3rd International Symposium on Accounting and Finance

ISAF 2014-Tokyo, Japan

Co-hosted by Tokyo Keizai University and MUFAD

3rd International Symposium on Accounting and Finance

ISAF2014-Tokyo, Japan

Co-hosted by Tokyo Keizai University and MUFAD

3rd International Symposium on Accounting and Finance

ISAF 2014 TOKYO

Full Papers Book

September 10-12, 2014

Tokyo, Japan

OPENING SPEECH

Welcome to Tokyo Keizai University!

Dear Colleagues,

It gives us pleasure to tell you that we are very pleased to have you as attendants to the 3rd International Symposium on Accounting and Finance.

Tokyo Keizai University Accounting Research Centre (ARC) was organized in 1984 by accounting staff at Tokyo Keizai University, and has served as a forum for promoting accounting research and for interuniversity and international exchanges between accounting scholars with different cultural and methodological background. A characteristic of the researches at ARC is that the members have benefitted from the standpoints of Japan: Japanese views and methodologies of accounting on one hand, and the Japanese practice of accounting especially that of management accounting in Japanese large companies on the other hand.

The members of ARC hope that the 3rd International Symposium on Accounting and Finance will be the starting point for further development of accounting research especially for further fruitful intellectual exchange between non-Japanese and Japanese researchers.

With warmest regards,

Tokyo Keizai University Accounting Research Centre

Makoto TAKEWAKI , Professor, Management accounting

Takemi ONO; Professor , International accounting

YukinariINOUE , Professor , Auditing

Fumiyoshi WATANABE, Professor , Management accounting

Hyonok KIM, Assobate Professor, Financial accounting

Takeo ITABASHI , Lecturer, Tax accounting

Hideharu OKUDA, Researcher , History of corporate accounting

AkiyoshiTANAKA , Professor Emeritus

Tomoko TAKAYAMA , Professor Emeritus

Shigekazu KUKITA, Professor Emeritus

10th September, 2014

Tokyo Keizai University Accounting Research Centre

Yoshiaki JINNAI, Professor & Head of ARC, Methodology of accounting

Tokyo Keizai University

1-7-34, Minami-cho, Kokubunji-shi, Tokyo 185-8502. Japan

Tel 042-328-7711 Fax 042-328-7770

OPENING SPEECH

Ladies and Gentlemen,

Dear Colleagues,

Welcome to the 3rd International Symposium on Accounting and Finance Cohosted by Tokyo University of Keizai and the Association of Accounting and Finance Academicians. I am very happy to be with you in this symposium.

The purpose of education and training is to create the conditions necessary for an advanced society. Globalization has changed the objectives of higher education. Therefore revisions are carried out in the training programs of Academic studies that serving the commercial life are discussed and sharing information on current issues is carried out in symposiums and congresses.

I wish this Symposium will bring solutions of the problems encountered in the field of education and integration. In the process of education the duty of AAFA has published "Journal of Accounting and Finance" every three months since 1999 to perform its duty in order to add value to education process. By AAFA as well as its various national panels, international congresses, conferences and symposia were organized.

In recent years, the international activities can be listed as follows.

- The Balkan Countries' 1st Internatıonal Conference On Accountıng AND Audıtıng was held 2007 in İstanbul Cohosted by Trakya University And AAFA.

- 12th World Congress Of Accounting Historians was held 2008 in İstanbul Cohosted by AfyonKocatepe University and Marmara University.

-"2nd Balkans and Middle East Countries Conference on Accounting and Auditing History" was held 2010 in İstanbul

-"The 1st International Symposium on Accounting and Finance" was held 2012 in Gaziantep Cohosted by Gaziantep University And AAFA.

-"The 2nd International Symposium on Accounting and Finance" was held May 2014 in Bursa Cohosted by Uludag University And AAFA.

In the same year that allows us to be here today, I present my sincere thanks to "3rd International Symposium on Accounting and Finance" co-chairman, Mr. Yoshiaki Jinnai and Tokyo Keizai University.

Dear Colleagues,

Accounting practices must be made with the principle of public disclosure and social responsibility. Primary responsibility of business and accounting managers is to prepare and report true and fair information. At this point Auditing is a question of accuracy and appropriateness. But also the quality and reliability of audit activity should be questioned.

Global economic crisis drew the attention to accounting and audit standards. In the new and rapidly-globalized economic order in which competitive conditions have become heavier, accounting, financial reporting and auditing have important functions in the development of both enterprises and economies. Today it became more evident that a sound and reliable recording and auditing system is one of the basic elements of a strong economy. I believe that today a good and powerful management approach can easily overcome the crises. What I mean by a good management is the institutional management in which transparent financial information is produced and audit mechanism functions well. Capital market investments which have increased due to globalization and technological development further emphasized the importance of accounting and financial information. Transparent, understandable, reliable, comparable and timely organization of financial information is very important for enlightening the public.

I believe that this conference will make important contributions to the development of the recording and auditing culture, and to the scientific research. I would like to extend my thanks to all of those who have contributed to this conference which I believe will be beneficial and appropriate in terms of both its content and timing. This congress gives us opportunity to derive benefit from the papers presented by different countries' academics.

I hope that there will be such events in the future as well. I hope this Symposium achieves its objectives. I would like to present my personal respects and on behalf of AAFA to Mr. Yoshiaki JINNAI for allowing the organization of the Symposium, the organizing committee chairman Mr. Mehmet OZBIRECIKLI and to all the participants.

10th September, 2014

Prof. Ümit GÜCENME GENÇOĞLU
Chair of Association of Accounting and Finance Academicians
Uludag University, Faculty of Economics and Administrative Sciences

CONTENTS

CONFERENCE SCIENTIFIC COMMITTEE

CONFERENCE ORGANIZING COMMITTEE

DETAILED CONFERENCE TECHNICAL PROGRAM

PANEL DISCUSSIONS

Shinji SOMEHA
ENGAGE IN THE PUBLIC INTEREST – JICPA'S RECENT ACTIVITIES IN SAFEGUARDING THE PUBLIC INTEREST 1

Ömer SAYILGANOĞLU
AUDİT STRUCTURE IN TURKEY 11

Muharrem KARATAS
GENERAL İNFORMATİON ON TURMOB, ACCOUNTİNG AND AUDİTİNG PROFESSİON TODAY 29

PAPERS

Akira NIN
PERMEATION OF MODERN PHILOSOPHICAL THOUGHTS INTO BASIC AUDITING CONCEPTS 41

Nail SANLI &Zafer SAYAR &Muharrem KARATAS
AUDITORS' PUBLIC OVERSIGHT: GLOBAL PERSPECTIVES AND TURKEY EXPERIENCE 61

Nalan AKDOGAN
THE IMPORTANCE AND ROLE OF SUPREME AUDIT INSTITUTIONS IN PROMOTING ACCOUNTABILITY AND TRANSPARENCY OF PUBLIC ADMINISTRATION AND ACCOUNTING – THE IMPLEMENTATION OF TURKISH SUPREME AUDIT INSTITUTION(TURKISH COURT OF ACCOUNTS) 81

Ahmet Selçuk DİZKIRICI & Ahmet GÖKGÖZ
EVALUATING THE FINANCIAL PERFORMANCES OF THE BANKS LISTED ON ISTANBUL STOCK EXCHANGE BANKS INDEX BY DATA ENVELOPMENT ANALYSIS AND MALMQUIST INDEX 115

Selcuk KENDIRLI &Hulya CAGIRAN KENDIRLI
IMPORTANCE OF INTELLECTUAL CAPITAL IN ENTERPRISES FOR FINANCIAL PERFORMANCE AND A RESEARCH FOR CORUM ENTERPRISES 131

Bayram TOPAL& Hakan TUNAHAN& Sinan ESEN
THE RELATION BETWEEN EXPORT AND PROFITABILITY: AN ANALYSIS ON TOP 1000 EXPORTERS IN TURKEY 155

Yasushi YOSHİDA
THE CONTAGION EFFECTS IN THE JAPANESE STOCK MARKET OF THE GREAT EAST JAPAN EARTHQUAKE 167

Mehmet Fatih BAYRAMOĞLU
RELATIONS BETWEEN BORSA ISTANBUL AND TOKYO STOCK EXCHANGE 177

Deniz SUKRUOGLU
THE MACROECONOMIC DETERMINANTS OF STOCK MARKET DEVELOPMENT IN EMERGING MARKETS ASIA 191

Seval Kardeş SELİMOĞLU
CORPORATE GOVERNANCE IN TURKEY: LEGAL ENVIRONMENT 205

Yıldız ÖZERHAN &Burcu NAZLIOĞLU
THE AMENDMENTS PLANNED TO BE MADE IN THE CONCEPTUAL FRAMEWORK 221

Phi Thi DİEM HONG
HOW TO INNOVATE THE CURRENT ACCOUNTING SYSTEM IN VIETNAM? 233

Recep KARABULUT & Ahmet UĞUR
NONLINEARITY BEHAVIOUR OF EXCHANGE RATES IN TURKEY: EFFECTS OF ECONOMIC AND POLITICAL EVENTS 255

Cengiz TORAMAN & Mehmet KÖRPİ
FIRM VALUATION USING MARKET MULTIPLIERS: EVIDENCE FROM APPAREL AND LEATHER INDUSTRY IN ISTANBUL STOCK EXCHANGE 267

Ümit GÜCENME GENÇOĞLU & Alp AYTAÇ
THE PROCESS OF FORMATION OF ACCOUNTING STANDARDS AND THE PRESENT SITUATION IN TURKEY 287

Ümmühan ASLAN & Meral Erol FİDAN & Şerife SUBAŞI
OPINIONS OF STUDENTS ON TECHNOLOGY USE IN ACCOUNTING COURSES IN THE DIGITAL AGE 299

Selahattin KARABINAR &Varol KIŞLALIOGLU
AN EMPRICAL ANALYSIS ON ACCOUNTING CULTURE IN TURKEY 319

Takeo ITABASHI
THE JAPANESE CONSUMPTION TAX REFORM AND THE ISSUE OF TAX CREDITS 333

Cemal ELİTAŞ & Bilge Leyli ELİTAŞ & Mesut DOĞAN
AN ALTERNATIVE VIEW FOR AUDITING: GERMAN 10 POINT PROGRAM 345

Süleyman YÜKÇÜ & Emre KAPLANOĞLU
THE COMPARATIVE PERFORMANCE ANALYSIS OF BORSA İSTANBUL AND TOKYO STOCK EXCHANGE WITH EVA AND MVA 357

Fujio Yamaguchi
BUSINESS VALUATION AND INTERNALLY GENERATED GOODWILL 377

Zeynep HATUNOĞLU & Sevda DEMİR
HE EFFECT OF COST MANAGEMENT IN BUSINESS DECISION-MAKING PROCESS: A RESEARCH IN THE TEXTILE SECTOR IN KAHRAMANMARAS 397

SYMPOSIUM SCIENTIFIC COMMITTEES

Prof. Adriana Tiron Tudor-Babeş-Bolyai University-Romania

Prof. Alexandru Trifu, Petre Andrei University-Romania

Prof. Beyhan Marşap- Gazi University-Turkey

Prof. Can Şımga Mugan- İzmir Ticaret University-Turkey

Prof. Cengiz Toraman- Gaziantep University-Turkey

Prof. Fatih Coşkun Ertaş - Gaziosmanpaşa University-Turkey

Prof. Fatih Coşkun Ertaş- Gaziosmanpaşa University-Turkey

Prof. Ganite Kurt - Gazi University-Turkey

Prof. Giuseppe Galassı - Parma University-Italy

Prof. Hema Rao, Suny Oswego University-USA

Prof. İhsan Ersan-İstanbul University-Turkey

Prof. Juan Lanero-Leon University-Spain

Prof. Lale Karabıyık- Uludag University-Turkey

Prof. Mehmet Bolak - Galatasaray University-Turkey

Prof. Mehmet Özbirecikli- Mustafa Kemal University-Turkey

Prof. Metin Kamil Ercan- Gazi University-Turkey

Prof. Mevlüt Karakaya - Gazi University-Turkey

Prof. Nalan Akdoğan- Başkent University-Turkey

Prof. Nuran Cömert - Marmara University-Turkey

Prof. Ömer Lalik- İstanbul Ticaret University-Turkey

Prof. Özer Ertuna - Okan University-Turkey

Prof. Recep Pekdemir-Istanbul University-Turkey

Prof. Seval K. Selimoğlu- Anadolu University-Turkey

Prof. Shawki Farag, The American University of Cairo, Egypt

Prof. Shayem Sander, Yale University-USA

Prof. Sudi Apak- Beykent University-Turkey

Prof. SüleymanYükçü-Dokuz Eylül University-Turkey

Prof. Takemi Ono - Tokyo Keizai University- Japan

Prof. Turhan Korkmaz- Mersin University-Turkey

Prof. Ümit Gücenme Gençoğlu- Uludag University-Turkey

Prof. Yoshiaki Jinnai - Tokyo Keizai University-Japan

Prof. Yukinari Inoue - Keizai University- Japan

Assoc. Prof. Aylin Poroy Arsoy–Uludag University-Turkey

Assoc. Prof. Batuhan Güvemli- Trakya University- Turkey

Assoc. Prof. Dina Lvova-St. Petersburg University-Russia

Assoc. Prof. Recep Karabulut- İnönü University-Turkey

Assoc. Prof. Rezarta Shkurti Perri-Tirana University-Albenia

SYMPOSIUM ORGANIZATION COMMITTEES

SYMPOSİUM PROGRAMME

September 10, 2014 –Wednesday

09.00 – 09.30 **REGISTRATION**

09.30 – 10.00 **OPENING SPEECHES**

10.00 – 10.30 **COFFEE BREAK**

10.30 – 13.00 **PANEL**

Moderator: Prof. Mehmet OZBIRECIKLI (Mustafa Kemal University-Turkey)

Shinji SOMEHA
Executive Board Member – International of JICPA (The Japanese Institute of Certified Public Accountants)

Ömer SAYILGANOĞLU
Public Oversight Accounting and Auditing Standards Authority

Muharrem KARATAS
Technical Expert-TURMOB (The Union of the Chambers of CPAs and Sworn-in CPAs of Turkey)

September11, 2014 – Thursday

09.30 – 11.00 **PARALLEL SESSIONS**

MUFAD HALL: AUDITING

Chair: Prof. Yoshiaki JINNAI

1. **PERMEATION OF PHILOSOPHICAL THOUGHTS INTO BASIC AUDITING CONCEPTS**
   Akira NIN
   The University of Kitakyushu
2. **A COMPARATIVE PERSPECTIVE ON INDEPENDENT AUDIT OF NON – LISTED COMPANIES: THE CASES OF TURKEY, JAPAN AND ALBENIA**
   Mehmet OZBIRECIKLI
   Mustafa Kemal University
   Yoshiaki JINNAI
   Tokyo Keizai University
   Nertila CIKA
   Tirana University
3. **AUDITOR'S OVERSIGHT: GLOBAL PERPECTIVES AND TURKEY EXPERIENCE**
   Nail SANLI &Zafer SAYAR &Muharrem KARATAS
   TURMOB

KEIZAI HALL: PERFORMANCE REPORTING

Chair: Prof. Süleyman YÜKÇÜ

1. **THE IMPORTANCE AND ROLE OF SUPREME AUDIT INSTITUTIONS IN PROMOTING ACCOUNTABILITY AND TRANSPERENCY OF PUBLIC ADMINISTRATION AND ACCOUNTING – THE IMPLEMENTATION OF TURKISH SUPREME AUDIT INSTITUTION**
   Nalan AKDOGAN
   Başkent University
2. **EVALUATING THE FINANCIAL PERFORMANCES OF THE BANKS LISTES ON ISTANBUL STOCK EXCHANGE BANKS INDEX BY DATA DEVELOPMENT ANALYSIS**
   Ahmet Selçuk DİZDARCI
   Sakarya University
   Ahmet GOKGOZ
   Yalova University

TOKYO HALL: APPLICATIONS ON FINANCE

Chair: Prof. Dr. Nuran CÖMERT

1. **IMPORTANCE OF INTELLECTUAL CAPITAL OF ENTERPRISES FOR FINANCIAL PERFORMANCE: A RESEARCH STUDY ON THE ENTERPRISES IN CORUM**
   Selçuk KENDİRLİ &HülyaC. KENDİRLİ
   Hitit University
2. **THE RELATION BETWEEN EXPORT AND PROFITABILITY: AN ANALYSIS ON TOP 1000 EXPORTERS IN TURKEY**
   Bayram TOPAL &Hakan TUNAHAN & Sinan ESEN
   Sakarya University

11.00 – 11.30 COFFEE BREAK

11.30 – 13.00 PARALLEL SESSIONS

MUFAD HALL: STOCK MARKETS

Chair: Prof. Dr. Nalan AKDOĞAN

1. **THE CONTAGION EFFECTS IN THE JAPANESE STOCK MARKET OF THE GREAT EAST JAPAN EARTHQUAKE**
   Yasushi Yoshida
   Tokyo Keizai University
2. **RELATIONS BETWEEN ISTANBUL AND TOKYO STOCK EXCHANGES**
   Fatih BAYRAMOGLU
   Bülent Ecevit University
3. **THE MARCOECONOMIC DETERMINANTS OF STOCK MARKET DEVELOPMENT IN EMERGING MARKETS OF ASIA**
   Deniz SUKRUOGLU
   Bülent Ecevit University

KEIZAI HALL: CORPORATE GOVERNANCE AND FINANCE

Chair: Prof. Dr. Ganite KURT

1. **CORPORATE GOVERNANCE IN TURKEY: LEGAL ENVIRONMENT**
   Seval KARDES SELİMOĞLU
   Anadolu University
2. **THE ALTERATIONS PLANNED TO BE MADE IN THE CONCEPTUAL FRAMEWORK**
   Yıldız ÖZERHAN &Burcu NAZLIOĞLU
   Gazi University

TOKYO HALL: FINANCE

Chair: Dr. Takeo ITABASHI

1. **HOW TO INNOVATE THE CURRENT ACCOUNTING SYSTEM IN VIETNAM?**
   Phi Thi DİEM HONG
   Hanoi University of Agriculture
2. **NONLINEARITY BEHAVIOUR OF EXCHANGE RATES IN TURKEY**
   Recep KARABULUT & Ahmet UĞUR
   İnönü University
3. **FIRM VALUATION USING MARKET MULTIPLIERS: EVIDENCE FROM APPAREL AND LEATHER INDUSTRY IN ISTANBUL STOCK EXCHANGE**
   Cengiz TORAMAN & Mehmet KÖRPİ
   Gaziantep University

September 12, 2014 – Friday
09.30 – 11.00 PARALLEL SESSIONS

KEIZAI HALL:NEW INTERACTIONS IN GLOBALIZATION AND FINANCIAL REPORTING

Chair: Prof. Dr. Fujio YAMAGUCHI

1. **THE PROCESS OF FORMATION OF ACCOUNTING STANDARDS AND THE PRESENT SITUATION IN TURKEY**
   Ümit GÜCENME GENÇOĞLU & Alp AYTAÇ
   Uludağ University
2. **THE OPINION OF UNDERGRADUATE STUDENTS ON TECHNOLOGY USED IN ACCOUNTING CLASSES IN DIGITAL ERA**
   Ümmühan ASLAN & Meral Erol FİDAN & Şerife SUBAŞI
   Bilecik Şeyh Edebali University
3. **AN EMPIRICAL ANALYSIS ON ACCOUNTING CULTURE IN TURKEY**
   Selahattin KARABINAR &Varol KIŞLALIOGLU
   Sakarya University

TOKYO HALL: TAX, ACCOUNTING AND AUDIT

Chair:Prof. Dr. Mehmet ÖZBİRECİKLİ

1. **THE JAPANESE CONSUMPTION TAX REFORM AND THE ISSUE OF TAX CREDITS**
   Takeo ITABASHI
   Tokyo Keizai University
2. **A JAPANESE PERSPECTIVE ON THE RELATIONSHIP BETWEEN CAPITAL OWNERSHIP RELATIONS AND THE FUNCTION OF CORPORATE ACCOUNTING**
   Yoshiaki JINNAI & Hideharu OKUDA
   Tokyo Keizai University
3. **AN ALTERNATIVE VIEW FOR AUDITING: GERMAN 10 POINT PROGRAM**
   Cemal ELİTAŞ & Bilge Leyli ELİTAŞ
   Yalova University
   Mesut DOĞAN
   Afyon Kocatepe University

11.00 – 11.30 COFFEE BREAK

11.30 – 13.00 PARALLEL SESSIONS

MUFAD HALL: VALUATION / PRICING

Chair: Prof. Dr. Yasushi YOSHIDA

1. **THE COMPARATIVE PERFORMANCE ANALYSIS OF ISTANBUL STOCK EXCHANGE AND *TOKYO STOCK EXCHANGE WITH EVA AND MVA***
   Süleyman YÜKÇÜ
   Dokuz Eylül University
   Emre KAPLANOĞLU
   Ege University
2. **BUSINESS VALUATION AND INTERNALLY GENERATED GOODWILL**
   Fujio YAMAGUCHI
   Meiji University
3. **THE EFFECT OF COST MANAGEMENT IN BUSINESS DECISION – MAKING PROCESS: A RESEARCH IN THE TEXTILE SECTOR IN KAHRAMANMARAS**
   Zeynep HATUNOĞLU
   Kahramanmaraş Sütçü İmam University
   Sevda DEMİR
   OKÜ Bahçe Vocational High School

Engage in the Public Interest – JICPA's recent activities in safeguarding the public interest

International Symposium on Accounting and Finance Tokyo 2014
September 10, 2014

Shinji Someha
Executive Board Member -International
Japanese Institute of Certified Public Accountants

Engage in the Public Interest

1. About JICPA

Engage in the Public Interest

Overview

- Established in 1949, became special body cooperate under CPA Act in 1966
- JICPA's mission is defined in the Act and JICPA constitution

"To serve the public interest by strengthening the accountancy profession through maintaining the quality of services provided by members and upholding the professional ethics, values, and standards pursuant to the mission and professional responsibilities prescribed in Certified Public Accountants Act (CPA Act Article 43-2, JICPA Constitution Article 2)"

Key Responsibilities

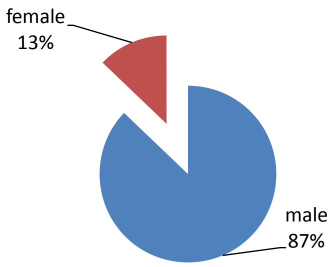
- **Registration of CPAs**
- **Developing the code of ethics** for accountancy profession and promoting compliance with the code
- **Providing guidance** on auditing, accounting and other related fields of professional accounting services
- **Initiating research** on the practices and the systems of accounting, auditing and other related fields of professional accounting services in Japan and overseas;
- **Delivering training** for pre-qualification courses and continuing professional development;
- **Performing quality control reviews**; and
- **Conducting Investigation** and disciplinary proceedings

Current Membership

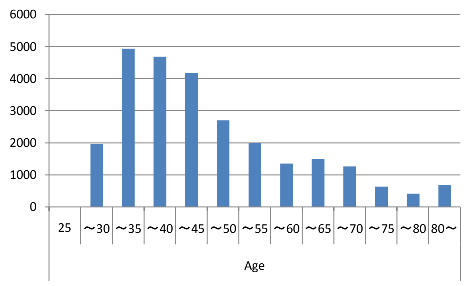
As of July 31, 2014

Member		Associate Member	Total
CPAs	firms		
26,262	217	7,522	34,001

CPAs by Gender

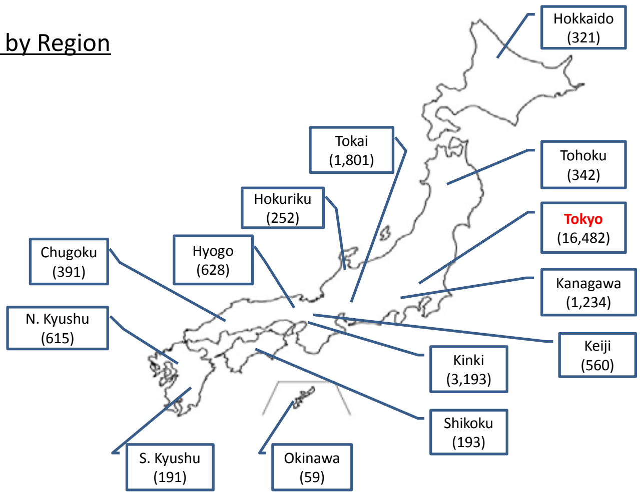


CPAs by Age



5

CPAs by Region



6

New Leadership (2013 July – 2016 July)

MORI Kimitaka, Chairman and President

IKEGAMI Gen, Deputy President
SEKINE Aiko, Deputy President
KAJIKAWA Toru, Deputy President
SUZUKI Masaji, Deputy President
YAMADA Haruhiko, Deputy President
YANAGISAWA Giichi, Deputy President
TAKAHAMA Shigeru, Deputy President

UMINO Tadashi, Chief Executive

7

Reaching the Younger Generation

8

2. CPA Profession in Japan

Engage in the Public Interest
社会に貢献する公認会計士

Legal and Regulatory Framework

The CPA Act
- Scope of services to be provided by CPAs
- Requirements for CPA qualification
- Roles and functions of JICPA
- Roles of the FSA as the regulatory authority to oversee CPAs

FSA
- FSA is given oversight responsibilities over the audit profession in Japan

CPAAOB
- CPAAOB monitors and oversees CPAs and the JICPA quality control reviews
- CPAAOB conducts CPA examinations

日本公認会計士協会 The Japanese Institute of Certified Public Accountants
- JICPA is the statutory organization permitted under CPA Act
- All CPAs must register with JICPA

Scope of CPA Services

Auditing and other assurance services

CPA Act Article 2-1
"A certified public accountant shall make it his/her practice to audit or attest financial documents for fees at the request of others "

Exclusive

Other Services

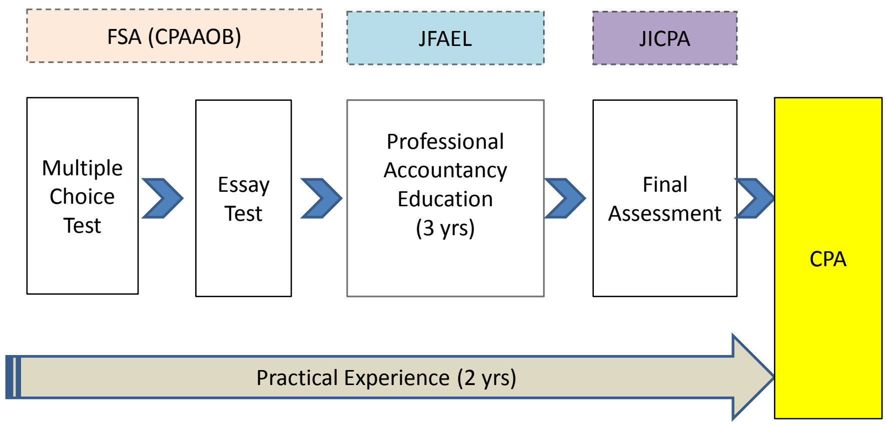
CPA Act Article 2-2
- To compile financial documents, to examine or plan financial matters, to be consulted on financial matters for fees at the request of others, using the title of CPA

Tax

- Certified Public Tax Accountant (CPTA)

11

Becoming a CPA



12

Multiple Choice →	Essays
1. Financial accounting and reporting 2. Management accounting 3. Audit 4. Business law	1. Financial accounting and management accounting 2. Audit 3. Business law 4. Tax law 5. One of (a) business administration, (b) economics, (c) the Civil Code or (d) statistics.

	# of Applicants	# of Successful applicants	%
2011	22,773	1,447	6.4
2012	17,609	1,301	7.4
2013	13,016	1,149	8.8

CPAAOB: http://www.fsa.go.jp/cpaaob/

13

CPE Requirements

- CPA Act Article 28 requires all CPAs to undergo CPE
- CPAs are required to earn 120 credits in every three-year rolling period (minimum of 20 credits every year) and submit their CPE status every year to JICPA
- “Professional Ethics” and “Tax” are mandatory for all CPAs and “Audit Quality and Fraud Risk” will be required for statutor auditors
- A member who fails to satisfy CPE requirements is subject to disciplinary action by JICPA
- Exemptions are permitted for certain members

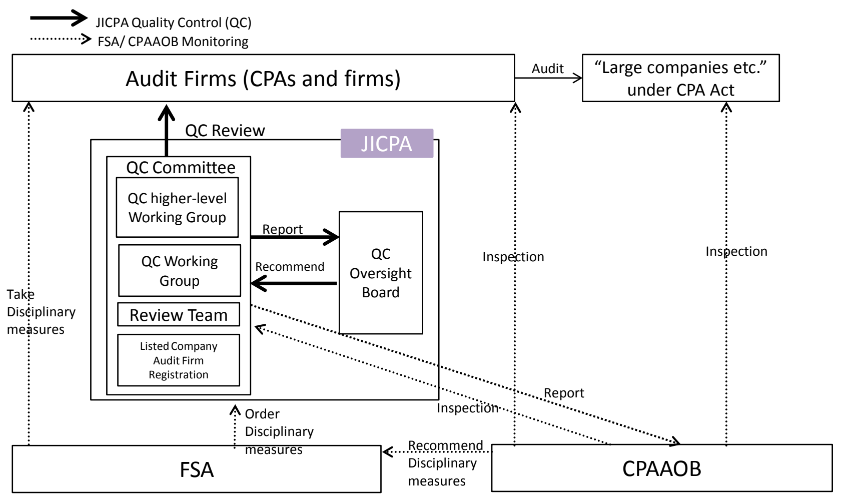
14

3. Achieving High Quality Audits

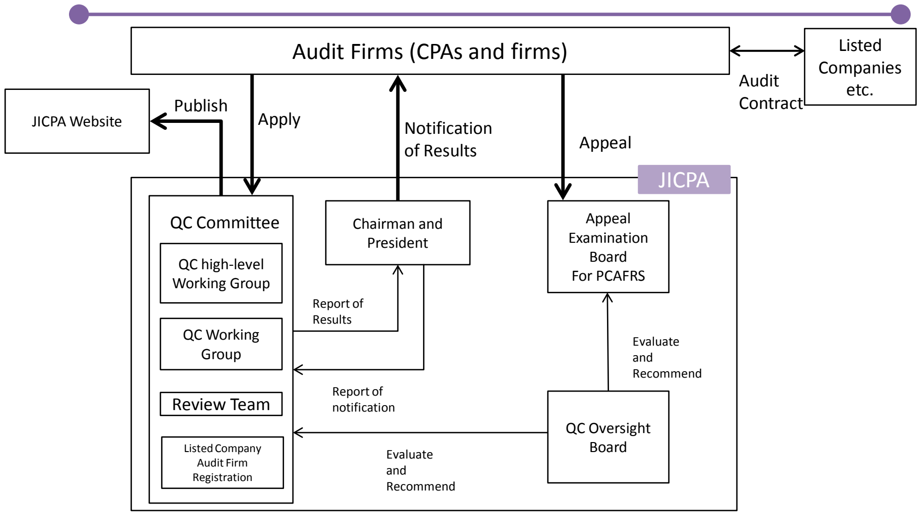
Engage in the Public Interest

社会に貢献する公認会計士

Quality Control Review Procedure



Overview of Public Company Audit Firm Registration System



Restructuring of Quality Control Review System

Restructuring quality control review system

Redrafting of rules on QC review

Nature of QC Review

Guidance → Guidance and Supervisory

Scope of QC Review

"Large companies etc." under CPA Act
Credit banks etc.
→
All Audit Engagements under Article 2 (1) of CPA Act
"Large companies etc." under CPA Act
Credit banks etc.

Other measures

- New special QC reviews to be conducted on case-by-case basis
- Continuous evaluation and improvement of QC review system etc.

Engage in the Public Interest

社会に貢献する公認会計士

The Japanese Institute of Certified Public Accountants
Tel: 81-3-3515-1130 / Fax: 81-3-3515-1161
Email: international@sec.jicpa.or.jp

19

REPUBLIC OF TURKEY
KGK
Public Oversight Authority

Public Oversight
Accounting and Auditing Standards
Authority (POA)

Audit Structure in Turkey

AGENDA

- ✓ Review Audit Structure of Turkey
  - ✓ Before the Turkish Commercial Code no. 6102
  - ✓ Current Audit Framework
- ✓ Oversight of Audits
  - ✓ POA's Role in Audit Framework
  - ✓ Information About POA's Activities

REVIEW AUDIT STRUCTURE OF TURKEY

3

Structure Before New TCC-I

- **What was the scope for 'Independent' Audit?**

  Those companies subject to regulations of supreme authorities as

  - Capital Markets Board
  - Banking Regulation and Supervision Agency
  - Undersecretariat of Treasury
  - Energy Market Regulatory Authority
- **Others?**
  - Auditors designated by Plenary Committee but maybe among company partners
  - No authorization by any authority& No specification
  - No need to be independent

4

Structure Before New TCC-II

- ✓ **Fragmented Regulations from Multiple Authorities**
  - ✓ Capital Markets Board
  - ✓ Banking Regulation and Supervision Agency
  - ✓ Undersecretariat of Treasury
  - ✓ Energy Market Regulatory Authority
- ✓ There was a fragmented approach regarding auditing in Turkey, over which a number of regulatory institutions have authority in respect of particular types of entities.
- ✓ **Lack of Efficient Oversight in the Audit Sector**

REPUBLIC OF TURKEY KGK Kamu Gözetimi Kurumu Public Oversight Authority

5

Changes with TCC no. 6102

With TCC's regulations regarding audit come into force as of 01.01.2013, the whole audit process has been transformed. Radical changes have been made regarding

- ✓ Audit Scope
- ✓ Framework of audit
- ✓ Auditors' Qualifications

REPUBLIC OF TURKEY KGK Kamu Gözetimi Kurumu Public Oversight Authority

6

Current Audit Scope

What is the scope?

- ✓ According to the Turkish Commercial Code, entities that will be subject to statutory audit are determined by Council of Ministers.
- ✓ For the time being;
  - ✓ Public interest entities,
  - ✓ Entities that have at least two exceeding values for determined limits in the Cabinet Decree for criterias as balance sheet total, net annual turnover and the number of employees,

Current Audit Scope II

In 2013:

- ✓ Entities providing at least two of the following criteria at the two consecutive financial reporting periods are subject to audit in accordance with the Cabinet Decree in 2013:
  - ✓ balance sheet total ≥ 150 million TL (~ 70 m $),
  - ✓ annual net turnover ≥ 200 million TL (~ 90 m $), and
  - ✓ employee headcount ≥ 500.

In 2014:

- ✓ For 2014 limits for criteria have been decreased and number of the entities that are subject to audit have been increased.
- ✓ Entities providing at least two of the following criteria at the two consecutive financial reporting periods are subject to audit in accordance with the Cabinet Decree in 2014:
  - ✓ balance sheet total ≥ 75million TL (~ 35 m $),
  - ✓ annual net turnover ≥ 150 million TL (~ 70 m $), and
  - ✓ employee headcount ≥ 250.

Current Audit Scope III

- ✓ Also, regardless of those criteria, companies operating in the specified sectors such as;
  - ✓ Companies that broadcast nationwide and provide media service,
  - ✓ Intermediary companies of precious metals which are allowed to operate as a member of the Istanbul Gold Exchange and,
  - ✓ Agricultural products warehouse companies that are established as joint-stock companies

  are subject to audit in accordance with the Cabinet Decree.

9

Statutory Audit Framework of Turkey I

- ✓ The Objective

Auditors are supposed to state their opinion on financial statements of the entity audited with regard to their compliance with financial reporting standards and accuracy of them.

- ✓ The Criteria
  - ✓ Turkish Accounting Standards
- ✓ Methods
  - ✓ Application of techniques specified in Turkish Standards on Auditing (TSA)

10

Statutory Audit Framework of Turkey II

- ✓ The framework to define the working conditions of auditors is By-law on Statutory Audit
  - ✓ Published on 26 December 2012,
  - ✓ Has been prepared on the basis of Directive 2006/43/ EC,
  - ✓ The purpose of this By-law is to regulate procedures and principles of statutory audit.

With this By-law issues about;

- ✓ qualifications of statutory auditors,
- ✓ licensing of statutory auditors and audit firms,
- ✓ establishment requirements of audit firms,
- ✓ education and examination of statutory auditors, and
- ✓ general principles of ethical rules, continuing education and registration of statutory auditors and audit firms,

have been regulated.

11

Qualifications of Auditors

Qualifications of Auditors

- ✓ Auditors must be approved and registered by POA. To be an auditor one must maintain:
  - ✓ Undergraduate degree (at least 4 years undergraduate education),
  - ✓ Must be a CPA or Sworn-in CPA,
  - ✓ At least 3 years practical professional training,
  - ✓ Auditor Licensing Examination (Candidates who will conduct audit in the fields of capital market, banking, insurance, and individual retirement are also subject to an exam which consists of the subjects about regulations of capital markets, banking, insurance and private pension.)

12

Designation of Auditor

- ✓ Auditor of an entity could only be designated by plenary committee among those approved by POA.
- ✓ The designation power of plenary committee is unassignable; auditor designated by any other body is not accepted as statutory auditor before the law.
- ✓ Audit of public interest entities could only be carried out by audit firms.

13

OVERSIGHT OF AUDIT

14

Establishment of POA

- ✓ Established by the Statutory Decree No. 660, published in Official Gazette on November 2, 2011, in order to:
  - ✓ Eliminate the fragmented approach in the field of accounting and audit,
  - ✓ Ensure more effective accounting, audit and public oversight system, and
  - ✓ Fulfill the commitment given to EU
    - ✓ *to establish an organization as the sole supreme authority in determining auditing standards and ethics, authorizing independent auditors and audit companies under a public oversight system and monitoring their activities within the frame of quality assurance.*

15

Structure of POA I

POA is the ultimate authority in:

- ✓ setting accounting and auditing standards,
- ✓ setting ethical and continuing education rules,
- ✓ approving statutory auditors and audit firms under a public oversight system,
- ✓ registering statutory auditors and audit firms,
- ✓ conducting disciplinary and investigative procedures,
- ✓ monitoring the auditors' and audit firms' activities within the frame of quality assurance.

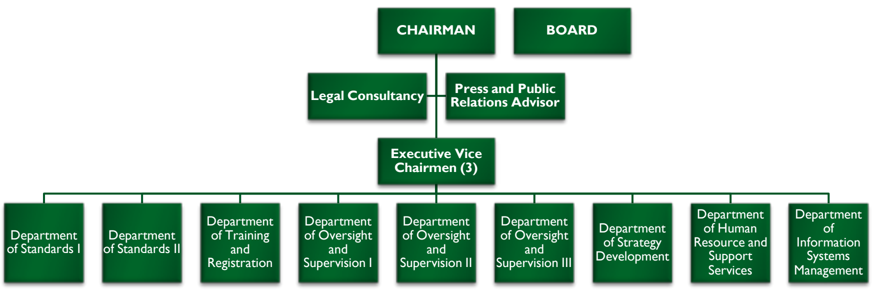
16

Structure of POA II

- Government body with administrative autonomy.
- POA is composed of a Board and Chairmanship.
- Board members are appointed by Council of Ministers among the candidates proposed by:
  - Ministry of Finance (two members),
  - Ministry of Customs and Trade (two members),
  - Undersecretariat of Treasury,
  - Capital Markets Board,
  - Banking Regulation and Supervision Agency,
  - The Union of Chambers and Commodity Exchanges of Turkey,
  - The Union of Certified Public Accountants and Sworn-in Certified Public Accountants of Turkey.

17

Organisation Chart



18

Budget of POA

- ✓ Financial resources of POA are composed of:
  - ✓ treasury grants,
  - ✓ copyrights of the accounting and auditing standards,
  - ✓ fees for services provided by POA such as registration fees and licences fees, and
  - ✓ other incomes.

Pros for Functioning

- ✓ A modern framework for audit activities in line with the international standards and EU regulations
- ✓ Independent of regulated statutory auditors and audit firms
- ✓ Independent funding and free from any possible undue influence by statutory auditors or audit firms
- ✓ Have adequate resources (eg. technical and human recources)
  - ➢ 57 Professional Staff working directly on oversight, inspections and standard setting

Oversight of Audit I

Inspections

- ✓ Statutory Decree No. 660 directs POA to conduct a continuing program of inspections
- ✓ Inspections assess the compliance of auditors and audit firms with *Turkish Commercial Code, Statutory Decree No. 660, rules and regulations of the POA, and professional standards*
- ✓ Oversight through «Engagement Portal» (e.g. by requiring standardized data and filing of audit reports by auditors)
- ✓ Inspection of selected audit files

21 KGK

Quality Assurance System I

Annual Inspection Plan

- ✓ Audit firms to be inspected are determined through a risk model.
- ✓ The risk model is based on:
  - Audit revenue,
  - The number of contracts for the year,
  - The audit of the public interest entities,
  - Whether a quality assurance inspection conducted in the previous years,
  - Whether any administrative sanctions have been imposed as a result of previous inspections.

22 KGK

Quality Assurance System II

Inspection Guides

- ✓ POA has completed preparation of inspection guides.
- ✓ The inspection guides focuses in areas of:
  - Standard on Quality Control
  - Turkish Standards on Auditing
  - Turkish Accounting Standards

Quality Assurance System III

Scope of Inspections

- ✓ Inspections of the audit firms cover:
  - ✓ Review of audit work performed regarding
    - Turkish Standards on Auditing
    - Turkish Accounting Standards
  - ✓ Regulatory compliance of audit firms activities
  - ✓ Quality control system of audit firms
  - ✓ Quality and quantity of resources spent in audits
  - ✓ Audit fees charged

Quality Assurance System IV

Focus of Inspections

Two integrated elements:

- ✓ **Quality Control:** Compliance of audit firms to quality control standard
- ✓ **Audit Performance:** Compliance of auditors and audit firms with
  - Turkish Commercial Code
  - Statutory Decree No. 660
  - Rules and regulations of the Authority *(Audit Bylaw)*
  - Professional standards

25 KGK

Quality Assurance System V

Quality Assurance Inspections

- ✓ «Standard on Quality Control» have been published in compliance with «International Standard on Quality Control», which requires audit firms to establish and maintain a system of quality control, and
- ✓ Oversight system in accordance with quality control standard for the supervision of quality control systems of audit firms has been established.

By taking these steps, a systematic oversight process has been developed for quality assurance inspections.

26 KGK

Quality Assurance System VI

Inspection Frequency

- ✓ Inspections are carried out;
  - ➢ at least in every 3 years for audit firms which audit public interest entities and
  - ➢ every 6 years for other firms
- ✓ Inspections of auditors are carried out when deemed necessary by the Authority.

In addition to the planned inspections, POA reserves the right of performing or causing others to perform an inspection in case of warning, complaint, notification and other cases considered necessary.

27 KGK

Quality Assurance System VII

Inspection Methodology

- ✓ Inspection of audit firms and auditors in the context of
  - ➢ Sufficient number of selected audit files
  - ➢ Other information related to Quality Assurance System
- ✓ Inspections are carried out as planned in annual inspection program.
- ✓ Results of inspections shall be announced to the public in the form of an annual report.

28 KGK

Quality Assurance System VIII

Inspection Results

- ✓ Reporting
  - Main conclusions of the inspections
  - The overall results of the inspections shall be published annually
  - Recommendations of POA shall be followed up by the statutory auditor or audit firm within a reasonable period.

29 KGK

Quality Assurance System IX

Enforcement

- ✓ POA has authority to investigate and discipline registered audit firms and auditors for noncompliance with the relevant legislations and to impose fines to those auditors and audit firms.
- ✓ When violations are found, in addition to fines, the Authority can impose appropriate sanctions that compose of:
  - Warning
  - Suspension of the approval for two years and
  - Withdrawal of the approval.
- ✓ In case of repeated violations, aggravated sanctions shall be imposed by the POA.

30 KGK

Off-site Oversight Activity «Engagement Portal» - I

- ✓ POA has started to perform off-site oversight activity via «Engagement Portal».
  - In order to detect any noncompliance of auditors and audit firms with the POA's regulations timely and to incorporate the relevant data in the risk model for annual inspection program.
- ✓ POA plans to expand the scope of «Engagement Portal» to cover whole audit process gradually.
- ✓ As the first step:
  - «Engagement Data Entry Portal» was created to obtain «engagement letters» timely and to inspect the compliance of the engagement letters with the regulations of POA.

31 KGK

Off-site Oversight Activity «Engagement Portal» - II

- ✓ All audit engagement letters are reviewed by POA and any discrepancies are reported to those concerned immediately.
- ✓ For audits conducted in 2013, all audit reports have been filed through Engagement Portal.

32 KGK

Statistical Data

- ✓ As of September 2014, 124 audit firms have been approved and registered and all of them are subject to quality control reviews.
- ✓ For 2013, 2,530 engagement letters and audit reports filed through the «Engagement Portal».
- ✓ Approximately 1,800 of them are for public interest audits:
  - ➢ 1,730 under Capital Markets Law
  - ➢ 185 under Banking Law
  - ➢ 59 in insurance sector
- ✓ It is estimated that 3,500 companies will be subject to audit for 2014.

33 KGK

Thank you for your attention…

34 KGK

UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY (TÜRMOB)

Muharrem Karataş
TURMOB

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

AGENDA

- **General information on TURMOB**
  - **An overview on TURMOB**
  - **Organizational structure**
  - **Membership figures**
- **Accounting and auditing profession today**
- **New trends for accounting profession**
- **The major challenges currently faces in Turkey**
- **Our expectations and strategic plan for the future**

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

GENERAL INFORMATION ON TURMOB

- TURMOB, the Union of Chambers of Certified Public Accountants and Sworn-in Certified Public Accountants of Turkey, is the national professional body with the sole authority to award professional license.
- TURMOB was founded in 1989 with the Law 3568 on Certified Public Accountancy and Sworn-in Certified Public Accountancy.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

TURMOB – Who we are and what we do

- TURMOB, has a legal status related with the profession of accountancy and audit in Turkey.
- TURMOB was equipped with authorizations like keeping records and registering, determining activity and setting ethical rules.
- TURMOB is the national umbrella for the local Chambers, and only TURMOB is authorized to issue professional licenses in Turkey.
- TURMOB is a member of;
  - International Federation of Accountants (IFAC) since 1994.
  - Federation of European Accountants (FEE) since Dec 2013.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

TURMOB – Organizational Structure

- The organizational structure of the TÜRMOB is supported by two distinct Chambers;
  - Chambers of Certified Public Accountants (SMMM) and
  - Chambers of Sworn-In Certified Public Accountants (YMM).
- 85 Chambers form the TÜRMOB, of which 77 are SMMM Chambers and 8 are YMM Chambers.
- TURMOB is the national umbrella for the local Chambers.
- The Union renders a public service and is founded primarily to carry out activities to insure the development of the profession and the protection of due interests of the members of the profession and the preservation of professional dignity, ethics, order and traditions.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

TURMOB – Membership Figures

- Totally, 95,000 members
  - 4,350 YMM (Sworn-in Certified Public Accountant)
  - Other members are SMMM (Certified Public Accountant)
- Nearly 44,000 SMMM who have potential to conduct statutory audit;
- 4,350 YMM members who have right to conduct audit and tax audit.
- More than half of the professional members are working in public practice and in industry, academia and governmental institutions

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

ACCOUNTING AND AUDITING PROFESSION TODAY

- Law 3568 regulates the profession in Turkey into two titles for professional membership with different educational requirements for licensing and allowed activities:
  - *Certified public accountant (SMMM), and*
  - *Sworn-in certified public accountant (YMM)*
- Requirements for individuals who can carry out auditing activities to be certified public accountant is entitled by the new Turkish Commercial Code.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

General conditions for SMMMs and YMMs:

- To be a citizen of the Republic of Turkey (provisions for foreign Certified Public Accountants remain reserved).
- To be competent in exercising the civil rights.
- Not to be deprived of public rights.
- Not to be sentenced for offences stated as in the Law 3568
- Not to be penalized by expulsion from the government service consequent to an investigation.
- Not to possess conditions incompatible with the honor and dignity of the profession.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

Specific conditions to become SMMM

- At least a B. A. degree in law, economics, business administration, accounting, banking, public administration and political science or to hold a post-graduate degree in one of the disciplines mentioned above
- Minimum of 3 years practical experience
- To pass the examination for SMMMs
- To receive a license as a SMMM from TURMOB.
- To register in a SMMM Chamber.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

Specific conditions to become YMM

- At least ten years of experience as a SMMM,
- To pass the YMM examination
- To receive a practicing license for YMM.
- To register in an YMM Chamber.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

Education & Training

- Education and Training Center (TESMER) was founded in 1993, within the TÜRMOB. TESMER is responsible for preparation, management and control for practical training and professional examination programs. TESMER also, conducts continuous professional education for professional members.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

TÜRMOB Auditing Center

- TÜRMOB has an effective role in providing self-regulation to the profession.
- Having paid attention to specialization in the profession in the recent period, TÜRMOB created the **“TÜRMOB Auditing Center”** orienting to specialization in field of auditing.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

RECENT DEVELOPMENTS IN TURKEY

- New Turkish Commercial Code (TCC) which requires all the companies to use TMS/TFRS and subject to audit and give authority to Turkish Auditing Standards Board (TUDESK) to set the Turkish Auditing Standards. (2011)
- Establishment of Turkish Public Oversight Authority (POA) that will execute four primary functions in overseeing auditors: registration, inspection and oversight, standard setting (both of accounting and auditing) and enforcement. (2011)
- Amendments to TCC 's provisions relating to financial reporting and independent audits which limit the scope of audited entities, and after this amendment entities that are subject to audit will be determined by Cabinet Decree. (2012)
- POA published a board decision and entities that are subject to audit in accordance with the Cabinet Decree are also required to apply Turkish Accounting Standards. (2012)
- Determination of entities that are subject to statutory audit in accordance with Council of Ministers Decision.(2013)
- Amendments to Council of the Minister Decision and POA's Board decision about scope of application of Turkish Accounting Standards .(2014)

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

2011 **was very important for us at regulation level !**

- Turkish accountancy profession has faced with very important developments in 2011.
  - **New Turkish Commercial Code**
  - **Public Oversight, Accounting and Auditing Standards Board**

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

New Commercial Code

- New Commercial Code published in February 2011.
- The code affects not only accounting issues but also auditing issues.
- Every jointly stock companies (including SMEs) should prepare its financial statements according to IFRS or IFRS for SMEs and will be audited according to ISAs.
- This regulations would be enacted by the beginning of 2013.
- But, amendments to TCC 's provisions relating to financial reporting and independent audits which limit the scope of audited entities, and after this amendment entities that are subject to audit will be determined by Cabinet Decree. (2012)

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

New Public Oversight Authority

- The POA has four primary functions in overseeing the auditors:
  - registration,
  - inspection and oversight,
  - standard setting (both of accounting and auditing) and
  - enforcement .
- The Board has the following responsibilities and powers according to Statutory Decree No. 660:
  - setting and issuing accounting and auditing standards,
  - setting and issuing ethical rules and continuous education principles,
  - authorizing statutory auditors and audit firms under a public oversight system,
  - registering statutory auditors and audit firms,
  - monitoring the auditors' and audit firms' activities within the frame of quality assurance
  - to make secondary legislations about the areas regulated and supervised by the Authority,
  - conducting disciplinary and investigative procedures

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

TURMOB Training Programme for Auditing - 2012

- Three Dimensions for accountants in terms of Auditing Education:
  - New Commercial Code Education Session
  - International Financial Reporting Standards Education Session
  - Auditing Education Session
  - Total 99 hours education
  - In class & computer based education

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

Four New Dimensions for Accounting Professions

- **Specialization, new technical areas, innovations**: highly qualified people
- **Globalization & Cross-Border Activities:** international cooperation among professional organizations.
- **New Institutional Structure Model & Apply Good Governance Principles:** effective communication.
- **Regulation Burden on Accounting Professions:** partnership approach with regulators. (win - win solution)

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

NEW TRENDS FOR ACCOUNTING PROFESSION

- **Specialization: New aspects for the profession**
  - Specialization is the key factor for career progression.
  - It creates new areas and new markets.....
  - We should think about new areas, such as;
    - Company & Assets Valuation, Credit Rating, Corporate Governance Rating, Internal Audit, Risk Assessment, Integrated Reporting etc
- **New Technical Department: We have already established Auditing Center.**
- Paying attention to specialization in the profession, TÜRMOB will create the **"TÜRMOB Quality Assurance Center,**
  - orienting to specialization in field of accounting, auditing and consultancy services
  - professionals should establish workplace, service and quality assurance policies and processes
  - quality assurance practices are carried out through authorized inspectors and inspections are performed at least four years
- Recruiting new qualified people for technical departments is very essential.

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

The major challenges currently faces our professional body, members and SMP

- Unfair competition
- Need to rapid adoption to the heavy regulation
- Different institutions has their own regulations
- Sectors training towards the new accounting and auditing practices
- Compliance of the taxation regulation to the accounting and auditing standards

TÜRMOB
TÜRKİYE SERBEST MUHASEBECİ MALİ MÜŞAVİRLER VE YEMİNLİ MALİ MÜŞAVİRLER ODALARI BİRLİĞİ
(UNION OF CHAMBERS OF CERTIFIED PUBLIC ACCOUNTANTS OF TURKEY)

Our expectations and strategic plan for the future…….

As TURMOB, we believe strategic planning is the key factor for our future.

- **In national level**, 2013 was the year of implementation of new regulations in respect to our profession. We expect the expansion of the scope of the audited entities, and until 2016 workplace, service and quality assurance policies and processes would be established by professionals
- **In global level**, current financial crisis and its impacts shows one more time that how accountancy and auditing profession are important in the turbulent periods. We expect to continue our active attitude towards preventing the crisis in EU with a minimum loss.

PERMEATION OF MODERN PHILOSOPHICAL THOUGHTS INTO BASIC AUDITING CONCEPTS

Akira NIN*

ABSTRACT

Epistemological thought foundation of modern audit practices would have been established by Mautz and Sharaf (1961). However, the attributes of evidential matters that Mautz and Sharaf assumed were largely affected by philosophers' view, among others, of the twentieth century's analytic philosophers' including W.P. Montague (1925). The author's intention through this article is to explore permeation process of modern philosophy into the basic auditing concepts. And the relevant path taken would be a delicate reflection of Mattessich (2008 Foreword)'s argument, i.e., "the history of accounting is similar to that of philosophy. At best, it is one of representing financial realities – though in a pragmatic way."

Keywords: *ASOBAC, Skepticism, Audit Evidence*

JEL Classification: *M41, N82, B31*

* Akira NIN, The University of Kitakyushu, ninakira@kitakyu-u.ac.jp, Phone/ Fax +81-93-964-4120

1. INTRODUCTION

A Statement of Basic Audit Concepts (ASOBAC, 1973) issued by American Accounting Association (AAA) was an official expression of opinion as to the way to establish conceptual foundation of audit[1]. ASOBAC has amplified upon the extent of credibility, referring to the Bertrand Russell's work (1948) titled Human Knowledge: Its Scope and Limits[2]. And as to the perceptions of auditors, ASOBAC had added explanations which were affected by an empiricist, David Hume of18th century's with his comments such as, "perception requires an association by the perceiver of various judgments and beliefs. There is no such thing as immaculate perception."[3] In fact, David Hume had mentioned earlier that " those perceptions, which enter with most force and violence, we may name impressions : and under this name I comprehend all our sensations, passions and emotions, as they make their first appearance in the soul."In the end, human perception is vulnerable and the process to nurture impression requires association of ideas[4].

ASOBAC had followed some philosophical views, and mentioned that "pioneer work concerned with the conceptual foundations of auditing is Mautz and Sharaf's ThePhilosophy of Auditing. This document has significantly influenced our thinking" (1973, 1). Mautz and Sharaf's (1961, 299) approach to weigh "adjacent fields of knowledge from which auditing draws some of its ideas" had been endorsed and acclaimed by AAA's ASOBAC. Since then, the conceptual framework of audit had willingly begun to include modern philosophical perspectives[5].

ASOBAC attempted to explore with the effects how prominent philosophical achievements in the past had affected Mautz and Sharaf's work which intended to establish theoretical foundation of auditing. ASOBAC had first examined Russell's concern of saying "if skepticism

---

[1]Schandl, C.W. (1978, preface ix) said that "events since 1969 have shown the need for a comprehensive theory of auditing, including the philosophical and psychological foundations." The author thinks such "events since 1969"would include, among others, the case of Continental Vending Machine in 1969 as an good example.
[2]ASOBAC (1973,28)argued that "human beings generally are aware that they hold their beliefs with varying degrees of conviction. Russell referred to these varying degress as degrees of credibility, the probability that a given assertion is true or valid."
[3]ASOBAC (1973, 28). Here, the author believes that it is the expression mostly taken over from what Hume once mentioned. Cf.Nin, A (2010, Conference proceedings Vol. I. 2nd BMAC 65-67).
[4]Note Nin, A (2008, 88, Figure 2) . Also, Hume's *Treatise of Human Nature* (1739-1740) in its relevant Part I. IV "Of connexion or association of ideas."
[5]For instance, Flint (1988) for which Mautz had put his Foreword to add comments on philosophical approach.

is to be theoretically defensible, it must reject all inferences from what is experienced"(popkin and Neto 2007,327), and dare excluded René Descartes' rigorous skepticism from their theory. In fact, ASOBAC had dealt with the problem of credibility and in its entailing skepticism on the foundation of pragmatism which would be applicable to auditing practices. And ASOBAC had been largely affected by the immersion of pragmatic thoughts initially conceived by William James6 (1842-1910) and Charles Peirce (1839-1914), and eventually ASOBAC had departed from the old metaphysical modes of thought. And in developing the theory of evidential-ism7 in epistemology8, ASOBAC availed the Mautz and Sharaf's (1961) view which had adopted William Montague's "New Realism."

In this article, the author's objective is to draw implications that the classical audit publications, i.e., Mautz and Sharaf, and ASOBAC, had been affected by genealogy of modern analytic, realistic, pragmatic philosophies which stand on positivism in Anglo-American countries. That is, Vienna Circle (Weiner Kreis)[9] of 19th century and Cambridge Circle in 20th century were the original thought resources which were taken over in US, along with the immigrations of some philosophers during the World War II[10].

[6]Popkin and Neto (2007, 307) talks regarding James' position as follows, "he breaks with skepticism in that he rejects - for certain kinds of beliefs - the skeptical rationalist principle of intellectual integrity that judgment must be suspended in the lack of sufficient rational warrant." It seems that skepticism and pragmatism are not easily be compatible.

[7]Bernecker and Duncan (2011, 58, Mcgrew) typically argued that "the concepts of evidence pervades our lives. In science, history, law, medicine, and innumerable other areas, evidence plays a central, indispensable role."

[8]According to Moran (2008, 469, Steup), "Epistemology, in the strict sense of the word, is connected with the nature of knowledge and justified (ore reasonable) belief. This twofold concern may be divided into five discernable questions, (1) what is knowledge? (2) what is justified belief? (3)how do we acquire knowledge? (4) what makes our beliefs justified? (5) extent of justified belief and knowledge."

[9]Moran (2008,18) argued that "Vienna Circle was hardnosed in their rejection of metaphysics and gave epistemic predominance to science and that too in a particular stringent form." That is, the Vienna Circle gave chance to turn metaphysics to epistemology, and to the scientific stages. Moran(2008, 27) also said that "for the first half of the century, Europe was at the center of western academic philosophy, especially if we include Britain as part of Europe… But especially since 1945, the axis has been moving persistently westward, specifically to United States."

[10]Moran (2008, 885, Matravers) argued"Popper and Hayek were both emigrants from Nazis (Popper from Germany and Hayek from German occupied Austria) and Berlin clearly had both Soviet Russia and Nazi Germany in mind when connecting positive liberty with the rise of totalitarianism."

2. MODERN PHILOSOPHERS AND FOUNDATIONS OF ACCOUNTING, AUDITING THOUGHTS

Listed below are the names of influential thinkers who have given significant impacts onto the thoughts on accountancies. Here, it would be recognized that the emergence of analytic philosophies and its timing that accountancies established their base would be overlapped notably at early 20th century.

Exhibit 1: Modern Philosophers and Their Latent Impact to Accounting and Auditing Concepts

Their Names	Life and relevant Institutions	Their accounts, and /or citation from 3rd parties	Relevant works and Characteristics of them
(1) Williard, V.O. Quine, 【Analytic, Scientific, and Logical Methodologies】	1908-2000, Harvard U.	"Holism of Quine, which has substituted the theory for the sentence as the appropriate unit on which surgery is to be performed. According to Quine, it is misleading to attempt the analysis sentence by sentence" (Moran, 2008, 72, Potter).	Two dogmas of Empiricism (1951) ／ From a Logical Point of View(1953) ／ Word and Object (1960) Citation made by Auditing :Toba (1980), 21st Century Public Company Auditing (2005)[11]
(2) Thomas S. Kuhn, 【Scientific methodologies】	1922-1996, Princeton U.	"Kuhn argued that a paradigm defines a world. Accordingly, there is a sense in which when a new	The Structure of Scientific Revolutions (1970) ・Denial of metaphysics

[11]Bell et al. (2005, 23-25) discussed with the "all audit procedures with a potential to yield evidence are, fundamentally, risk assessment procedures. They are risk assessment procedures because evidence has belief formation/revision potential." The author believes Bell et al.'s argument had been affected by Quine as to the phase of revising one's belief.

		paradigm is adopted, the world changes.""Kuhn's views inspiredsocial constructivists. Social constructivism is an agglomeration of views with varying degrees of radicalness and plausibility." (Moran, 2008, Psillos, 638)	・Confrontation with Popper
(3) Roderick M. Chisholm 【Renaissance of a priori Epistemology】	1916 – Harvard U. Brown U.	"For our purpose, we shall refer to auditor's professional opinion as a warranted assertion. A warranted assertion must be distinguished from positive knowledge because positive knowledge generally is impossible to come by. Clearly, Chisholm suggests that a true belief (or positive knowledge) involves not only the state of mind of the believer but a fact as well." (ASOBAC, 1973, 20)	Perceiving – A Philosophical Study (1957) ／Theory of Knowledge (1966,1989) ／ The Foundation of Knowing(1982) ／ ASOBAC(1973) [12] ／21st Century Public Company Audit(2005)
(4) Karl R. Popper,	1902-1994	"Popper wanted to preserve the idea that there is a	Fallibilism (1934) ／ Conjectures and

[12]ASOBAC (1973, 20) referred to both Chisholm and Russell in its section noted as Professional Opinion and Positive Knowledge Distinguished in Chapter 2. It seems to the author that Bell et al. (2005). has drawn the perspective from Chisholm(1981;1989) and Russell(1948), as they put those two names in their references, in relation to the quality of knowledge and assured justified belief through ASOBAC.

【Analytic Philosophy, Physics, Psychology, Scientific Methodology】	U. Vienna, U. of London	deductive relationship between observations and the ampliative conclusion of a putatively inductive references; as a result, he repudiated the notion of inductive support or confirmation. Rather than inductively support the conclusion, the evidence is only able to refute it." (Bernecker and Pritchard, 2011, Morrison, 448)	Refutations (1962)
(5) Rudolf Carnap, 【Semantics】	1891-1970, U. Vienna, U. of Chicago, U. of California	"Carnap developed a probabilistic logic of induction." (Bernecker and Pritchard, 2011, Morrison, 447)	Introduction to Symbolic Logic and its Applications (1958) ／ Meaning and Necessity ― A Study in Semantics and Model Logic (1956) SFAC No.2 Verifiability (1980), Accounting and Analytical Methods (1964)
(6) Ludwig Wittgenstein, 【Analytic Philosophy and Positivism】	1889-1951 Berlin Tech. U. Cambridge U.	"Wittgenstein has been a central resource or inspiration for other analytic social epistemologists as well. For instance, Wittgenstein is clearly a key	Logisch-Philosophische Abhandlung(1921) ／ Philosophical Investigations (1945, 1953) ／

		influence for authors favoring a “dialectical” approach to justification. According to this approach, “being justified” is social status granted by others to the believer.”(Bernecker and Pritchard, 2011, Kusch, 878)	Paton and Littleton (1940) ／ ASOBAT (1966) ／ SFAC No.2 Verifiability (1986)／Mattessich (1964)
(7) Clarence I. Lewis 【Symbolic Logic and Conceptualistic Pragmatism】	1883-1964 Harvard U.	“The assertion upon which he expresses an opinion must include empirically meaningful premises sufficient both as to quality and quantity. That inclusion of some empirically true assertions in the total set of premises in question is imperative is recognized by Lewis.” (ASOBAC, 1973,24)	Probable Knowledge and the Validity of Meaning (1965)／ASOBAC (1973)
(8) Percy W. Bridgman 【Physics】	1882-1963 Harvard U. Nobel Laureate	“Thus the first requirement of a concept, to Bridgman, is that it consist of or include a set of operations. The second requirement is that the operations be unique. A difference in operations indicates a difference in concepts.” ((Mautz and	The Logic of Modern Physics (1927) ／ Mautz and Sharaf (1961, 79)

		Sharaf, 1961, 79)	
(9) William P. Montague 【Philosophy in New Realism】	1873-1953 Columbia U.	“Many American philosophers have followed Peirce’s work, each advancing his own classification of the sources of knowledge. Contemporary writers, however, are almost unanimous that Montague’s treatment of the subject is the most comprehensive. His analysis, evaluation, and objective criticism of the sources of knowledge has made his work outstanding” (Mautz and Sharaf, 1961, 107)	The Ways of Things (1940) ／The Ways of Knowing (1925)／The New Realism (1912)／Mautz and Sharaf (1961, 107)
(10) Bertrand A.W. Russell 【Analytic Philosophy】	1872-1970 Cambridge U. Nobel Laureate (Literature)	“Science has had particular success in the development of its philosophy, a large portion of such success being attributable to men like Poincare about; whom Bertrand Russell writes,” (Mautz and Sharaf, 1961, 7)	A History of Western Philosophy (1945)/ Human Knowledge: Its Scope and Limits(1948)/ Truth and Falsefood (1965) 21st Century Public Company Audit (2005)
(11) Charles S. Peirce 【Astronomy】	1839-1914 Harvard U.	“We find Peirce’s definition of inquiry particularly interesting because it relates	Peirce and Pragmatism by W.B. Gallie (1952)

		directly to the kind of problem faced by auditors. He defined inquiry in terms of the basic concepts of doubt and belief." (Mautz and Sharaf, 1961, 107)	"Father of pragmatism"
(12) William James 【Pragmatism】	1842-1910 Harvard U.	"A debate within pragmatism that began between James and Peirce continues to this day. – they require philosophical theories and norms to arise from our everyday practices; they are fallibilists in that they think that none of our beliefs provide us with a certain foundation for knowledge; and they are holists in that they take their view of truth and inquiry to encompass all areas of inquiry."(Bernecker and Pritchard, 2011, Misak, 861)	The Meaning of Truth (1909) "Father of Pragmatism"

The author would like to point out intrinsic connections between philosophical views and accounting and/or auditing works, even though they are inadequately short listing, as follows. With the order tracing from the latest to the older ones, for instance, Nelson (2009) dealt with the moderate, modern skepticism, referring to a philosopher Kurtz (1992). Japanese Kuno (2009) referred to the dialectic arguments of Popper (1976), and Kuno had counted times of quotation with regard to the philosophical views explained in an Accounting Thesaurus (1995) of R.J. Chambers. Bell et al. (2005) put Chisholm (1982)'s name in its references, and had been affected by Quine's (1951) view of "belief revision-able"setting of thought. Japanese Toba (1980) had referred to Carnap (1950) and Quine (1953) on his trial to apply semantic analysis. Statement on Accounting Theory and Theory Acceptance (SATTA, AAA, 1977) had employed Kuhn's (1970) logics. And ASOBAC (1973) had cited variety of philosophical works and located Russell's (1948, 1963) in its pivotal center. On the other hand, ASOBAT (1966) had found certain value in James'(1909) pragmatism. Mattessich (1964) had examined the logics used by Carnap (1958), Popper (1959;1962), Russell(1945), Wittgenstein(1945),and so on. Among others, Mautz and Sharaf (1961) had appraised Montague's (1925) with its value to enhance credibility of audit evidential matters, applying certain moderated skepticism. Further, US SFAC No.2 (1980) and Paton and Littleton (1940)'s had found necessary element of "verifiability" which had incidentally been the central concern for Wittgenstein's. That is, accounting and audit theory had placed foundation on modern philosophy and they had been developed in somewhat paralleled fashion with ongoing pragmatism[13]. According to Moran (2008, 987), such tendency could be driven with permeation of "pluralism"[14]persisted in America, such like a propaganda against Marxism or Totalitarianism, notably after World War II. In fact, Pluralism had been introduced by American Philosophical Association (APA) which called for inclusion of diverse and innovative perspectives at some relevant professional meetings, and in so many journal publications.

3. CONCEPTUAL FOUNDATION OF THE WORK － MAUTZ AND SHARAF'S

Mautz and Sharaf, at first, had examined the value of scientific approach in making query that had been the line of Bridgeman[15], with the intention to carry on effectiveness and to enhance inquisitiveness on making queries. Mautz and Sharafhad shown interests with the way to define concepts with operational method. However, they(1961, 78) concluded that "if the

[13]Why most of old ideal philosophy had to be thrown away from the pragmatic viewpoint? Robertson (1979, 64) explainedin a way that "the current mood of society is to question not only conduct itself but the rules on which conduct is based. Thus a dogmatic imperative approach to ethical decisions may not necessarily be completely sufficient for the maintenance of professional standards."

[14] It is explained by DR Scott (1933, reprinted 1978, 64-66) with the view of pluralismespecially in political theory, with his Chapter IV- Disintegration of Market Control.

[15]Mautz and Sharaf (1961, 79) cited P.W. Bridgman's *The Logic of modern Physics* (1958,5) with regard to the meaning of operationalism.

concept relates to something physical, the operations are physical; if the concept is mental, the operations are mental. Without knowing the operations involved, we cannot understand the concept."

In the end, Mautz and Sharaf had pursued the idea that would be some combination which would be brought by operations anda priorilogical definitions in order to establish the foundation of theory16. In fact, Mautz and Sharaf argued that "Operationalism, like empirical testing, is but one way of clarifying. Some see serious limitations to the operationalism approach and recommend against relying on it too strongly …. writers contend that the best solution is to combine the precision of operationalism with the significance of traditional conceptual definitions and to use each where it best fits….we feel that there are some other concepts in which the operations concerned cannot be as readily or as precisely stated because of the infinite variety of possibilities" (1961, 80). After all, Mautz and Sharaf could not find more value on operationalism over a priori, logical definitions. And, that is the reason why they put Montague's The Ways of Knowing(1925), as the relevant foundation of their Chapter 5 – Evidence, in their work (1961).

Mautz and Sharaf had applauded Montague's work by asserting "Montague's treatment of the subject is the most comprehensive. His analysis, evaluation, and objective criticism of the sources of knowledge has made his work outstanding"(1961,107). And they referred to the Montague's in order to clarify attributes of evidential matters acceptable for professionals' eyes. Mautz and Sharaf's conception concerning evidences existed originally in Montague's framework. And, they assumed the pragmatism and skepticism complementally, in furthering the thoughts concerning valid and competent evidences.

The advantage of Montague's conception is his approach in dealing with rationalism, empiricism, pragmatism, etc, in fairly echoed way. And "New Realist"Montague intended to enhance the rigidness as to the results to be derived, and for that objective, he availed the old skepticism as some functional contrivance.

[16]This way of thinking may be in accordance with what Whitehead (1925, reprinted 1967,143) argued as follows, "scientific materialism and the Cartesian Ego were both challenged at the same moment, once by science and the other by philosophy, as represented by William James." That is, science and philosophy would be complementary in nature.

According to Moran(2008, O'shea 221), "the character of philosophyas practiced in America underwent an important sea-change that became increasingly evident from the late 1920s through the 1930s and 1940s. These changes resulted, first, from the increasing interest in America in the sorts of logical and linguistic analyses that Russell and others were bringing. Influx, resulting from the rise of the Nazis, of logical positivist and logical empiricist philosophers from the Vienna Circle and from Berlin who had been strongly influenced by the developments in logic just mentioned and by other revolutionary developments in science (i.e., the birth of analytic philosophy)" With the rise of so called analytic philosophy in US, modern philosophers had gathered with the hope to depart from old idealism, and to proceed to the anti-Kantian foundation17, and by the mid of 20th century, philosophers had evacuated from old metaphysics. Eventually,"logical form became a central and distinctive feature of analytic philosophy in the 20th century" (Moran ,2008, Sainsbury). As the legitimate successor of Mautz and Sharaf's[18], ASOBAC had laid the problem of evidences on the foundation of analytical thoughts of philosophy.

4. MONTAGUE'S CONCEPTION

Mautz and Sharaf (1961) had paid attentions on Montague's (1925) discussion, notably, with the worth to avail skepticism in order to enhance rigidity of theory. To enhance credibility of evidential matters, the approaches that they had taken over (from Montague) were five positive methods plus one negative, i.e., (1) authoritarianism(2) mysticism (3)rationalism (4)empiricism (5)pragmatism, and that of (6) skepticism.

The New Realism had been prevalent among20th century philosophers in US, especially for those from Vienna and Cambridge Circles. Montague (Columbia) had promoted their pragmatic, analytic philosophy with W.B.Pitkin(Columbia), and W.T. Marvin(Rutgers), E.G.Spaulding(Princeton), E.B. Holt and R.B. Perry(Harvard). These new realists believed that divergence of metaphysical discussion had been caused by the environment that lacks precision, uniformity on terminologies, and deliberate cooperation in research. With such nature and

[17]Moran (2008, 43, Potter)'s Chapter 1 - the Birth of Analytic Philosophy argued that "First Frege tried to refute Kant's account in the case of arithmetic by showing that it could be derived from logic; then Russell extended the project to the whole of mathematics."
[18]In short, it would be understood as a reflection of pragmatism. Mautz and Sharaf (1961, 13) said that "we find the analytic and valuational methods to be the more fruitful in developing audit theory."

condition, philosophy couldn't be a science. Therefore, as Montague put in his platform article (Holt et al, 1910, 396): "Realism is opposed to subjectivism or epistemological idealism which denies that things can exist apart from an experience of them, or independently of the cognitive relation."In that way, New Realism had succeeded to evacuate from old conventional idealism to the discussion which approaches science, which for instance would approve the existence of objects apart from recognition in one's mind.

The New Realists believed that the existence of objects and human conscious with existence are different problem. And they therefore opposed to the idealism which believes that the existence depends on human recognition. The New Realism had been founded on the pragmatism permeated in US from late 19th century. However, even the new realists, they finally encountered to the situation that the results did not end up to the one absolute conclusion. They met with difficulties to explain why some conclusion on evaluations can't be converged.

5. ATTRIBUTES OF VALID AND COMPETENT EVIDENTIAL MATTERS

At present, the attributes that the audit evidential matters contain would be understood as something persuasive, rather than convincing. That is what actually US auditing standards SAS No.80 (1996, AU326.22) is requiring, i.e., "the auditor has to rely on evidence that is persuasive rather than convincing."

In the audit field work environment, neither absolute evidences nor conclusive evidences[19] are obtainable. Further, there are certain limitations and/or difficulties in obtaining corroborating evidences in order to support managements' assertions. On the other hand, evidences which bring reasonable assurances would have certain certitude which convince merely his or her own mind. The certitude which can bring "justifiable belief" to the auditors would be persuasiveness[20]sought by auditing standards.

As to the discussions regarding evidential matters, it can be traced back to the locus,

[19]ISA 200.11 (1994) noted"the fact that most audit evidence is persuasive rather than conclusive." In essence, neither absolute nor conclusive evidences are obtainable on usual conditions as US and International Standards on Auditing note.

[20]Bell et al. (2005, 65) said that "we observe that the persuasiveness of evidence used to form and revise beliefs and derivative risk assessments recently has become more critical to auditors because society has heightened the extent to which it holds authors responsible for detecting material financial statement fraud."Meaning of persuasiveness for audit evidences is underscored in Bell et al.'s arguments as well.

representatively, of Chisholm(1966)'s, Russell(1948)'s, and Montague(1925)'s . The issues as to trustworthiness of evidences were, in fact, not originated in auditing theories. Rather, it had been envisaged in modern philosophy, among others, positive, analytic philosophy which were affected by pragmatism. Mautz and Sharaf mentioned in their Chapter 5 (1961, 117) that, "most evidence is no more than persuasive. The auditor must take such evidence as he can obtain and make the best decisions possible. We have propositions to judge; judgments must be made; if compelling evidence is not available, let us judge as soundly as we can with the evidence that is available." Hence, the auditors virtually can't reach to the absolute, compelling, nor conclusive evidences and they have to face realities. In the end, persuasive evidences only, which surpass the convincing evidences could be the solid base of justifiable belief[21], and that is the consensus that accounting professions had agreed invisibly for long time.

In the end, Mautz and Sharaf's conclusion is well represented in their expression that "Montague agrees that the human mind is unable to attain absolute certainty in any field of inquiry, yet this does not necessarily lead to a condition of complete doubt. There is still the possibility and even the probability that asserted truths are true; the evidence may be such as will persuade the mind to accept the proposition. If the evidence is thus adequate, the mind is more in error when it continues to doubt than when it accepts." The context developed in that way would prove that works of Montague, Mautz and Sharaf are the representation of pragmatic thoughts with certain compromises in securing effectiveness. Such thoughts would gauge value from the results eventually obtainable. Mautz and Sharaf (1961), as with Montague's (1925), adopted unlimited countermarching method by taking skepticism, and they intended to enhance the value of evidence to secure hardness[22] of knowledge to be derived.

Incidentally, Montague had understood probability somewhere in between dogmatism and absolute skepticism. Montague intended to be an anti-dogmatist with the view of modern philosopher. Mautz and Sharaf as well wished to be philosopher and scientist, and explored the meanings of persuasiveness. The concepts deployed by modern auditing theory would be

[21]For instance, Montague (1925, reprinted 1978, 34) put,as to justifiability, as follows. He noted "all of us hold certain beliefs which seem to have no basis of support other than that of intuition. The feeling that dark places and dead bodies are dangerous." That is, intuition is not the one formed on justifiable belief.
[22]AICPA *Cohen Commission Report* (1978, 8) discussed "hardness" as follows. "a hard measurement is less subject to outside bias. …when an accounting measurement is not sufficiently hard, the required interpretation places an additional burden on the auditor."

subtle representations of analytic, new realistic, and pragmatic philosophies. In the work of Mautz and Sharaf which ASOBAC had appraised, the values of philosophies had been woven.

6. AUDITING AND PHILOSOPHY

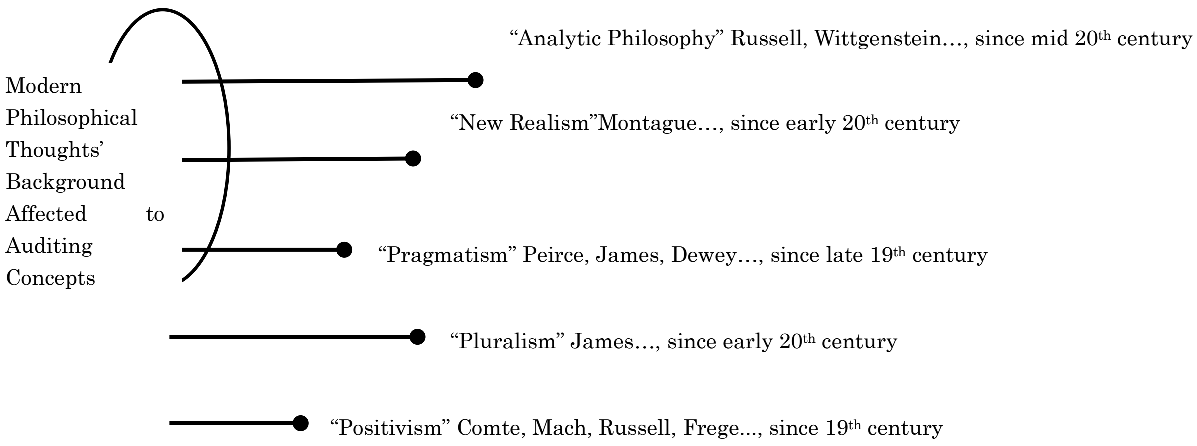
At present, audit researchers as well have to tackle with the meaning and dilemma brought from philosophical facets. The reality we are generally aware would be the divergence of philosophical arguments and the fact that, in modern world, philosophy would no longer be conceived as a genre of science. In philosophical views, variation of characters and contents found would be so vast. Sympathy for one view might simply mean a denial to another view. The common characteristics throughout the philosophy resides only in its given name.

The author here would like to point out that science would deal with phenomenon in positive way, but “quasi” science philosophy naturally would deal with it negatively. Thus, philosophy would have to entail the task that applies critical thoughts onto the realistic phenomena observed.

The pragmatism that had been rolled out by Peirce, James and Dewey in US had been expected to lessen the width of divergence in modern thoughts. But it couldn’t succeed to remove dispersion even on the ground of pragmatism.

Mautz and Sharaf which examined applicability of modern philosophy to auditing concepts, in fact, found value in philosophy which had been embraced from ancient Greece. They referred to the great classics but oldness in thoughts should have been abandoned if Mautz and Sharaf had pursued pragmatism solely in their thoughts. The author suspects that Mautz and Sharaf intentionally left unsmoothed and unsettled conditions, for the purpose to bring about arguments in auditing where no audit thinkers has yet set foot, then.

Exhibit 2: Departure from Metaphysics－Lineages of Modern Ideologies which Constitute 20th century Anglo-American Thoughts Background



7. CONCLUSION AND PERSPECTIVE

ASOBAC had taken over Mautz and Sharaf's perspective of laying philosophy as the foundation of audit. Henceforth, the basic concepts of auditing had to embrace aspects to deal with reality in negative way, as represented by the philosophical posture to maintain skepticism in auditors' mindset.

Professional skepticism had been rolled out as accounting professions' idealistic attitude to promote quality of audit, as explained, e.g., The Commission on Auditors' Responsibilities: Report, Conclusions, and Recommendations (Cohen Committee, 1978). In the report, stern skepticism had been smoothed-out and sought as attainable goal which springs from due professional care. But, persuasiveness as primary element for evidence had never been changed on the explicit contexts of auditing standards. And apparently, stepping into the days of the 21st century, with the fraud cases of Enron and WorldCom, auditors are suggested to keep presumptively doubting stances which may be realized in questioning managements' integrity.

Modern audit environment constantly rests in disrupted condition. It drags David Hume's skepticism and, on the other hand, is going to apply skepticism as a safety tool for securing credibility of audit. Even in the 21st century, situation is not cured, and accounting profession is suffering in some midpoint between ideal position of “thought leadership” and realism that auditors are belonging to.

The scene of contradiction that auditors would constantly encounter may be, unsurprisingly, “déjà vu” situation. Statement on Accounting Theory and Theory Acceptance (SATTA, AAA,1980) once mentioned that it is far to reach to the one generally applicable financial accounting theory. And, to single out a theory amongst the theories would not help ceasing and dissolving disputes. And it can’t be successful to stop any controversies. SATTA would have argued that, if we understood the essential issue more thoughtful way, we no longer have had the wish to establish one universally acceptable, authoritative rule. SATTA was the opinion which pointed out the assumption of disintegration and of dispersion as phenomena to be taken for granted. Oddly, such condition may ring our bell with what Descartes once mentioned, as Mattessich (1964, preamble) quoted, “diversity of our opinion does not arise from some being endowed with a larger share of reason than others, but solely from this, that we conduct our thoughts along different ways, and do not fix our attention on the same objects. For to be possessed by a vigorous mind is not enough; the prime requisite is rightly to apply it.”

With the reasons above mentioned, the author believes there would be remote possibility that issues in auditing converge into one point especially in any macro, holistic viewpoint. On the other hand, in the micro, reductionist view, auditors’ behavior would be shed light in positive, empiric way. At last, by the mezzo, intermediate approaches, controversies such as choosing, e.g., effectiveness of substantive test vs. risk approaches[23], skepticism and its cost-benefit aspects, etc, would be left as prolonged but never ever unsolved themes.

Mautz and Sharaf (1961, Preface) once mentioned in a way that “we trust the title of this book will not be misunderstood. It was chosen because it describes the center of interest of this study, not because we feel the study adequately presents a complete and finished philosophy. So far as the philosophy of auditing is concerned, we recognize that our efforts here are both incomplete

[23]For instance, in the memorandum dated Sept.28, 1998 by Lynn E. Turner,SEC Chief Accountant,addressed to A.A. Sommer, Chair of US POB did contain the context which US SEC then wanted to put more weight on substantive tests rather than risk approaches in order to heighten the quality of audit. Also, in EC Green paper (“Audit policy: Lessons from the Crisis”) issued Oct. 13, 2010, it was noted that EC would be examining to revert to the substantive test approaches. However, accounting profession in general has been inclined to believe that risk approach , which lessens the substantive test burden on field work, would in most cases be sufficient and appropriate in realizing reasonable assurance.

and inconclusive.” Philosophical approaches sometimes reflect schizophrenia[24]even on audit concepts. Audit thinkers can’t evade disruption so long as theory would live with full of contentions, as represented with never solved issue thinking what are ideal evidences, and to what extent auditor should be skeptical to the clientele.

REFERENCES

American Accounting Association(AAA) Committee on Concepts and Standards for External Financial Reports .1977. Statement on Accounting Theory and Theory Acceptance (SATTA), FL.

American Accounting Association(AAA).1966. A Statement of Basic Accounting Theory (ASOBAT), FL.

American Accounting Association(AAA) .1973.Committee on Basic Auditing Concepts, A Statement of Basic Auditing Concepts (ASOBAC), FL.

American Institute of Certified Public Accountants.2012.Journal of Accountancy, A Special Issue Celebrating 125 years of AICPA, AICPA June,2012.

American Institute of Certified Public Accountants.2000.Public Oversight Board, The Panel on Audit Effectiveness, Report and Recommendations, NY:AICPA.

American Institute of Certified Public Accountants .1978.(Cohen Commission Report)The Commission on Auditors’ Responsibilities, Report, Conclusions, and Recommendations. NY :AICPA.

Bell T.B. et al.2005.The 21st Century Public Company Audit, KPMG International.

Bell T.B. et al.1997,Auditing Organizations Through a Strategic-Systems Lens, KPMG Peat Marwick LLP.

Bernecker S. and Duncan.2011.The Routledge Companion to Epistemology, Routledge.

Degos J.G. 2010.“The Schizohrenia of Accounting Historians: Doctor Jekyll, Historian and Mister Hyde, Accountant” Conference Proceedings, 2 BMAC, AAFA, Istanbul.

[24]As some noteworthy paper which shed light on schizophrenic aspects on accounting history, see Degos (2010).

Financial Accounting Standards Board.1980.Statements of Financial Accounting Concepts 1-6, FASB, Distributed by McGraw-Hill.

Flint D. 1988.Philosohy and Principles of Auditing, An Introduction, MacMillan Education.

Financial Accounting Standards Board (FASB).1980.Accounting Standards, Statement of Financial Accounting Concepts 1-6,Stamford, CT:FASB.

Flint, D 1988.Philosohy and Principles of Auditing, Macmillan Education Ltd.

Holt, E.B., W.T., Marvin, W.P., Montague, R.B., Perry, W.B., Pitkin, and E.G., Spaulding (1910) “The program and first platform of six realists.”Journal of Philosophy, Psychology and Scientific Methods, 7.

Hurtt, R.K. 2013.“Research on Auditor Professional Skepticism: Literature Synthesis and Opportunities for Future Research”Auditing: A Journal of Practice & Theory, Vol.32. Supplement 1;.45-97, AAA.

Kenny A. 2006.An Illustrated Brief History of Western Philosophy, Blackwell Publishing.

Kissinger, J.N. 1977. “A General Theory of Evidence as the Conceptual Foundation in Auditing Theory: Some Comments and Extensions”The Accounting Review, Vol.LII, No.2, Aril 1977, AAA.

Kurtz, P. 1992.The New Skepticism: Inquiry and Reliable Knowledge, Prometheus Books, NY.

Mattessich, R. 2008.Two Hundred Years of Accounting Research, Routledge.

Mattessich, R. 1964.reprinted 1977, Accounting and Analytical Methods, Scholars Book Co.

Mautz R.K. and H.A. Sharaf.1961.18thprinting,1997.The Philosophy of Auditing, AAA Monograph No.6.

Moran, D. (Ed.)2008.The Routledge Companion to Twentieth Century Philosophy, Routledge.

Montague, W.1925, by the reprinted 1978.The Ways of Knowing or The Methods of Philosophy, Muirhead Library of Philosophy, Humanities Press Inc. NY.

Nelson, M.W. 2009.“A Model and Literature Review of Professional Skepticism in Auditing”Auditing :A Journal of Practice & Theory, Vol.28, No.2, November,2009, AAA.

Nin, A (2010) “Auditor’s Skepticism and Hume’s Problem” Conference Proceedings, Vol. I, 2nd Balkans and Middle East Countries Conference on Auditing and Accounting History, MUFAD, Istanbul.

Nin, A (2013) “Evolution of Professional Skepticism and Its Thought Background” Conference Proceedings, Vol. III, 3rdInternational Conference on Luca Pacioli in Accounting History, 3rdBalkans and Middle East Countries Conference on Accounting and Accounting History, AECA, TURMOB, MUFITAD, Istanbul.

Paton W.A. and A.C. Littleton.1940.An Introduction To Corporate Accounting Standards, AAA.

Pattillo, J.W.1965.The Foundation of Financial Accounting, Louisiana State University Press.

Polanyi,M .1958.Personal Knowledge, The University of Chicago Press, 1962.

Popkin, R.H. and J.R.M.Neto.2007.Skepticism - An Anthology, Prometheus Books.

Robertson J.C.1979.Auditing, Revised Edition, Business publications Inc.

Schandl, C.W.1978.Theory of Auditing, Evaluation, Investigation, and Judgment, Scholars Book, Co. Texas Houston.

Scott, DR.1931.reprinted 1973.The Cultural Significance of Accounts, Scholars Book Co.

Sober E. 2008.Evidence and Evolution, The Logic Behind Science, Cambridge University Press.

Stroud, B.1984.The Significance of Philosophical Scepticism, Oxford.

Toba, Y.1980. “A Semantic Meaning Analysis of the Ultimate Proposition to be Verified by Independent Auditors”The Accounting Review, Vil.LV, No.4, October 1980, AAA.

Toba, Y.1977. “A General Theory of Evidence as the Conceptual Foundation in Auditing Theory : A Reply, The Accounting Review” Vil.LII, No.3, July 1977, AAA.

Whitehead, A.N. 1925,Rerinted 1967.Science and the Modern World, The Free Press, Simon & Schusetr Inc.

3rd International Symposium on Accounting and Finance

ISAF 2014 TOKYO

AUDITORS' PUBLIC OVERSIGHT: GLOBAL PERSPECTIVES AND TURKEY EXPERIENCE

Nail Sanlı*

A.R. Zafer Sayar**

Muharrem Karataş***

ABSTRACT

Some radical regulations with the aim of reestablishment of public trust in financial markets are seen in almost all countries as a result of accounting and auditing scandals occurred firstly in the USA, then successively in other developed economies beginning from early 2000's. The turbulent events of the recent global financial crisis have highlighted again the critical importance of credible, high-quality financial reporting and the relevance of quality audits to support this. The arrangements mainly focus on field of auditing and accounting standards. New standards setters, supervision and auditing mechanisms were designed as well as the efforts for increasing the quality of accounting and auditing standards and auditing activities were generally preferred to be held under a tight control in order to ensure auditing to be performed in a more qualified and sufficient reliability. Shaping national regulatory approaches for the auditing, the United States enacted the Sarbanes-Oxley Act of 2002 (SOX) which created the PCAOB was the first example of this arrangement. SOX required that auditors of U.S. publicly held companies be subject to external and independent oversight for the first time in history. Previously, the profession was self-regulated. After the creation PCAOB in the United States, the European Commission and other international organizations have adopted a similar model and have recommended to members this approach. In practice, many countries have started to take place this approach in their regulations. Also, in Turkey, there was no mechanism to enclose the whole financial sector in monitoring and supervision of auditing; auditing activity has a multi-headed structure in the issues of regulation, monitoring and public oversight. The most important development related audit practice in Turkey is the new Turkish Commercial Code (TCC) issued in 2011 would be effective in 2013. Therefore, auditing and accounting practices must be evaluated within the framework of the new TCC. In this context, monitoring of all auditing enterprises in the country within an autonomous establishment is considerably important. However, the new Turkish Commercial Code is evaluated as an opportunity on this issue and

* Sworn-in Certified Public Accountant (YMM), President of the Union of Chambers of Certified Public Accountants and Sworn-in Certified Public Accountants of Turkey (TURMOB), e-mail: nsanli@turmob.org.tr

** Associate Professor, Part-Time Instructor at TOBB ETU Department of Business & Coordinator at TURMOB, e-mail: zsayar@etu.edu.tr, zsayar@turmob.org.tr

*** Phd candidate at Gazi University Department of Accounting and Finance, Technical Expert at TURMOB, e-mail: muharrem.karatas@turmob.org.tr

it is thought that the previous multi-headed structure situation might be overcome and an effective accounting and auditing standards and auditing control model might be created by means of establishing Turkish Public Oversight Authority (POA) that will execute four primary functions in overseeing auditors: registration, inspection and oversight, standard setting (both of accounting and auditing) and enforcement.

Keywords: *Audit, Auditing Standards, Auditors' Oversight, Accounting Standards, Audit Quality, Public Oversight*

Jel Classification: *M4O, M41, M42, M49*

1. CONCEPT OF AUDITING AND ITS BRIEF HISTORY

Audit makes an opinion in the issue whether financial statements of an enterprise reflect its financial status and performance accurately and honestly in conformity with generally accepted accounting principles and legal adjustments (Türker, Sayar & Alp, 2010).

Sarbanes-Oxley Act entered into force in 2002 in the United States of America defined audit as analysis of financial statements of publicly held companies in order to make an opinion within the framework of standards and norms accepted by Public Company Accounting Oversight Board (PCAOB) and Securities Exchange Commission (SEC) having regulatory and supervisory power in audit[1] (Roybark, 2007).

Need for audit should be evaluated within the framework of financial markets' need for confidence and stability. If financial markets are based on information which reflect truth and reality honestly within the framework of the concept of public enlightenment, transferring false, inaccurate and misleading, so unreliable information into the markets will weaken the concerned basis and make markets unstable and inoperative (Gunther & Moore, 2002). In this context, auditing activity emerges as a fact which has a specific importance for operation of finance markets in confidence and stability and so must be emphasized carefully and sensitively (Sayar, 2013).

When we look at the history of audit; understanding the significance of audit, acknowledgement and implementation of it as a professional activity in the world occurred in late 19th century in England. Having emerged in context of developing, growing economies and changing needs, audit was legally acknowledged during this period and this concerned

[1] SOX Section 2/(a)-2

activity started to be executed within professional associations and institutions and in the framework of certain legal arrangements (Türker, Sayar & Alp, 2010).

Professional activity rapidly developed in Canada and the USA following England, it was settled on a legal basis and trade unions were established. “Canadian Institute of Certified Accountants” of 1880 and “American Public Accountants Union” of 1886 in New York can illustrate the circumstance (Sayar, 2013).

It is seen that after this period profession of audit has rapidly developed mostly in the framework of finance and capital market activities and members of the profession were organized first in Europe, then other countries; the principles, essences and rules to be conformed in execution of the profession were constituted both by public authorities and trade associations having an effective position in self-regulation of the profession and similar associations and institutions, and they have been gradually improved and/or renewed with acquired experiences in developing and rapidly internationalized world economy (Sayar & Alp, 2008).

2. ACCOUNTING SCANDALS AND AFTER THEN ESTABLISHMENT OF PUBLIC OVERSIGHT MECHANISMs

Some radical regulations with the aim of reestablishment of public trust in financial markets are seen in almost all countries as a result of accounting and auditing scandals occurred firstly in the USA, then successively in other developed economies beginning from early 2000’s. The regulations mainly focus on field of auditing and accounting standards. New standards setters, supervision and auditor oversight mechanisms were designed as well as the efforts for increasing the quality of accounting and auditing standards and auditing activities were generally preferred to be held under a tight control in order to ensure auditing to be performed in a more qualified and sufficient reliability (Türker, Sayar & Alp, 2010).

The first of these regulations is the establishment of "public oversight bodies" in order to ensure public oversight of the accounting and auditing profession. Regulations made in the context of public oversight have been in the form of the establishment of a public oversight body which takes at least ultimate responsibility for the education, qualification, quality assurance and disciplinary procedures relating to statutory auditors and audit firms that have audited to the public interest bodies (including non-public interest entities in European Union (EU) Member States and other some countries (Türker & Türker, 2013)

The objective of the public oversight system for audit is to contribute the raising of the performance and quality of the accounting and auditing profession, the protection of the independency and objectivity of the accounting and auditing profession, and ensure the sustainability of the trust to audit of accounts and professional members at national and international level (Türker & Türker, 2013).

Effective oversight of the accounting profession and of independent audits is critical to the reliability and integrity of the financial reporting process. Oversight of auditors can occur in several ways, including within audit firms, by professional organizations and public or private sector oversight bodies, and through government oversight. In addition, oversight may be provided by supervisory boards and audit committees representing investors in matters relating to individual companies (IOSCO, 2002).

Within a jurisdiction, auditors should be subject to oversight by a body that acts and is seen to act in the public interest. While the nature of an auditor oversight body and the process through which it carries out its activities may differ among jurisdictions, an effective oversight mechanism generally includes the followings:

i. A mechanism to require that auditors have proper qualifications and competency before being licensed to perform audits, and maintain professional competence.

ii. A mechanism to require that auditors are independent of the enterprises that they audit, both in fact and in appearance. Effective standards, regular assessments, and regulatory oversight generally increase the likelihood that independence is maintained.

iii. A mechanism should exist to provide that a body, acting in the public interest, provides oversight over the quality and implementation of auditing, independence, and ethical standards used in the jurisdiction, as well as audit quality control environments.

iv. A mechanism should exist to require auditors to be subject to the discipline of an auditor oversight body that is independent of the audit profession, or, if a professional body acts as the oversight body, is overseen by an independent body.

v. An auditor oversight body should establish a process for performing regular reviews of audit procedures and practices of firms that audit the financial statements of listed public companies.

vi. An auditor oversight body should have the authority to stipulate remedial measures for problems detected, and to initiate and/or carry out disciplinary proceedings to impose sanctions on auditors and audit firms, as appropriate (IOSCO, 2002).

3. AN OVERVIEW ON PUBLIC OVERSIGHT IN USA AND IN JAPAN

3.1. PUBLIC OVERSIGHT OF THE AUDITORS IN USA

3.1.1. Establishing an Oversight Body in USA

PCAOB was created in response to an ever increasing number of accounting "restatements" (corrections of past financial statements) by public companies during the 1990s, and a series of high profile accounting scandals and record-setting bankruptcies by large public companies, notably those in 2002 involving WorldCom and Enron. Prior to the creation of the PCAOB, the audit industry was self-regulated through its trade group, the American Institute of Certified Public Accountants (AICPA).

PCAOB is a private-sector, nonprofit corporation created by the Sarbanes–Oxley Act of 2002 to oversee the audits of public companies and other issuers in order to protect the interests of investors and further the public interest in the preparation of informative, accurate and independent audit reports. The Sarbanes-Oxley Act of 2002, which created the PCAOB, required that auditors of U.S. public companies be subject to external and independent oversight for the first time in history. Previously, the profession was self-regulated (PCAOB, 2014).

3.1.2. Organizational Overview of PCAOB

The PCAOB has five Board members, including a Chairman, each of whom is appointed by the SEC, after consultation with the Chairman of the Board of Governors of the Federal Reserve System and the Secretary of the Treasury. Exactly two Board members are Certified Public Accountants. If the PCAOB Chairman is one of them, he or she may not have been a practicing CPA for at least five years prior to being appointed to the board. Each member serves full-time, for staggered five-year terms. The Board's budget, approved by the SEC each year, is funded by fees paid by the companies and broker-dealer who rely on the audit firms overseen by the Board. The organization has a staff of close to 800 and offices in eight states in addition their headquarters in Washington, D.C. (PCAOB, 2014).

3.1.3. PCAOB Powers

The PCAOB has four primary functions in overseeing the auditors: registration, inspection, standard setting and enforcement. Under Section 101 of the [Sarbanes-Oxley Act], the PCAOB has the power to:

- register public accounting firms that prepare audit reports for issuers and broker-dealers;
- set auditing, quality control, ethics, independence and other standards relating to the preparation of audit reports of issuers;
- conduct inspections of PCAOB-registered public accounting firms;
- conduct investigations and disciplinary proceedings concerning, and impose appropriate sanctions where justified upon, registered public accounting firms and associated persons of such firms;
- perform such other duties or functions as the Board determines are necessary or appropriate to promote high professional standards among, and improve the quality of audit services offered by, registered public accounting firms and their employees;

- sue and be sued, complain and defend, in its corporate name and through its own counsel, with the approval of the SEC, in any Federal, State or other court;

Part of the PCAOB's power to set rules of the auditing industry includes the power to regulate the non-audit services that audit firms may offer their audit clients (such as consulting or tax services). This power was given to the PCAOB as a result of allegations, in cases such as Enron and WorldCom, that auditors' independence from their clients' managers had been compromised because of the large fees that audit firms were earning from these ancillary services.

Under Section 103 of the Sarbanes-Oxley Act, the PCAOB establishes auditing and related attestation, quality control, ethics, and independence standards and rules to be used by registered public accounting firms in the preparation and issuance of audit reports as required by the Act or the rules of the SEC.

3.1.4. Inspections

PCAOB inspects registered public accounting firms to assess compliance with the Sarbanes-Oxley Act, the rules of the Board, the rules of the Securities and Exchange Commission, and professional standards, in connection with the firm's performance of audits, issuance of audit reports, and related matters involving U.S. companies, other issuers, brokers, and dealers (PCAOB, 2014).

The Act requires the Board to conduct those inspections annually for firms that regularly provide audit reports for more than 100 issuers, and at least triennially for firms that regularly provide audit reports for 100 or fewer issuers (PCAOB, 2014).

As required by the Act, the PCAOB prepares a written report on each inspection and provides it, in appropriate detail, to the SEC and to certain state regulatory authorities. The Board also makes portions of the reports available to the public; however, certain information is restricted from public disclosure, or its disclosure is delayed, as required by the Act (PCAOB, 2014).

3.2. PUBLIC OVERSIGHT OF THE AUDITORS IN JAPAN

3.2.1. Establishing an Oversight Body in JAPAN

The CPAAOB (Certified Public Accountants and Auditing Oversight Board) was established on April 1, 2004 based upon the CPA Law. The CPAAOB is an independent regulatory body (council) established within the Financial Services Agency (FSA), consisting of one chairperson and one full-time and eight part-time commissioners. The board members are appointed by the Prime Minister with the consent of the Diet. The Board exercises its statutory authority independently from the FSA. The term of the members is three years. In principle, they shall not be discharged from their positions against their wills (CPAAOB, 2014).

3.2.2. CPAAOB's Responsibilities and Organizational Structure

The CPAAOB has the following three responsibilities:

- Reviews of the "quality control review" and inspections
- Implementation of CPA Examinations
- Deliberation of disciplinary actions against CPAs and audit firms

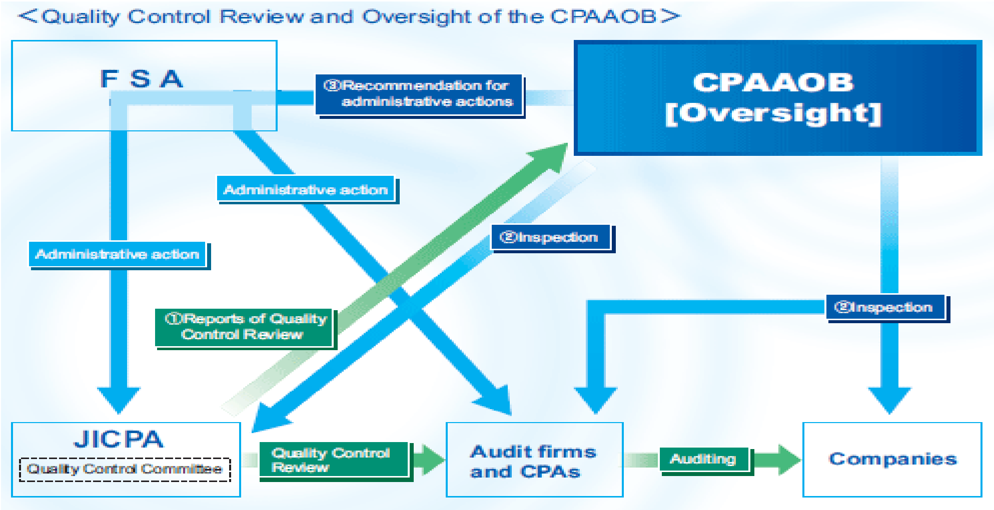
The CPAAOB has an Executive Bureau to handle its administrative duties. The Executive Bureau consists of two divisions. The "Office of Coordination and Examination" is responsible for general affairs, deliberation of disciplinary actions against CPAs and audit firms and implementation of CPA examinations. The "Office of Monitoring and Inspection" is in charge of oversight of the quality control review (CPAAOB, 2014).

3.2.3. Auditor Oversight Structure - ''Quality Control Review'' and Inspections

The CPAAOB reviews and examines reports of quality control reviews by the Japanese Institute of Certified Public Accountants (JICPA) and, if deemed necessary, conducts on-site inspections of the JICPA, audit firms, etc.
If the results of oversight show that quality control reviews have not been conducted properly, that the quality control of audits of CPAs/audit firms has been notably insufficient, or that their audit engagements have not conformed to laws, regulations and standards, the Board will recommend that the Commissioner of the Financial Services Agency take administrative actions and/or other measures necessary to ensure the proper operation of the JICPA and audit firms (CPAAOB, 2014).

The JICPA conducts reviews of quality control practices at audit firms and provides recommendations to audit firms as deemed necessary. Although the JICPA's quality control review was originally conducted as a self-regulatory mechanism of the audit profession, it was formally incorporated into the CPA Law in the May 2003 revision. The CPAAOB reviews and examines reports of quality control review and, if deemed necessary, conducts on-site inspections (CPAAOB, 2014).

Figure 1: Qualitiy Control Review and Oversight of the CPAAOB, http://www.fsa.go.jp/cpaaob



4. AN OVERVIEW ON PUBLIC OVERSIGHT IN EU

4.1. Public Oversight of the Auditors in EU within the context of the new Audit Legislation

Public oversight of the auditors could be evaluated within the context of the new European audit legislation and also provisions regarding public oversight of statutory auditors and audit firms. These provisions are included in the two following pieces of legislation:

- TheDirective2014/56/EU1 amending Directive 2006/43/EC2 on statutory audits (2006 SAD) and containing a series of amended and new requirements governing every statutory audit in the European Union (hereafter referred to as “the Directive”);

- The Regulation (EU) No 537/20143 containing additional requirements that relate specifically to statutory audits of Public Interest Entities (PIEs) in addition to the ones stated in the Directive (hereafter referred to as “the Regulation”).

Both the Directive and the Regulation were published in the Official Journal of the European Union on 27 May 2014 and came into force 20 days later on 17 June 2014. Member states will have two years after entry into force to adopt and publish the provisions to comply with the Directive, i.e. by 17 June 2016.With regard to the Regulation, most provisions will be applicable as from 17 June 2016, which ties in with the implementation date of the Directive.

Both the Directive and Regulation introduce a number of new or modified options in relation to the public oversight of auditors. The fundamentals for oversight of the audit profession at national level are carried forward from the 2006 Statutory Audit Directive (SAD) where every Member State of the EU was already required to organize a public audit oversight system and to designate a competent authority to be responsible for the execution of oversight. The new EU legislation brings this transition a step further (FEE, 2014).

As from the 2006 SAD, the system of oversight is to be organized by each Member State, but the responsibility for oversight should be delegated to one or more competent authorities designated by law. The appointment of the competent authority (ies) must be communicated to the European Commission. Member States shall designate one specific competent authority bearing the ultimate responsibility (FEE, 2014).

Designated competent authorities have ultimate responsibility for the oversight of:

• The approval and registration of auditors and audit firms;

• The adoption of standards (professional ethics, internal quality control of audit firms and auditing), except for the adoption of standards, where those standards are adopted or approved by other Member State authorities;

• The continuing education of auditors; and

• The quality assurance, investigative and administrative disciplinary systems (FEE, 2014).

Member States may delegate, or allow competent authorities to delegate, any of their tasks to other bodies and authorities. The legislation provides for the delegation of certain oversight tasks from the competent authority to professional bodies. However, there are restrictions with regards to PIE audits. Reference is made to the table below:

Table 1: The Delegation of Certain Oversight Tasks from the Competent Authority to Professional Bodies, http://www.fee.be/

OVERSIGHT OF	non PIEs	PIEs
Approval and registration of statutory auditors and audit firms	may be delegated	may be delegated
Adoption of relevant standards	may be delegated	may be delegated
Continuing education	may be delegated	may be delegated
Quality assurance system	may be delegated	may NOT be delegated
Investigative and administrative disciplinary system	may be delegated	Member States are provided with an option to delegate the tasks related to sanctions and measures, but only to a body independent from the profession.

This possibility to delegate certain tasks provides a level of flexibility to Member States and their competent authorities, which are best placed and sufficiently competent to make qualified judgements about the level of delegation that is appropriate to their own specific market conditions. It also enables competent authorities to operate more cost efficiently and helps ensure that these tasks are performed with the highest level of up-to-date experience and expertise while applying the criteria and conditions specified in the Directive and Regulation (FEE, 2014).

4.2. Public Oversight of the Auditors in UK

4.2.1. Establishing an Oversight Body in UK

The Professional Oversight Board (POB) was set up in 2004 as part of the reformed Financial Reporting Council (FRC). This followed the then Government's Review of Audit Regulation in 2003 in the light of the major auditing failures in the US at Enron and WorldCom. This introduced statutory independent oversight over the regulation of auditors by recognized professional bodies.

The 2004 statutory powers and responsibilities were re-enacted in the 2006 Companies Act and extended, as part of the UK's full implementation of the Statutory Audit Directive, to include the regulation of the auditors of companies from outside the EU with securities traded on UK regulated markets. POB reviewed directly, through the Audit Inspection Unit (AIU), the quality of the audits of listed and other major public interest entities. It was also delegated responsibility for the Independent Supervision of the Auditors General for the purposes of the 2006 Act and, following the 2006 Morris Report, took responsibility for the oversight of the actuarial profession (FRC, 2014).

4.2.2. FRC's Responsibilities

The FRC's statutory responsibilities for oversight of the regulation of statutory auditors are discharged by (FRC, 2014):

- recognizing professional bodies to act as supervisory bodies ("recognized supervisory body" or "RSB") and/or as offering a recognized professional qualification for statutory auditors ("recognized qualifying body" or "RQB");
- assessing periodically that the RSBs continue to meet the requirements for recognition in the Companies Act 2006, including the requirements to have arrangements for independent standard setting, independent monitoring of audits of public interest entities and independent investigation and disciplinary arrangements for public interest cases;
- assessing periodically that the qualifications offered by RQBs continue to meet the requirements of the Companies Act 2006;
- carrying out specific reviews of aspects of audit regulation, which can be found here.

The FRC has the following statutory powers in relation to the oversight of audit regulation (FRC, 2014):

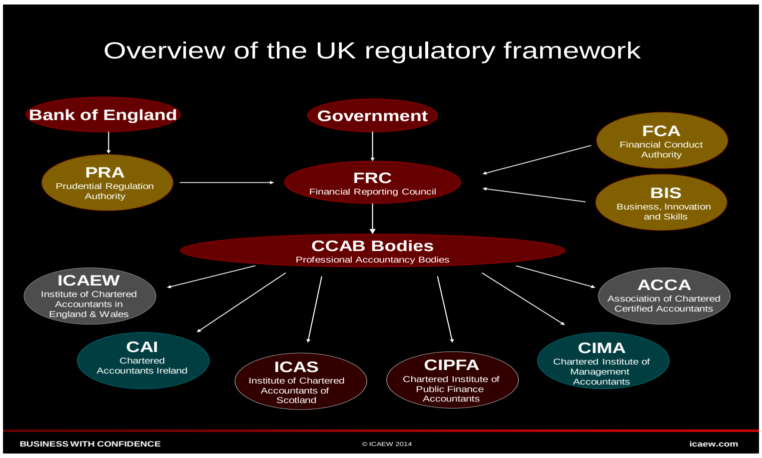
- to recognize and derecognize RSBs and RQBs;
- to require information from RSBs and RQBs;
- to serve an enforcement order on an RSB or RQB that is failing to meet its statutory responsibilities;
- to impose a financial penalty on an RSB or RQB that fails to meet its statutory responsibilities

4.2.3. The Roles of Government, FRC and RSBs

It can be summarized the roles of government, FRC and Recognized Supervisory Bodies (RSBs) within UK system as follows (ICAEW, 2014).

Government:	- ultimate authority to register, monitor and regulate auditors - delegates these powers to accountancy bodies, via FRC
Financial Reporting Council:	- sets accounting, auditing, independence and corporate governance standards - reviews and investigates listed entity accounts for non-compliance - monitors auditors of listed and certain other entities - investigates public interest complaints against members - oversees professional bodies' activities
Recognized Supervisory Bodies (RSBs):	- register and regulate auditors - monitor auditors of unlisted entities - investigate complaints against members - set ethical standards other than for auditor independence

Figure 2: Overview of the UK Regulatory Framework, http://www.icaew.com



4.3. Public Oversight of the Auditors in Germany

4.3.1. Establishing an Oversight Body in Germany

The Auditor Oversight Commission (APAK) was established according to the Auditor Oversight Law from December 27, 2004. The installation of the APAK on January 1, 2005 followed national, European and international initiatives to strengthen the quality, independence and integrity of the audit profession and is to this day an element to preserve confidence in the statutory audits performed.

The legislator`s objective is to submit the German audit profession under an independent oversight with ultimate responsibility. For this reason, the Chamber of Public Accountants (WPK) who has always been subject to state supervision administered by the Federal Ministry of Economic Affairs and Energy is now also subject to public oversight by the APAK.

WPK is formed as a corporation under public law and all public accountants are mandatory members. According to the law, WPK is also an element of indirect state administration. With the integration of the APAK in the public oversight regime, the basic principle of professional self-regulation is still preserved (APAK, 2014).

4.3.2. APAK’s Organizational Structure and Responsibilities

The APAK has at least six and at most ten honorary members, appointed by the Ministry. The commissioners shall not have been personal members of WPK, i.e. public accountants, in the past five years prior to their appointment. They are supposed to be or have been active in the fields of accounting, finance, economy, academics or jurisdiction.

In order to ensure the APAK`s ability to perform its tasks the Law provides the Commission with comprehensive rights in relation to WPK. The competencies include:

- Participation in meetings of organs and other bodies of WPK

- Right to be informed by WPK about all relevant issues
- Right to inspection in proceedings relevant to public oversight at WPK
- Remit of decisions from WPK for a renewed decision (re-examination)
- Issuance of instructions towards WPK under abrogation of its decisions (ultimate decision)
- Call in of experts for consultation
- Hearing before the remittal or the amendment of professional by-laws
- Consultation before the non-issuance of a certificate of attendance in the course of the quality assurance system
- Consultation before the revocation of a certificate of attendance in the course of the quality assurance system
- Consultation before the closing of a professional oversight proceeding

Also, the APAK is the competent authority for the organization and performance of inspections of audit firms of public interest entities. The APAK publishes an annual work plan and an annual progress report (APAK, 2014).

4.3.3. The APAK's Remits

The APAK is in charge of public professional oversight towards the WPK, as far as WPK accomplishes tasks according to Article 4, paragraph 1, first sentence of the Public Accountant Act, with respect to individual professionals and auditing firms who are entitled to perform statutory audits or who do so de facto without being entitled. The APAK is independent and free of instructions.

The APAK's remits comprise the professional examination and aptitude tests for foreign auditors, licensing, revocation of licenses and registration, disciplinary oversight, quality assurance and the adoption of professional rules. In cases of professional supervision with cross-border importance the APAK is the contact for authorities from abroad.

The Commission supervises WPK on whether it fulfils its legal obligations in a suitable and adequate manner (APAK, 2014).

5. A GENERAL OVERVIEW ON AUDITING AND PUBLIC OVERSIGHT MECHANISM IN TURKEY

5.1. A Brief History of Auditing in Turkey

The first comprehensive regulation concerning the auditing in capital markets was made by Capital Markets Board (CMB) and “the Regulations on External Auditing in Capital Market entered into force 1987. Moreover, basic principles and rules related with auditing were arranged with Communiqué’s entered into force in 1987 and 1988 (Türker, Sayar & Alp, 2010).

Then, “Notification on Auditing in Capital Market” published in parallel with international developments came into force. “Communiqué on Auditing Standards in Capital Market” harmonized with International Standards on Auditing was published in the Official Journal in 2006.

In accordance with new Capital Markets Law, CMB and Banking Regulation and Supervision Agency (BRSA) may set additional criterion for the audit firms that will conduct statutory audits in the capital markets and may oversight activities of those firms and CMB shall report the results of quality control reviews and inspection activities to the POA (CMB, 2014).

BRSA was established as the authority that is responsible for the regulation and supervision of banking system in Turkey. Then BRSA became the authority over the inspection of statutory auditors within banking sector. Auditing of the banks is considered as regulated through based on Banking Law No. 5411 in current situation.

There were some other regulations concerning the auditing activity in Turkey in addition to those stated above. Auditing of insurance sector was executed by the Undersecretariat of Treasury within the framework of the provisions of “Regulations on Auditing of Insurance and Reassurance Companies by External Audit Firms” of the Ministry of State. Auditing of activities and financial statements of entities operating in energy market was regulated by “Regulations on Auditing of Real and Legal Entities Operating in Energy Market by Audit Firms” and related Communiqués of the Energy Market Regulatory Authority (Türker, Sayar & Alp, 2010).

5.2. Public Oversight Mechanism in Turkey before the Release of TCC

Before the release of TCC, in Turkey, several agencies and institutions, in particular CMB and BRSA made regulations in this field and this situation led to a fragmented structure in the field of independent audit. In the “Reports on the Observance of Standards and Codes” prepared by the World Bank firstly in 2005 and then revised in 2007, similar findings were mentioned about the implementations in the field of accounting and auditing in Turkey.

This fragmented structure caused the implementation of different methods and techniques while conducting the audit and also resulted in more than one audit report for the same accounting period for the same entity. Moreover, lack of a competent authority to execute the public oversight function in the field of audit restrained the effective implementation of regulations and prevented to provide reasonable assurance to the public in this regard (POA, 2014).

Also, in Turkey, there was no mechanism to enclose the whole financial sector in monitoring and supervision of auditing; auditing activity has a multi-headed structure in the issues of regulation, monitoring and public oversight before the release of TCC (Türker, Sayar & Alp, 2010).

5.3. Public Oversight Mechanism in Turkey after the Release of TCC

The most important development related audit practices in Turkey are the new TCC issued in 2011 would be effective in 2013. Therefore, auditing and accounting practices must be evaluated within the framework of the new TCC. In this context, monitoring of all auditing enterprises in the country within an autonomous establishment is considerably important (Türker, Sayar & Alp, 2010).

All these developments required the establishment of an institution with the relevant authority and responsibility, in order to create a holistic legal structure in the field of statutory audit in Turkey. For this purpose, Public Oversight, Accounting and Auditing Standards Authority (POA) was established by the Statutory Decree No. 660 and on 2 November 2011 (POA, 2014).

Establishment of the POA is a very important achievement for Turkey, in particular for the EU negotiation process and it is evaluated as an opportunity for making great contributions to the effective implementation of new TCC.

5.4. Latest Developments in Public Oversight Mechanism and Turkey Experience: Public Oversight, Accounting and Auditing Standards Authority's Practices

When we look at the accounting and auditing history of Turkey, we see fragmented regulations from multiple authorities. In order to remove fragmented structure in the field of accounting and to fulfill the commitment given to EU by ensuring an effective auditing and public oversight system, POA was established in November 2011, by Statutory Decree No. 660. POA is a public legal entity with administrative autonomy and related with the Ministry of Finance.

5.4.1. Organizational Structure of POA

According to Statutory Decree No. 660, POA is composed of a Board and Chairmanship. The Chairmanship is responsible for implementing the Board decisions and assisting the Board in other issues. The Chairmanship includes the Chairman, Vice Chairmen and service departments.

The Board of the Authority is composed of nine members and appointed by the Council of Ministers among the people who have at least 10 years of experience in one of the fields of accounting, finance, tax, auditing and law after completing university degree or who have worked as a faculty member in certain disciplines for minimum 10 years.

Members are appointed among the candidates proposed by Ministry of Finance (two members), Ministry of Customs and Trade (two members), Under secretariat of Treasury, CMB, BRSA, The Union of Chambers and Commodity Exchanges, The Union of Certified Public Accountants and Sworn-in Certified Public Accountants (TURMOB).

5.4.2. POA Responsibilities and Powers

The POA has four primary functions in overseeing these auditors: registration, inspection and oversight, standard setting (both of accounting and auditing) and enforcement (Sayar, 2013). The Board has the following responsibilities and powers according to Statutory Decree No. 660:

- setting and issuing accounting and auditing standards,
- setting and issuing ethical rules and continuous education principles,
- authorizing statutory auditors and audit firms under a public oversight system,
- registering statutory auditors and audit firms,
- monitoring the auditors' and audit firms' activities within the frame of quality assurance
- to make secondary legislations about the areas regulated and supervised by the Authority,
- conducting disciplinary and investigative procedures.

5.4.3. POA's Activities

5.4.3.1. Approval and Registration of Auditors and Audit Firms

An audit shall be carried out only by auditors or audit firms, which are approved by the POA. Auditors are approved within two categories: Those who will carry out audits of public interest entities and those who will not carry out audits of public interest entities. As of July 2014, 9.000 members of the profession (CPAs and Sworn-in CPAs) have been approved as auditors (POA, 2014).

As of July 2014, 123 audit firms have been approved and registered by the POA. 97 of those firms have been approved to conduct the audit of public interest entities and 19 of them have been approved to conduct the audit of entities except public interest entities (POA, 2014).

5.4.3.2. Public Register

POA has established a Public Register in which auditors and audit firms are identified by an individual number. Registration information is stored in the register in electronic form and is electronically accessible to the public.

5.4.3.3. Establishment of Quality Assurance System

POA is working on establishing a framework for audit activities in line with the international standards and EU regulations. According to this framework, all auditors and audit firms are subject to a system of quality assurance. The quality assurance system will be independent from the auditors and audit firms under oversight system (POA, 2014).

5.4.3.4. Establishment of Education and Approval Information System

In order to conduct approval and public register transactions electronically and to create a database in which data to be registered and announced is stored in an orderly manner; “Education and Approval Information System (EAIS)” has been established by the POA. By means of EAIS, auditors’ and audit firms’ approval applications and requests for entering Public Register are taken and data, which constitute basis for Public Register, is maintained in an electronic platform (POA, 2014).

5.4.3.5. Oversight Activity

POA has started to perform off-site oversight activity via Filing of Engagement Portal. POA plans to expand the scope of Filing of Engagement Portal covering all audit process gradually. As a first step of this project, Engagement Data Entry Portal was created to get audit engagements and inspect the compliance of them with the regulations issued by the Authority (POA, 2014).

5.4.3.6. Inspections

POA oversights and inspects registered audit firms and auditors to assess their compliance with the TCC, the Statutory Decree No. 660, the rules and regulations of the Authority and professional standards, in connection with the performance of audits, issuance of audit reports, and related matters involving Turkish companies. Within this scope, 2014 annual inspection plan has been approved by the POA. It is expected to fulfill inspections within audit firms in 2014 (POA, 2014).

6. CONCLUSION: AN ASSESSMENT ABOUT PUBLIC OVERSIGHT MECHANISM IN TURKEY IN COMPARISON WITH THE GLOBAL PERSPECTIVES

Some radical regulations with the aim of reestablishment of public trust in financial markets are seen in almost all countries as a result of accounting and auditing scandals occurred firstly in the USA, then successively in other developed economies beginning from early 2000's. In order to strengthen public confidence in the accounting profession, after regulation continuing over the last ten years, one of the most important innovations in audit practice was the move from a self-regulated profession to a regulated profession which is under the supervision of a public oversight system.

New standards setters, supervision and auditing mechanisms were designed as well as the efforts for increasing the quality of accounting and auditing standards and auditing activities were generally preferred to be held under a tight control in order to ensure auditing to be performed in a more qualified and sufficient reliability.

Shaping national regulatory approaches for the auditing, the United States enacted the Sarbanes-Oxley Act of 2002 (SOX) which created the PCAOB was the first example of these regulations. SOX required that auditors of U.S. publicly held companies be subject to external and independent oversight for the first time in history. Previously, the profession was self-regulated. After the creation PCAOB in the United States, the European Commission and other international organizations have adopted a similar model and have recommended to members this approach. In practice, many countries have started to take place this approach in their regulations.

The implementations of Auditor Public Oversight mechanisms under the above samples, which are U.S., European Union regulations, the UK, Germany and, Japan, were evaluated and it is understood that Public Oversight Authorities in all country practices in general:

- focus on the oversight of audit procedures and practices which is their primary task and function;
- carry out their activities in co-operation with professional organizations,
- are not involved in determination of accounting standards and auditing standards;
- have delegated the auditor's training, education, examination, registration, certification operations to professional bodies;
- are seen independent audit as a technical area of expertise in accountant profession; also not a profession separate from the accountant profession.

The new TCC is evaluated as an opportunity on this issue in Turkey and it is thought that the previous multi-headed structure situation might be overcome and an effective accounting and auditing standards and auditing control model might be created by means of establishing Turkish Public Oversight Authority that will execute four primary functions in overseeing auditors: registration, inspection and oversight, standard setting (both of accounting and auditing) and enforcement.

According to the main findings of the study; regulations and practices of "Auditor Public Oversight Mechanism in Turkey" have some differences from the example of other countries, and concluded that implementations are not fully compatible with the world practices. As a result, by comparing our country practices to other countries, it can be deduced that POA focus mainly on registration and standard setting process while others concentrate on oversight activities. On the other hand, in international practice, the relevant authorities particularly in the United States and most countries of the EU are fulfilling their activities -public oversight of the auditor, in other words audit procedures and practices- in consultation with the professional bodies. In this regard, German and Japanese practices are excellent examples of cooperation between oversight authorities and professional bodies.

BIBLIOGRAPHY

Federation of European accountants (July, 2014) “PUBLIC OVERSIGHT OF THE AUDIT PROFESSION: Enhancing Credibility and Supporting Cooperation”, A Briefing Paper on Audit Reform.

Gunther, J. W. ve Moore, R.R. (2002) “Auditing the Auditors: Oversight or Overkill”, Federal Reserve Bank of Dalls Economic and Financial Policy Review, Volume 1, Number 5.

IOSCO (2002) “Principles for Auditor Oversight”, A Statement of the Technical Committee of the International Organization of Securities Commissions.

Roybark, Helen M. (2007) “An Analysis of Audit Deficiencies Based on PCAOB Inspection Reports Issued During 2005” (http://ssrn.com/abstract=1008206)

SAYAR, Zafer A.R and A. ALP (2008) “Under the Latest Regulations and Developments, Role of The Independent Audit and the Accounting and Auditing Professions: An Evaluation In Terms of Capital Markets”, İktisat İşletme ve Finans Dergisi, Vol. 23, No. 267, pp.70-88.

SAYAR, Zafer A.R, TÜRKER, Masum and A. ALP (September 2010) “Development of Audit Practices in Turkey and Future Expectations”, Balkan and Middle Eastern countries 'Auditing and Accounting History Conference', International Conference Series II.

SAYAR, Zafer A.R. (February 2002) “Independent Auditing Standards in Capital Markets”, Muhasebe ve Denetime Bakış Dergisi. (May 2013) “World Practices of Auditor Oversight and Turkey Experience” TÜRMOB Yayınları – Number 451.

TÜRKER, Masum, TÜRKER İpek (November 2013) “Public Oversight, Benefits and Challenges”, 12th FCM Annual Conference.

REGULATIONS

Capital Markets Law, Act No: 6362

Banking Law, Act No: 5411

Turkish Commercial Code, Act No: 6102

Serial:X, No:22 “Notification on Auditing Standards in Capital Market”

Serial:XI, No:29 “Notification on Rules of Financial Reporting in Capital Market”

“Public Oversight, Accounting and Auditing Standards Authority’s Organization and Responsibilities Decree Law” numbered 660

“Regulations on Auditing of Insurance and Reassurance Companies by External Audit Institutions”

“Regulations on Auditing of Real and Legal Entities Operating in Energy Market by Independent Auditing Institutions”

“Regulations on Principles and Procedures for Accounting Applications and Storage of Documents in Banks” published in 01.11.2006 dated and 26333 numbered Official Gazette.

German Auditor Oversight Law (2004)

Japanese CPA Law (2004)

U.K., Companies Act (2006)

Sarbanes-Oxley Act (2002)

http://www.bddk.org.tr/WebSitesi/English.aspx

http://www.apak-aoc.de/english/apak/auditor_oversight_germany.asp

http://www.cmb.gov.tr/

http://www.icaew.com/

http://www.fee.be/

https://www.frc.org.uk/

http://www.fsa.go.jp/cpaaob/english/

http://www.kgk.gov.tr/KgkWeb.aspx

http://mevzuat.basbakanlik.gov.tr/

http://pcaobus.org/Pages/default.aspx

THE IMPORTANCE AND ROLE OF SUPREME AUDIT INSTITUTIONS IN PROMOTING ACCOUNTABILITY AND TRANSPARENCY OF PUBLIC ADMINISTRATION AND ACCOUNTING – THE IMPLEMENTATION OF TURKISH SUPREME AUDIT INSTITUTION(TURKISH COURT OF ACCOUNTS)

Nalan Akdoğan*

ABSTRACT

A major challenge facing all Supreme Audit Institutions (SAIs) is to promote a better understanding of their different roles and tasks in society among the public and the administration. Accountability and transparency are two important elements of good governance. Transparency is a powerful force that, when consistently applied, can help fight corruption, improve governance and promote accountability.

Efficient, accountable, effective and transparent public administration has a key role to play in the implementation of the internationally agreed development goals, including the Millennium Development Goals, Stressing the need for capacity-building as a tool to promote development and welcoming the cooperation of the International Organization.

The Organization groups together the Supreme Audit Institutions (SAIs) of 192 Full Members and 5 Associated Members, within The international Organization of Supreme Audit Institutions (INTOSAI) promotes of the efficiency, accountability, effectiveness and transparency in public administration and accounting. Also for the independency of Supreme Audit Institutions and the core principles of independent audit were pointed with several declarations as Lima Declaration, Mexico Declaration, Millennium Declaration etc.

On the other hand to ensure the transparency and accountability The International Public Sector Accounting Standards Board (IPSASB) develops accounting standards and guidance for use by public sector entities. IPSASB announced 32 accounting standards.

Turkey accepts international public sector accounting standards for disclosure of financial statements in order to ensure transparency and accountability of public sector. Turkish Supreme Audit Institution (Turkish court of Accounts -TCA) is a member of INTOSAI carries out regularity (financial and compliance) and performance audits with the principles of ISSAI's. With the Public Financial Management and Control Law No.5018, the financial management and control system has been reformed based on a new understanding, and the new system has been built over the concepts of effectiveness, economy, efficiency, transparency and accountability.

The TCA carries out regularity (financial and compliance) and performance audits. Financial audits consist of an evaluation and an opinion on the accuracy of public administrative bodies' financial reports and statements, and whether or not those bodies' financial decisions and

* Prof. Dr. Nalan Akdoğan, President of Accounting And Financial Management Department of The Faculty of Commercial Sciences of Baskent University.

transactions and any programs and activities are compliant with the law. The auditors also evaluate the auditees' financial management and internal control systems.

Compliance audits take the form of an examination whether auditees' revenue, expenditure, assets and other accounts and transactions comply with the law and other legal arrangements. In performance audit, the auditors evaluate whether or not public resources have been used effectively, efficiently and economically. They also assess auditees' activities against the goals and indicators which the latter have set with regard to accountability.

The TCA Law numbered 6085 foresees new audit approaches in order to conduct audits in compliance with the international standards and principles. In line with this, audit works will be carried out, the colleagues will improve their Professional competencies, The technical infrastructure of audit will be developed, and collaboration will be made with the national and international professional entities and other relevant entities in order to develop the audit understanding, approach and capacity of entity so that it can conduct sound audits of public entities.

Key Words: *Supreme Audit Institutions, IPSAS’S, ISSAI’S, transparency, accountability, financial and compliance audit, performance audit, Turkish court of Accounts -TCA*

Jel Classification: *M40,M41,M42,M48*

1. INTRODUCTION

In this paper we focus on the recent developments of government accounting standards and audit standards and the goal of Supreme Audit Institutions for promoting accountability and transparency of public administration and accounting.

Accountability and transparency are two important elements of good governance. Transparency is a powerful force that, when consistently applied, can help fight corruption, improve governance and promote accountability.

Supreme Audit Institutions (SAIs)) have very important role in promoting accountability and transparency of public administration and accounting.

The concept of accountability refers to the legal and reporting framework, organizational structure, strategy, procedures and actions to help ensure that:

- SAIs meet their legal obligations with regard to their audit mandate and required reporting within their budget.

- SAIs evaluate and follow up their own performance as well as the impact of their audit.

- SAIs report on the regularity and the efficiency of the use of public funds, including their own actions and activities and the use of SAI resources.

- the head of the SAI, members (of collegial institutions) and the SAI's personnel can be held responsible for their actions.

The notion of transparency refers to the SAI's timely, reliable, clear and relevant public reporting on its status, mandate, strategy, activities, financial management, operations and performance. In addition, it includes the obligation of public reporting on audit findings and conclusions and public access to information about the SAI.[1]

The principal task of supreme audit institutions (SAI) is to examine whether public funds are spent economically and efficiently in compliance with existing rules and regulations.

SAIs need to be independent from the entities they audit and must be protected against any form of outside influence.[2]

Accountability can be representing democratic values and a means towards the development of more efficient and effective organizations. Politicians and public servants are given enormous power through the laws and regulations they implement, resources they control and the organizations they manage. Accountability is a key way to ensure that this power is used appropriately and in accordance with the public interest. Accountability requires clarity about who is accountable to whom for what and that civil servants, organizations and politicians are held accountable for their decisions and performance.

Transparency is an important aspect of good governance, and transparent decision making is critical for the private sector to make sound decisions and investments. Accountability and the rule of law require openness and good information so higher levels of administration, external reviewers and the general public can verify performance and compliance to law.

2. GENERAL INFORMATIONS ABOUT INTOSAI, IAASB AND IPSASB

2.1 Intosai At A Glance (1)

INTOSAI is the professional organization of supreme audit institutions (SAI) in countries that belong to the United Nations (UN) or its specialized agencies and is the recognized international body representing SAIs. SAIs play a major role in auditing government accounts and operations and in promoting sound financial management and overall accountability in their governments.

The International Organization of Supreme Audit Institutions (INTOSAI) operates as an umbrella organization for the external government audit community. For more than 50 years it has provided an institutionalized framework for supreme audit institutions to promote development and transfer of knowledge, improve government auditing worldwide and enhance professional capacities, standing and influence of member SAIs in their respective countries. In keeping with INTOSAI's motto, *"Mutual Experience Benefits All."* the exchange of experience

[1]ISSA 20, Principles of transparency and accountability
[2]INTOSAI STRATEGIC PLAN 2011-2016

among INTOSAI members and the findings and insights which result, are a guarantee that government auditing continuously progresses with new developments. INTOSAI provides a forum for government auditors from around the world to discuss issues of mutual concern and keep abreast of the latest developments in auditing and other applicable professional standards and best practices.

INTOSAI is an autonomous, independent and non-political organization. It is a non-governmental organization with special consultative status with the Economic and Social Council (ECOSOC) of the United Nations.

INTOSAI was founded in 1953 at the initiative of Emilio Fernandez Camus, then President of the SAI of Cuba. At that time, 34 SAIs met for the 1st INTOSAI Congress in Cuba. At present INTOSAI has 192 Full Members and 5 Associated Members.[3]

Since then, INTOSAI has provided an institutionalized framework for SAIs to improve professional standing and capacities. INTOSAI adopted the Lima Declaration of Guidelines on Auditing Precepts in 1977.This fundamental declaration articulates INTOSAI’s philosophic and conceptual approach and, with the Mexico Declaration on SAI Independence from 2007, emphasizes the principles of independence and democratic values. INTOSAI issues international standards and guidelines for financial, compliance, and performance audits and provides guidance for good governance.

INTOSAI also partners with other organizations: the Interparliamentarian Union (IPU), the International Federation of Accountants (IFAC), the Institute of Internal Auditors (IIA), the Organization for Economic Cooperation and Development (OECD), as well as the World Bank and others in the Donor Community. INTOSAI also cooperates with the UN in promoting good governance and fighting corruption. INTOSAI entered into a milestone agreement with 15 organizations, including international donor institutions and country development agencies, to enhance the development capacity of SAIs around the world. This Memorandum of Understanding, signed in October 2009, established a cooperation to strengthen the capacity of SAIs to increase their effectiveness as instruments of accountability, transparency, good governance, and anti-corruption in their countries.[4]

Organization of INTOSAI: INTOSAI consists of:

i) the International Congress of Supreme Audit Institutions (INCOSAI),
ii) the Governing Board,
iii) the General Secretariat,
iv) the Regional Working Groups, and

[3] http://www.intosai.org/about-us.html
[4] October 2010 International Organization Of Supreme Audit Institutions (Intosai) Mutual Experience Benefits All Strategic Plan 2011-2016

v) the Finance and Administration Committee (FAC) according to the Statutes of INTOSAI.

vi) Committees, Working Groups (WG) and Task Forces (TF),

vii) the International Journal of Government Auditing (commonly called “INTOSAI Journal”), and

viii) the INTOSAI Development Initiative (IDI) on the basis of resolutions of INCOSAI or the Governing Board.

Those organs have been reorganized to correspond to Strategic Goals 1-4 in the Strategic Plan .

The goals are focus on:

1.Accountability and Professional Standards

2. Building of Capacity Of SAI’s

3.Knowledge sharing and knowledge serving

4.Model information organization

Under goal 1, of those goals, the Professional Standards Committee (PSC) has been established to develop standards, guidelines, for government auditing (financial audit compliance audit performance audit), internal control, Independence of SAI, financial reports, etc. In particular, PSC functions as an international standard-setting organization for government auditing.

Under goal 2;Capacity Building Committee has been established to peer review ,Institutional strengthening and staff development, partnership with international development organizations, and advisory / consultant services.

Under goal 3, working group, Task Forces (TF),has been established for sharing knowledge about public debt, information technology, environment audit, privatization, program evaluation, audit of international organization, , anti-money laundering- audit of disaster-related aids etc. In order to share knowledge about those subject the International Journal of Government Auditing (commonly called “INTOSAI Journal” is issued by INTOSAI.

And under goal 4; Finance & Administration Committee has been established for Ensuring the economy, efficiency and effectiveness of INTOSAI's operations, maintaining due regard for regional autonomy and the differences among member SAIs.

2.2 International Auditing And Assurance Standards Board (Iaasb)

The IAASB develops auditing and assurance standards and guidance for use by all Professional accountants under a shared standard-setting process involving the Public Interest Oversight Board, which oversees the activities of the IAASB, and the IAASB Consultative Advisory Group, which provides public interest input into the development of the standards and guidance. The objective of the IAASB is to serve the public interest by setting high-quality auditing, assurance, and other related standards and by facilitating the convergence of international and national auditing and assurance standards, thereby enhancing the quality and consistency of practice throughout the world and strengthening public confidence in the global auditing and assurance profession. The structures and processes that support the operations of the IAASB are facilitated by the International Federation of Accountants (IFAC).[5]

INTOSAI financial audit guidelines provide guidance for conducting financial audits of public sector entities. It include the International Standards on Auditing (ISAs) issued by IAASB.

2.3 Public Sector Accounting Standards Board (Ipsasb)

The International Federation of Accountants' International Public Sector Accounting Standards Board (IPSASB) develops accounting standards for public sector entities referred to as International Public Sector Accounting Standards (IPSASs). The IPSASB recognizes the significant benefits of achieving consistent and comparable financial information across jurisdictions and it believes that the IPSASs will play a key role in enabling these benefits to be realized. The IPSASB strongly encourages governments and national standard-setters to engage in the development of its Standards by commenting on the proposals set out in its Exposure Drafts. The adoption of IPSASs by governments will improve both the quality and comparability of financial information reported by public sector entities around the world.

The IPSASB develops accounting standards and guidance for use by public sector entities. The structures and processes that support the operations of the IPSASB are facilitated by IFAC.[6]

A key part of the IPSASB's strategy is to converge the IPSASs with the International Financial Reporting Standards (IFRSs) issued by the IASB. To facilitate this strategy, the IPSASB has developed guidelines or rules for modifying IFRSs for application by public sector entities.

3. INTERNATIONAL PUBLIC SECTOR ACCOUNTING STANDARDS (IPSAS)

International Public Sector Accounting Standards (IPSAS) are a set of accounting standards issued by the IPSAS Board for use by public sector entities around the world in the preparation of financial statements. These standards are based on International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB).

IPSAS aims to improve the quality of general purpose financial reporting by public sector entities, leading to better informed assessments of the resource allocation decisions made by governments, thereby increasing transparency and accountability. IPSAS are accounting standards for application by national governments, regional (e.g., state, provincial, territorial)

[5] Reporting on Audited Financial Statements: Proposed New and Revised International Standards on Auditing (ISAs www.iaasb.org

[6] http:/www.ifac.org/pulic-sector/about-ipsasb

governments, local (e.g., city, town) governments and related governmental entities (e.g., agencies, boards and commissions). IPSAS standards are widely used by intergovernmental organizations. IPSAS do not apply to government business enterprises.

IPSAS and IFRSs having mostly same contents. There are very little differences between them. The list of IPSAS and IAS-IFRS are given below (TABLE 1)

TABLE 1

IPSAS 1	Presentation of Financial Statements	IAS 1
IPSAS 2	Cash Flow Statements	IAS 7
IPSAS 3	Accounting Policies, Changes in Accounting Estimates & Errors	IAS 8
IPSAS 4	The Effects of Changes in Foreign Exchange Rates	IAS 21
IPSAS 5	Borrowing Costs	IAS 23
IPSAS 6	Consolidated & Separate Financial Statements	IAS 27
IPSAS 7	Investments in Associates	IAS 28
IPSAS 8	Interests in Joint Ventures	IAS 31
IPSAS 9	Revenue from Exchange Transactions	IAS 18
IPSAS 10	Financial Reporting in Hyperinflationary Economies	IAS 29
IPSAS 11	Construction Contracts	IAS 11
IPSAS 12	Inventories	IAS 2
IPSAS 13	Leases	IAS 17
IPSAS 14	Events After the Reporting Date	IAS 10
IPSAS 15	Financial Instruments: Disclosure & Presentation.	IAS 32 (old)
IPSAS 16	Investment Property	IAS 40
IPSAS 17	Property, Plant & Equipment	IAS 16
IPSAS 18	Segment Reporting	IAS14 (replaced) IFRS 8
IPSAS 19	Provisions, Contingent Liabilities & Contingent Assets	IAS 37
IPSAS 20	Related Party Disclosures	IAS 24
IPSAS 21	Impairment of Non–Cash Generating Assets	N/A
IPSAS 22	Disclosure of Information about the General Government Sector	N/A

IPSAS 23	Revenue from Non-Exchange Transactions (Taxes & Transfers)	N/A
IPSAS 24	Presentation of Budget Information in Financial Statements	N/A
IPSAS 25	Employee Benefits	IAS 19
IPSAS 26	Impairment of Cash-Generating Assets	IAS 36
IPSAS 27	Agriculture	IAS 41
IPSAS 28	Financial Instruments: Presentation	IAS 32 (old)
IPSAS 29	Financial Instruments: Recognition & Measurement	IAS 39
IPSAS 30	Financial Instruments: Disclosures	IFRS 7
IPSAS 31	Intangible Assets	IAS 38
IPSAS 32	Service Concession Contracts	IFRIC 12

4. INTERNATIONAL QUALITY CONTROL, AUDITING, REVIEW, OTHER ASSURANCE, AND RELATED SERVICES STANDARDS

The international audit standards issued by The International Auditing and Assurance Standards Board are given below:

i.IESBA Code of Ethics for Professional Accountants

ii.ISQCs 1–99 International Standards on Quality Control

iii.International Framework for Assurance Engagements

-*Audits and Reviews of Historical Financial Information*

ISAs 100–999 International Standards on Auditing

ISREs 2000–2699 International Standards on Review Engagements

-*Assurance Engagements Other than Audits or Reviews of Historical Financial Information*

ISAEs 3000–3699 International Standards on Assurance Engagements

-Related Services

ISRSs 4000–4699 International Standards on Related Services

International Standards on Auditing (ISAs) are to be applied in the audit of historical financial information.

. International Standards on Review Engagements (ISREs) are to be applied in the review of historical financial information.

. International Standards on Assurance Engagements (ISAEs) are to be applied in assurance engagements other than audits or reviews of historical financial information.

5. INTOSAI AUDITING STANDARDS FOR PUPBLIC SECTOR ENTITIES

5.1 INTOSAI international standards and guidelines

INTOSAI issues international standards and guidelines for financial, compliance, and performance audits and provides guidance for good governance. The list of standards and guidelines are given below:

1. INTERNATIONAL STANDARDS OF SUPREME AUDİT INSTİTUTİONS (ISSA)

1 LEVEL: FUNDEMENTAL PRINCIPLES

1 The Lima Declaration

10 Code of Independence of SAIs

11 Guidelines and Good Practices related to SAI Independence

2 LEVEL: PREREQUISITES FOR THE FUNCTIONING SAIs

20. Code of Transparency and Accountability

30. INTOSAI Code of Ethics

3 LEVEL: AUDITING PRINCIPLES

100 INTOSAI Auditing Standards (Basic Principles of Government Auditing)

200 INTOSAI Auditing Standards (General Standards for Government Auditing)

300 INTOSAI Auditing Standards (Field Standards for Government Auditing)

400 INTOSAI Auditing Standards (Reporting Standards for Government Auditing)

4 GUIDELİNES

Financial Audit (1000-2999)

INTOSAI 1000 Implementation Guideline on Financial Audit - Introduction -

IFAC/IAASB 1 Implementation Guideline on Financial Audit

Performance Audit (3000-3999)

3000 Implementation Guideline on Performance Audit

Compliance Audit (4000-4999)

4000 Implementation Guideline on Compliance Audit

Specific Guidelines (5000-5900)

Audit of International Institutions

5000 Audit of International Institutions - Guidance for SAIs -

5010 Principles for best audit arrangements for international institutions

5010 Best practice example of financial rules and regulations concerning audit arrangements in international institutions (ISSAI 5010-Appendix)

Environmental audit

5110 Guidance on Conducting Audits of Activities with an Environmental Perspective

5120 Environmental Audit and Regularity Auditing

5130 Sustainable Development: The Role of SAIs

Privatization

5210 Guidelines on Best Practice for the Audit of Privatizations

5220 Guidelines on Best Practice for the Audit of Public/Private Finance and Concessions

5230 Guidelines on Best Practice for the Audit of Economic Regulations

5240 Guidelines on Best Practice for the Audit of Risk in Public/Private Partnerships

IT-Audit

5310 Information System Security Review Methodology - A Guide for Reviewing Information System Security in Government Organizations

Public Debt:

5410 Guidance for Planning and Conducting an Audit of Internal Controls of Public Debt

5420 Management and Fiscal Vulnerability: Potential Roles for SAIs

5430 Fiscal Exposures: Implications for Debt Management and the Role for SAIs

11.INTOSAI GUİDANCE ON GOOD GOVERNANCE (INTOSAI GOV)

Guidance on standards for internal control (9100-9199)

9100 Guidelines for Internal Control Standards for the Public Sector

9110 Guidance for Reporting on Effectiveness of Internal Controls: SAI Experiences in Implementing and Evaluating Internal Controls

9120 Internal Control: Providing a Foundation for Accountability in Government

Guidance on accounting standards (9200-9299)

9200 Accounting Standards Framework

9210 Accounting Standards Framework Implementation Guide: Departmental and

Government-wide Reporting

9220 Accounting Standards Framework Implementation Guide for SAIs: Management Discussion and Analysis of Financial, Performance and Other Information

9230Guidance on Definition and Disclosure of Public Debt

5.2 The INTOSAI Financial Audit Guidelines

The INTOSAI Financial Audit Guidelines draw on the International Standards on Auditing (ISA) developed by the International Auditing and Assurance Standards Board (IAASB) and published by the International Federation of Accountants (IFAC). The ISAs are included in the Guidelines with the permission of IFAC.

The INTOSAI Financial Audit Guidelines are the result of years of dedicated work by the highly Professional members of the INTOSAI Financial Audit Subcommittee (FAS). The development of the Guidelines has involved audit experts and other input from a great number of INTOSAI member organizations.

The agreement between INTOSAI and IFAC the IAASB has been a professional partner and great supporter throughout the process of developing the ISSAIs for Financial Audits.

The development work has involved active work and different types of input from more than 90 SAIs, which has helped ensure the ISSAIs applicability and relevance globally. Without this commitment by the INTOSAI community this work would not have been possible.

It is the hope of the Financial Audit Subcommittee that the guidelines will enhance the quality, credibility and professionalism of INTOSAI and its members, and thereby contribute to the global strives towards transparency and accountability**.(Gert JönssonDeputy Auditor General of Sweden and Chair, INTOSAI Financial Audit Subcommittee ,Preamble ISSAI 1000–2999)**[7]

The INTOSAI Financial Audit Guidelines represent the fourth level (Auditing Guidelines) of the International Standards of Supreme Audit Institutions (ISSAI) Framework as shown before. The standards of INTOSAI is shown Table 2.

The main purpose of the INTOSAI Financial Audit Guidelines is to provide INTOSAI members with a comprehensive set of guidelines for the audit of financial statements of public sector entities. The INTOSAI Financial Audit Guidelines include PNs developed by INTOSAI in addition to the ISAs developed by the IAASB. They together form a guideline in the INTOSAI standards framework.[8]

[7]INTOSAI Financial Audit Subcommittee ,Preamble ISSAI 1000–2999)
[8]general introduction to the INTOSAI financial audit guıdelınes.par.14

The INTOSAI Fundamental Principles provide the overriding principles for the performance of and reporting on audits carried out by Supreme Audit Institutions. However, by utilizing the detail of the ISAs insofar as it is relevant to financial audits conducted by Supreme Audit Institutions and by developing PNs that deal with special considerations for financial audits of public sector entities, INTOSAI provides a comprehensive set of Financial Audit Guidelines that can be drawn upon by all Supreme Audit Institutions in all institutional settings and audit environments.[9]

The INTOSAI Financial Audit Guidelines contain initially 38 ISSAIs. 36 of those include an ISA and in addition a Practice Note to support the adoption and use of the ISA in the public sector. The ISA and the PN together constitute one guideline on the subject matter at hand. The remaining ISSAIs, not based on or including an ISA, are ISSAI 1000, General Introduction to the INTOSAI Financial Audit Guidelines and ISSAI 1003, the Glossary which includes the IAASB Glossary and provides additional public sector terms and explanations.

The INTOSAI Financial Audit Guidelines are presented in the INTOSAI classification system as ISSAIs, starting with ISSAI 1000 to ISSAI 2999. The three last positions in the ISSAI number indicate the corresponding number of the ISA (for example, ISSAI 1800 includes ISA 800 and the Practice Note for ISA 800).[10]

The list of ISSAIs are given below (Table 2):

[9] general introduction to the INTOSAI financial audit guıdelınes.par.15
[10] General introduction to the INTOSAI financial audit guıdelınes.par.24-26

TABLE 2	
THE LIST OF ISSAIs AND ISAs	
ISSAI	**ISA**
ISSAI 1000 General Introduction to the INTOSAI Financial Audit Guidelines	
ISSAI 1003 Glossary of Terms to the INTOSAI Financial Audit Guidelines	
ISSAI 1200 Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards of Auditing	**ISA 200** Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing
ISSAI 1210 Agreeing the Terms of Audit Engagements	**ISA 210** Agreeing the Terms of Audit Engagements
ISSAI 1220 Quality Control for an Audit of Financial Statements	**ISA 220** Quality Control for an Audit of Financial Statements
ISSAI 1230 Audit Documentation	**ISA 230** Audit Documentation
ISSAI 1240 The Auditor’s Responsibility Relating to Fraud in an Audit of Financial Statements	**ISA 240** The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements
ISSAI 1250 Considerations of Laws and Regulations in an Audit of Financial Statements	**ISA 250** Consideration of Laws and Regulations in an Audit of Financial Statements
ISSAI 1260 Communication with Those Charged with Governance	**ISA 260** Communication with Those Charged with Governance
ISSAI 1265 Communicating Deficiencies in Internal Control to Those Charged with Governance and Management	**ISA 265** Communicating Deficiencies in Internal Control to Those Charged with Governance and Management
ISSAI 1300 Planning an Audit of Financial Statements	**ISA 300** Planning an Audit of Financial Statements
ISSAI 1315 Identifying and Assessing the Risks of Material Misstatements through Understanding the Entity and Its Environment	**ISA 315** Identifying and assessing the risks of material misstatement through understanding the entity and its environment
ISSAI 1320 Materiality in Planning and Performing an Audit	**ISA 320** Materiality in planning and performing an audit
ISSAI 1330 The Auditor’s Responses to Assessed Risks	**ISA 330** The auditor's responses to assessed risks
ISSAI 1402 Audit Considerations Relating to an Entity Using a Service Organization	**ISA 402** Audit Considerations Relating to an Entity Using a Service Organization
ISSAI 1450 Evaluation of Misstatements Identified during the Audit	**ISA 450** Evaluation of Misstatements Identified during the Audit
ISSAI 1500 Audit Evidence	**ISA 500** Audit Evidence
ISSAI 1501 Audit Evidence – Additional Considerations for Specific Items	**ISA 501** Audit Evidence – Additional Considerations for Specific Items
ISSAI 1505 External Confirmations	**ISA 505** External Confirmations
ISSAI 1510 Initial Audit Engagements – Opening Balances	**ISA 510** Initial Engagements - Opening Balances
ISSAI 1520 Analytical Procedures	**ISA 520** Analytical Procedures

ISSAI 1530 Audit Sampling	**ISA 530** Audit Sampling and Other Means of Testing
ISSAI	**ISA**
ISSAI 1540 Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures	**ISA 540** Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures
ISSAI 1550 Related Parties	**ISA 550** Related Parties
ISSAI 1560 Subsequent Events	**ISA 560** Subsequent Events
ISSAI 1570 Going Concern	**ISA 570** Going Concern
ISSAI 1580 Written Representations	**ISA 580** Written Representations
ISSAI 1600 Special Considerations – Audits of Group Financial Statements (Including the Work of Component Auditors)	**ISA 600** Special Considerations - Audits of Group Financial Statements (Including the Work of Component Auditors)
ISSAI 1610 Using the Work of Internal Auditors	**ISA 610** Using the Work of Internal Auditors
ISSAI 1620 Using the Work of an Auditor’s Expert	**ISA 620** Using the Work of an Auditor's Expert
ISSAI 1700 Forming an Opinion and Reporting on Financial Statements	**ISA 700** Forming an Opinion and Reporting on Financial Statements
ISSAI 1705 Modifications to the Opinion in the Independent Auditor’s Report	**ISA 705** Modifications to the Opinion in the Independent Auditor's Report
ISSAI 1706 Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor’s report	**ISA 706** Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor's Report
ISSAI 1710 Comparative Information – Corresponding Figures and Comparative Financial Statements	**ISA 710** Comparative Information - Corresponding Figures and Comparative Financial Statements
ISSAI 1720 The Auditor’s Responsibilities Relating to Other Information in Documents Containing Audited Financial Statements	**ISA 720** The Auditor's Responsibilities Relating to Other Information in Documents Containing Audited Financial Statements
ISSAI 1800 Special Considerations – Audits of Financial Statements Prepared in Accordance with Special Purpose Frameworks	**ISA 800** Special Considerations-Audits of Financial Statements Prepared in Accordance with Special Purpose Frameworks
ISSAI 1805 Special Considerations – Audits of Single Financial Statements and Specific Elements, Accounts or Items of a Financial Statement	**ISA 805** Special Considerations-Audits of Single Financial Statements and Specific Elements, Accounts or Items of a Financial Statement
ISSAI 1810 Engagements to Report on Summary Financial Statements	**ISA 810** Engagements to Report on Summary Financial Statements

6. IMPLEMENTIONS OF TURKISH COURT OF ACCOUNTS (TCA)

6.1 Historical Background-Law On The Tca

Turkish Court of Accounts (TCA) was set up by an imperial edict of His Majesty Sultan Aziz I on 29 May 1862 and took its place as a Supreme Audit Institution in the first Ottoman Constitution of 1876. During the Republican period its status was reconfirmed in the 1924, 1961 and 1982 Constitutions, the last of which is in force today.

The TCA was set up on the basis of the model in use in continental Europe, and France in particular. It has judicial power and functions through chambers. Its traditional structure has recently been affected by reforms to the system of public financial management and control in Turkey.

The Turkish Court of Accounts (TCA), which is a supreme audit institution conducting audit on behalf of the Turkish Grand National Assembly (TGNA), is a constitutional entity that is equipped with the task and power of taking final decision and that gets its impartiality from its independence. In this context, it has been successfully continuing its audit and judicial tasks for 150 years. The TCA, which has been established in 1862 and which is a reputable member of the global SAI community, is an active member of the international and territorial organizations of SAIs such as.

- International Organization of Supreme Audit Institutions (INTOSAI),
- European Organization of Supreme Audit Institutions (EUROSAI),
- Asian Organization of Supreme Audit Institutions (ASOSAI) and
- Economic Co-operation Organization Supreme Audit Institutions (ECOSAI).

  The TCA is now represented in the EUROSAI and ECOSAI Governing Boards and in the ASOSAI Audit Committee.

6.2 The Status of Turkish Court of Accounts(TCA)

Turkish Court of Accounts(TCA) status are:

1.Constitutional Establishment (Articles 160,164 and 165 of 1982 Constitution)

2.Collegiate body with judicial function

3.Independence

- prepares and manages its own budget
- decides on audit programmes without any interference
- determines content and timing of Reports to Parliament
- has tenurial safeguards for President Members and Auditors

- has free access to documents and all kinds of information

4.Organization, functions and audit procedures of TCA are governed by it specific regulations laid down by itself.

6.3 Duties, Competences and Responsibilities of the TCA

The major **legal** arrangements regarding the duties and competencies of the TCA are as follows:[11]

- 1982 Constitution-articles 160,164,168
- The TCA Law No.6085 –articles 4.5.6
- The Public Financial Management and Control (PFMC) Law No.5018-artıcle 68
- The Law on the Establishment and the Rules of Procedure of the Constitutional Court No.6216-artıcles 55
- The Law no. 3346 on Regulating the Audit of Public Economic Enterprises and Funds by the TGNA
- Other Laws

Those laws and articles states duties, competences and responsibilities of the TCA. Some of important explanations are summarized as follows:

The Article 160 of the 1982 Constitution states that:

"*The Court of Accounts shall be charged with auditing, on behalf of the Grand National Assembly of Turkey, revenues, expenditures, and assets of the public administrations financed by central government budget and social security institutions, with taking final decisions on the accounts and acts of the responsible officials, and with exercising the functions prescribed in laws in matters of inquiry, auditing and judgment. Those concerned may file, only for once, a request for reconsideration of a final decision of the Court of Accounts within fifteen days of the date of written notification of the decision. No applications for judicial review of such decisions shall be filed in administrative courts.*

In case of conflict between the decisions of the Council of State and the Court of Accounts, regarding taxes, similar financial obligations and duties, the decision of Council of State shall prevail.

Auditing and final decision on the accounts and acts of local administrations shall be conducted by the Court of Accounts. The establishment, functioning, auditing procedures, qualifications, appointments, duties and powers, rights and obligations and other

[11] Assoc. Prof. Dr. Recai Akyel President of the TCA- METHOD EMPLOYED IN STRATEGIC PLANNING AND SITUATION ANALYSIS

personnel matters of the members and guarantees of the President and the members of the Court shall be regulated by law."

On the other hand The Article 68 of Public Financial Management and Control Law No.5018 states that:

"The purpose of the ex post external audit to be performed by the Court of Accounts is to audit, within the framework of the accountability of public administrations within the scope of general government, the financial activities, decisions and transactions of management in terms of their compliance with the laws, institutional purposes, targets and plans, and to report their results to the Turkish Grand National Assembly. The external audit is performed in accordance with the generally accepted international audit standards by carrying out the following:

a) On the basis of public administrations' accounts and relevant documents, to perform financial audit on the reliability and accuracy of financial statements, and to determine whether the financial transactions related to revenues, expenditures and assets of public administrations comply with the laws and other legal arrangements.

b) To determine whether the public resources are used in an effective, economic and efficient way, to measure the activity results and to evaluate them as to their performance.

During the external audit, reports issued by the internal auditors of the public administrations shall be submitted to the information of the Court of Account auditors, if required so. At the end of the audits, the reports on the issues stated in the subparagraphs (a) and (b) of second paragraph of this article shall be consolidated according to the administrations, and a copy shall be submitted to the relevant public administration and replied by the head of public administration. The Court of Accounts shall prepare the External Audit General Evaluation Report by taking into account the audit reports and replies given thereto, and present it to the Turkish Grand National Assembly.

The finalizations of accounts by the Court of Accounts means taking a decision on whether the revenue, expenditure and asset accounts and related transactions of the public administrations within the scope of general government are in compliance with the legal provisions.

Other issues on the finalization of external audit and accounts shall be stipulated in the relevant law."

Regarded the Article 160 of the 1982 Constitution, and the Article 68 of Public Financial Management and Control Law No.5018, Turkish Court of Account**s**- TCA has responsibilities of audit and judicial functions and also has responsibilities for promoting accountability and transparency of public administration and accounting.

Audit function of TCA is explained below.

6.3.1 Audit Function Of TCA

The TCA carries out:

- legality- regularity (financial and compliance) audits and ;
- performance audits.

Financial audits; consist of an evaluation and an opinion on the accuracy of public administrative bodies' financial reports and statements, and whether or not those bodies' financial decisions and transactions and any programs and activities are compliant with the law. The auditors also evaluate the auditees' financial management and internal control systems.

Compliance audits; Take the form of an examination whether auditees' revenue, expenditure, assets and other accounts and transactions comply with the law and other legal arrangements. The auditor, examines whether all revenue has been received and all expenditure incurred in a law full and regular manner. In doing so, it shall report in particular on any cases of irregularity. The audit of revenue shall be carried out on the basis both of the amounts established as due and the amounts actually paid to the entity. The audit of expenditure shall be carried out on the basis both of commitments undertaken and payments made.[12]
Performance audits, the auditors evaluate whether or not public resources have been used effectively, efficiently and economically. They also assess auditees' activities against the goals and indicators which the latter have set with regard to accountability.

6.3.2 Judicial Function Of TCA

In the implementation of its judicial function, the TCA decides whether or not the accounts and transactions of the competent departments are in accordance with the legal arrangements. At the end of the audit process, the auditors prepare an enquiry into any losses to the public purse. If the auditors are still dissatisfied with the counter-arguments of the competent officials, they prepare a judicial report, which will contain the auditees' arguments and the auditors' opinion. The chambers reach a final decision on any charges of public loss in the judicial report, though there are still legal remedies such as appeal, revision of trial and correction of decision.

6.4 Audit Scope Of Tca

The Article 4 of the TCA Law No.6085 states the scope of TCA:

"Turkish Court of Accounts shall audit;

[12]FINANCIAL AND COMPLIANCE AUDIT MANUAL EUROPEAN COURT OF AUDITORS 2012 s 16

a) Public administrations within the scope of the central government budget and social security institutions, local authorities, joint stock companies established by special laws and with more than 50% of its capital directly or indirectly owned by the public sector and other public administrations (with the exception of professional organizations having a public status);

b) Provided that the public share is no less than 50%, all types of administrations, organizations, institutions, associations, enterprises and companies affiliated to, or founded by the administrations listed in point (a), or those of which the above mentioned administrations are directly or indirectly partners;

c) All types of domestic and foreign borrowing, lending, repayments, utilization of foreign grants received, giving grants, Treasury guarantees, Treasury receivables, cash management and other matters related to these, all transfers of resources and their utilization and the utilization of domestic and foreign resources and funds, including European Union funds;

d) All public accounts, including private accounts, funds, resources and activities regardless of whether these are in the public administrations budget.

Turkish Court of Accounts shall also audit the accounts and transactions of international institutions and organizations within the framework of the principles set out in the relevant treaty or agreement.

Audit of public institutions, organizations and partnerships within the scope of Article 2 of Law No. 3346 on Regulating the Audit of State Economic Enterprises and Funds by the Turkish Grand National Assembly, dated 02.04.1987, shall be performed within the framework of the procedures and principles indicated in this Law and other laws."

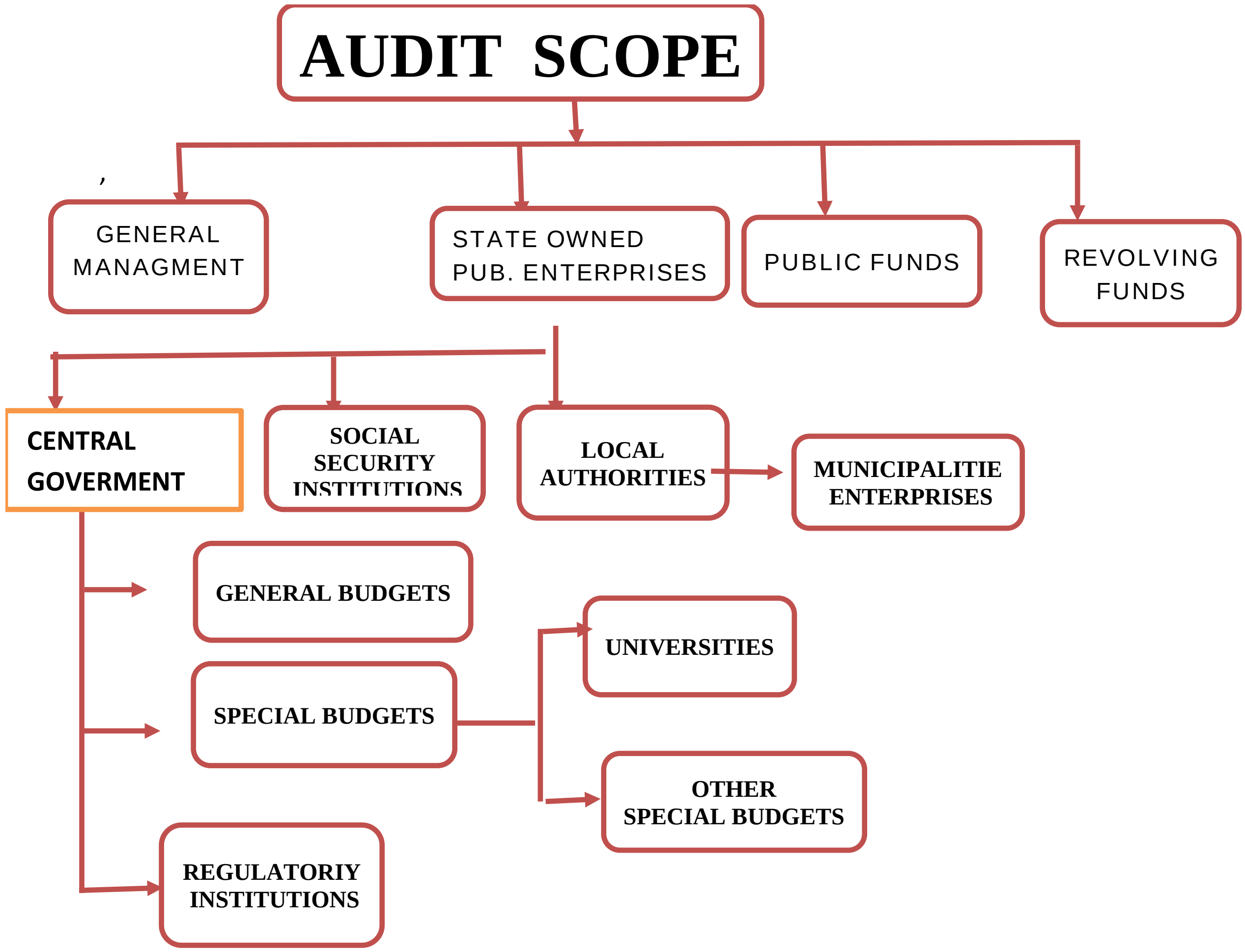
The Article 5 of the TCA Law No.6085; also stated that:

"Turkish Court of Accounts shall;

a) Audit the financial activities, decisions and transactions of public administrations within the framework of accountability and submit accurate, sufficient, timely information and reports to the Turkish Grand National Assembly on the results of these audits;

b) Audit whether or not accounts and transactions of public administrations within the scope of the general government with respect to their revenues, expenses and assets are in compliance with laws and other legal arrangements, and take final decision on matters related to public loss arising from the accounts and transactions of those responsible."

We show the scope of audit of TAC as belows:



6.5 Mission-Vision-Fundamental Values Of Tca

-Mission Of TCA

The mission of the Turkish Court of Accounts (TCA) is to conduct audits and produce reports, and to take final decision on the accounts and transactions of those responsible through trial with a view to ensuring the public administrations to serve efficiently, economically, effectively and in compliance with the laws and the public resources to be acquired, preserved and utilized in accordance with the foreseen purposes, targets, laws and other legal arrangements, as per the right to budget of Turkish Grand National Assembly (TGNA). In other words TCA mission is,

• To conduct audits in line with international auditing standards and to submit reports to the TGNA and the public on behalf of which the TCA performs audits in order to ensure accountability and fiscal transparency in the public sector;

•Ensure that public administrations act in accordance with the financial management, performance management and reporting provisions of Law No.5018 and present reliable, timely and informative financial statements and other reports as required by the financial regulations, giving evidence of economy, efficiency and effectiveness in usage of public resources ;

• To take final decisions in a timely manner and on the basis of sound information and analysis on matters related to public loss caused by the financial transactions of the public administrations within the scope of general government.

- Vision

The vision of the TCA is to ensure the transparency and accountability of public management.

- Fundamental Values Of TCA

• Independence and Objectivity

Independence is the prerequisite for the TCA to exist as a supreme audit institution and judicial organ as well as to deliver objective services. Conduct of audits in a fair, unbiased and objective manner and compliance with professional code of ethics is an indispensible element of institutional credibility, which is, therefore, safeguarded under Article 3 of the TCA Law.

• Good Governance and Responsiveness to Expectations

Among TCA's fundamental policies are to pursue and implement the principles of good governance such as accountability, transparency, effectiveness, participation, equality, fairness, consistency, rule of law, being scientific, etc. In the light of such principles, expectations and needs of the external and internal stakeholders including the parliament and the public, and finding solutions by means of a common understanding aiming at a better public management is highly important.

• Openness to Innovation

Today, the public administrations in general and the audit organizations in particular need to find timely and effective solutions to problems emanating from rapid changes. Therefore, by adopting an approach of continuous development, innovations should be followed and when required, should be put into implementation. Monitoring the developments within the audit environment with an approach of constant change and making the changes that the TCA needs are of vital importance.

• Professional Competency and Acknowledging Staff as the Most Valuable Assets

Quality in audit can only be maintained through creative personnel that think analytically, have professional independence, are apt to team work and cooperation, and have internalized the culture of audit. TCA's aim to develop continuously the knowledge and experience of personnel displaying such a commitment. The quality in audit is maintained when the audits are planned, conducted and followed-up as per generally accepted auditing standards.

- Sensitivity to Needs and Expectations

Being sensitive to the expectations and needs of the Parliament, public and audited entities and making effort to produce solutions through mutual understanding are of great importance**.**

- Professional Secrecy

It is a principle that the information obtained should not be disclosed to third persons outside the Office.[13]

6.6 Organizational Structure Of Tca

The TCA consists of the presidency, and the judicial and decision-making bodies.

The TCA consists of the TCA President, deputy presidents and the heads of departments.

Audit and audit supporting groups, Audit Development and Training Center and supporting units doing their duties under the authority of the Presidency. Audit and audit supporting groups and Audit Development and Training Center consist of one head of group and an adequate number of auditors.

The judicial and decision-making bodies are the chambers, the General Assembly, the Board of Appeals, the Board of Chambers, the Board of Report Evaluation, the High Disciplinary Board, the Board of Promotion and Discipline of Professional Personnel, the Board of Auditing, Planning and Coordination, and the Office of the Chief Prosecutor.

There are 8 chambers (divisions), each consisting of one chairman and 6 members.

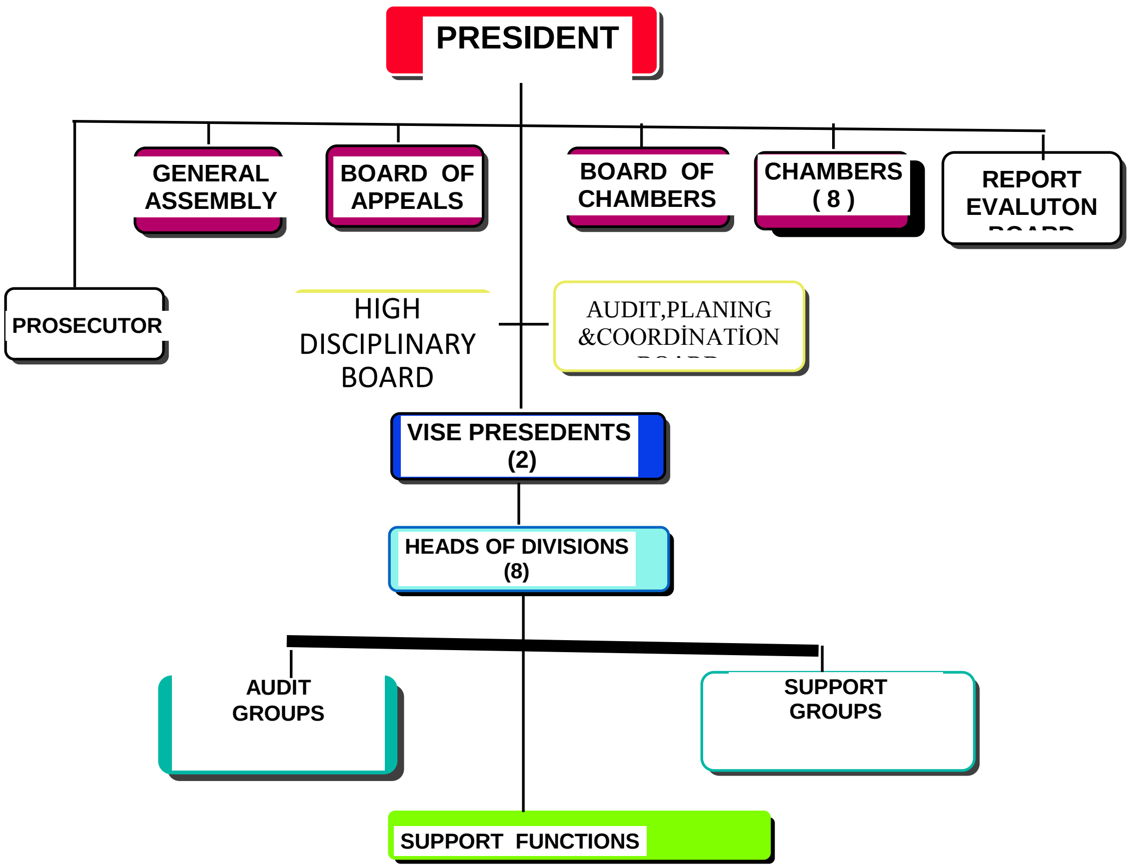
The General Assembly consists of deputy presidents, chairmen of chambers and members under the chair of the President of the TCA.

The Board of Appeals consist of 4 chairmen of chambers and 16 members to be elected by the General Assembly from among the chairmen of chambers and members except those elected to the Board of Report Evaluation.

The Board of Chambers consists of chairmen of chamber and members except those elected to the Board of Report Evaluation and the Board of Appeals.

The Board of Report Evaluation consists of 2 chairmen of chambers and one member from each chamber elected by the General Assembly for a period of 2 years and the deputy president responsible for audit. The organization chart is shown below:[14]

[13]Strategic Plan 2014-20182018 The Turkish Court Of Accounts,p25
[14]Strategic Plan 2014-20182018 The Turkish Court Of Accounts,p 8


PRESIDENT
GENERAL ASSEMBLY
BOARD OF APPEALS
BOARD OF CHAMBERS
CHAMBERS (8)
REPORT EVALUTON
PROSECUTOR
HIGH DISCIPLINARY BOARD
AUDIT,PLANING &COORDİNATİON
VISE PRESEDENTS (2)
HEADS OF DIVISIONS (8)
AUDIT GROUPS
SUPPORT GROUPS
SUPPORT FUNCTIONS

Duties

The President of the TCA governs and represents the TCA. He is the highest-level official of the entity and is responsible for its overall functioning. He takes all necessary precautions to ensure that the entity properly performs all duties set forth by laws, and the administrative tasks are conducted regularly. He is the chairman of the General Assembly, and as he deems necessary, he may chair the Board of Appeals and the Board of Chambers. He informs the TGNA Plan and Budget Committee at least twice a year with regard to the activities of the TCA. He determines the chambers of chairmen and members; establishes specialized chambers; distributes tasks among the chambers; sets up audit groups and audit supporting groups; determines the work places of professional personnel and the duties and work places of supporting staff. He is also the chair of the Board of Report Evaluation.

Deputy Presidents assist the President of the TCA in fulfilling the audit and administrative tasks set forth by law.

The Heads of Departments assist the Deputy Presidents in fulfilling their assigned tasks.

The Heads of Groups carry out the tasks assigned by the Presidency in order to ensure that the tasks assigned to the TCA with the Law no. 6085 and other laws are fulfilled effectively. They fulfill the audit and examination tasks assigned to the groups by the President of the TCA within the framework of the principles and procedures in laws, regulations, by-laws, standards, circular and guidelines and report the outcome to the Presidency.

Supporting units execute the administrative tasks of the TCA.

Chambers as the account court, take final decision on matters related to public loss specified in judicial reports prepared with respect to the accounts and transactions of those responsible, and express opinion on audit reports.

General Assembly discusses the Statement of General Conformity and decides on the unification of case law. It gives its opinion on draft laws and proposals pertaining to the TCA and the by-laws to be prepared pursuant to the Law no. 6085.

The Board of Appeals is the ultimate authority to take final decision on writs issued by the chambers of the TCA.

The Board of Chambers gives its opinion on the by-laws, and regulatory processes in the nature of bylaws, to be prepared on financial matters by the public administrations within the scope of the general government.

The Board of Report Evaluation gives opinion on the reports of the TCA and the matters demanded to be examined by the President of the TCA.

High Disciplinary Board carries out the disciplinary proceedings concerning the President, chairmen and members of the TCA.

The Board of Promotion and Discipline of Professional Personnel executes promotional procedures, disciplinary investigations and penal prosecutions with regard to professional personnel except the President, chairmen and members the TCA.

The Board of Auditing, Planning and Coordination prepares the TCA's strategic plan, performance program, audit strategic plans, annual audit programs, accountability report, the by-laws, standards, guidelines on audit, and determines the professional code of ethics. The Board may invite heads of audit and audit supporting groups to the meetings during discussions on matters related to their fields of work. During the discussion on matters related to the preparation and monitoring of the strategic plan and the preparation of the annual program

of TCA, one member to be assigned by the President of the TCA from each chamber and heads of audit and audit supporting groups shall attend the Board meetings as well.

The Office of the Chief Prosecutor performs the writ appeals, writ executions and the necessary operations thereof.

6.7 Staff Of Tca

The personnel numbers, auditor numbers and auditor groups numbers (2010-2013) are shown table 4.

TABLE 4: PERSONNEL LIST OF TCA

YEARS	FEMALE	MALE	**TOTAL**	FEMALE %	MALE__%__
2010	186	719	**905**	20,55	79,45
2011	184	709	**893**	20,60	79,40
2012	183	725	**908**	20,15	79,85
2013	182	748	**930**	19,57	80,43
2014-END OF JUNE					

GROUPS	**NUMBER**	**%**
AUDITOR GROUPS	***552***	***64,11***
PUBLIC ENTERPRICES	***109***	***12,66***
TOTAL AUDITORS	***661****	***76,77***
SUPPORT GROUPS	57	6,62
CHAMBERS	43	4,99
BOARDS	21	2,44
PREDISENCY	7	0,81
OTHER INST.	10	1,16
COURT OF CONSTITUION	9	1,05
AUDITOR ASSİSTANT AND INTERN AUDITOR	95	11,03
TOTAL	**903**	**100,00**

AUDITORS	661	76,77
TRAINING STAFF	95	11,03
SUPPORT GROUPS	57	6,62
JUDGMENT	64	7,43
MANAGMENT	7	0,81
OTHER	19	2,21
TOTAL	**903**	**100,00**

If we analyzing the figures of 2012, we see that the TCA has 661 auditors %76,77 percent of total personnel. And if we add the number of assistant and intern auditors numbers the total become 756, percent of total %87.80.And most of the staff %80.4 percent are male. The information that we have got from TCA management, the auditors numbered raised to 865 in 2013

6.8 Audit Reports Of Tca

As mentioned before TCA applies regularity (financial and compliance) audits and performance audits. For financial audit TCA has began to apply the the INTOSAI financial audit guidelines and other fundamental audit principles. All documents and guidelines are translated into Turkish. So now the audit procedure about financial audit mostly is the same as stated INTOSAI's guidelines.

In a financial audit of a private sector entity, the audit objective is limited to expressing an assurance opinion on a set of assertions. The objectives of a financial audit in the public sector, however, are often broader than expressing an opinion on whether the financial statements have been prepared, in all material respects, in accordance with the applicable financial reporting framework (i.e.,the scope of the ISAs). The audit mandate, or obligations for public sector entities, arising from legislation, regulation, ministerial directives, government policy requirements, or resolutions of the legislature may result in additional objectives.

These responsibilities may include, for example, performing procedures and reporting instances of non-compliance with authorities, and the effectiveness of internal controls. However, even where there are no such additional objectives, there may be general public expectations in this regard**.**[15]

In conducting an audit of financial statements, the overall objectives of the auditor are:

(a) To obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, thereby enabling the auditor to express an opinion on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework; and

(b) To report on the financial statements, and communicate as required by the ISAs, in accordance with the auditor's findings.(**FG par.11)**

In all cases when reasonable assurance cannot be obtained and a qualified opinion in the auditor's report is insufficient in the circumstances for purposes of reporting to the intended users of the financial statements, the ISAs require that the auditor disclaim an opinion or withdraw (or resign from the engagement, where withdrawal is possible under applicable law or regulation(**FG par.12)**When the auditor modifies the audit opinion, the auditor shall use the heading "Qualified Opinion," "Adverse Opinion," or "Disclaimer of Opinion," as appropriate, for the opinion paragraph.

Greater consistency in the form of audit reports promotes credibility, as the report can be readily identified as being prepared based on professional standards. It also helps readers to more easily identify any modifications of the Auditor's opinion and audit findings such as internal control deficiencies and instances of non- compliance with authorities. The responsibilities of the auditor and management are set out and the auditor's opinion is clearly stated. In certain circumstances, the report may also include additional paragraphs that further elaborate on important matters. The same structure is normally relevant to public sector audit reports even though they tend to be longer and include a wider range of matters. In the public sector laws, the audit mandate or common practice may lead the public sector auditor to report findings, conclusions,

[15]Glossary of terms to the INTOSAI Financial Audit Guidelines p.54

recommendations and management responses. Such reporting is supplementary to the auditor's report on the financial statements in accordance with ISSAI 1700.

As mentioned before, the auditor has responsibility to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, thereby enabling the auditor to express an opinion on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework. In Turkey, government accounting has been developed and (International Public Sector Accounting Standards)IPSASs have been issued for use. So applicable the financial reporting framework is mostly IPSASs and uniform accounting system. Financial statements prepared under the accrual basis of accounting inform users of those statements of past transactions involving the payment and receipt of cash during the reporting period, obligations to pay cash or sacrifice other resources of the entity in the future, the resources of the entity at the reporting date and changes in those obligations and resources during the reporting period. Under the accrual basis of accounting, transactions and other events are recognized in financial statements when they occur (and not only when cash or its equivalent is received or paid). Therefore, the transactions and events are recorded in the accounting records and recognized in the financial statements of the periods to which they relate. In Turkey government entities have to prepare their financial statements such as the statement of financial position, income and expense report, cash flows statement etc. But because of implementation of the adaptation to IPSASs is so recently, most of government entities especially General Management Sector couldn't be able to disclosure these statements yet. So most of the auditors' opinion are "Disclaimer Opinion" about these sector.

6.8.1 Some Figures About Audit Reports Of Tca In 2012

With the Law no. 6085, which entered into force on 19.12.2010, the powers and audit scope of the TCA has expanded significantly, and major novelties have been foreseen in auditing techniques and methodologies. 2012 was an important and busy year for the TCA because, on the one hand, efforts were focused intensely on the sub-legislation works for settling the system introduced by the new Law and on the in-service trainings for ensuring a prompt adaptation to the new system, and on the other hand, audits were conducted by implementing the new system, and the first results were started to be obtained in the new system.

2012, within the scope of its audit program, the TCA audited 121 public administrations out of a total of 524 that are subject to audit by using the new auditing system and techniques. In this context. The TCA, which is one of the most important actors for the TGNA's use of the power of purse, has undertaken new functions with the new restructuring and its audit scope has expanded.[16]

[16] Accountability Report-2012

Public Administrations Subject to Audit under General Management Sector's figures are given Table 5.As the table indicates, the audit program for 2012 includes 43 administrations under general budget, 92 administrations with special budgets, 8 regulatory and supervisory institutions, 81 special provincial administrations, 16 metropolitan municipalities, 15 institutions affiliated to a metropolitan, 46 district municipalities affiliated to a metropolitan, 63 provincial municipalities, 20 development agencies and Social Security Institution and Turkish Labor Institution.

TABLE 5: Public Administrations Subject To Audit Under General Management Sector

GENERAL MANAGEMENT SECTOR		**UNDER AUDIT**	**INCLUDED IN AUDIT PROGRAM**
Central Administration Subsector	General Budget	44	23
	Special Budget-A (Universities and YÖK	105	14
	Special Budget -B (Other Institutions)	40	20
	Regulatory and Supervisor Institutions	9	7
	TOTAL	**198**	**64**
Local Administrations Subsector	Special Provincial Administrations	81	22
	Metropolitan Municipalities	16	16
	Institutions Affiliated to a Metropolitan	19	2
	District Muni. Affiliated to a Metropolitan	143	2
	Provincial Muni	65	13
	TOTAL	**324**	**55**
Social Security	SSI	1	1

Subsector	TURKISH LABOR INSTITUTION	1	1
	TOTAL	**2**	**2**
TOTAL OF GENERAL MANAGEMENT SECTOR		**524**	**121**

TABLE 6: Public Administrations Included In The Audit Program Under Public Enterprises Sector

PUBLIC ENTERPRISES SECTOR		**UNDER AUDIT**	**INCLUDED IN AUDIT PROGRAM**
PUBLIC ENTERPRISES SUBSECTOR	State(Public) Economic Enterprise	15	15
	State Economic Enterprise Subsidiary	4	4
	State Economic Enterprise Establishment	9	9
	Public Economic Institution	4	4
	Public Economic Institution Subsidiary	3	3
	Entities audited acc. to law no.3346	24	24
	Entities under the Privatization Law no.4046	21	21
	Entities audited acc. to their special laws	16	16
	Others	1	1
	TOTAL	**97**	**97**

TABLE 7: Public Administrations Included In The Audit Program Under Other Sector

OTHER SECTOR	**UNDER AUDIT**	**INCLUDED IN AUDIT PROGRAM**
OTHER SUBSECTOR	14	6
SECTOR	**UNDER AUDIT**	**INCLUDED IN AUDIT PROGRAM**
GENERAL MANAGEMENT SECTOR	524	121
PUBLIC ENTERPRISES SECTOR	97	97
OTHER SECTOR	14	6
GENERAL TOTAL	**635**	**224**

If we look the figures we can see that 121 entities examined under General Management Sector. 64 of those are from Central Administration Subsector, 55 of them are from Local Administrations Subsector and 2 of the mare from the Social Security Subsector. Within the scope of Public Enterprises Sector; a total of 97 public entities all of them were audited. This figure covers a total of 28 State Economic Enterprises (including subsidiaries and establishments), 7 Public Economic Institutions, 24 entities audited according to Law no. 3346, 21 entities under the Privatization Law no. 4046, 16 entities audited according to their special laws, and 1 other entity. Also 6 entities of other sector were audited.

On the other hand In 2013 the management of TCA states that 401 compliances audit reports and 22 performance audit reports were written by auditors. Also the presidency mentioned that all ministries of government, and all public enterprises sector and all metropolitan municipalities were audited. Only small Institutions affiliated to a metropolitan and district muni. affiliated to a metropolitan have not been audited.

But when we compare the budget figures; while Central administration subsector total amount of budget cost (for 198 entities)is 330.234.814.000 TL, total budget cost of entities audited in 2011 (for 64 entities)is 312.486.409.000 TL. So it means a ratio of 95% was achieved, which is quite significant.

On the other hand, In 2012, a total of 1497 judicial reports from the previous audit programs were submitted to the eight judicial chambers, and 1191 of those reports were judged and their writs were prepared. In 2012, it was decided to send 27 cases regarding the criminal acts to the relevant chamber or prosecution office for necessary action. The below table indicates the information regarding the judicial decisions made by the eight judicial chambers in 2012[17]

The table shown below indicates the information regarding the judicial decisions made by the eight judicial chambers in 2012.

TABLE 8: Judicial Decisions Of The Chambers

CHAMBERS	TOTAL NUMBEROF REPORTS	NUMBER OFJUDGED REPORTS	TOTAL PUBLIC LOSS JUDGED TO BE INDEMNIFIED (TL	CRIMINAL ACTS
1. CHAMBER	189	124	16.476.425,11	13
2. CHAMBER	176	139	43.172.512,22	1
3.CHAMBER	204	170	15.808.896,27	2
4.CHAMBER	132	101	9.663.602,23	-
5.CHAMBER	172	137	8.818.517,45	1
6.CHAMBER	177	128	14.812.998,28	3
7. CHAMBER	164	140	17.260.529,53	7
8.CHAMBER	283	252	20.102.542,09	-
TOTAL	**1497**	**1.191**	**146.116.023,18**	**27**

[17]Accountability report 2012

7. CONCLUSION

The aim of TCA is to achieve transparency and accountability in the public financial management and proper management of public resources by promoting the public financial management system and improving the financial transactions of public administrations. Prerequisite for transparency and accountability is democracy. In this context, as its primary objectives, the TCA is in pursuit of strengthening its institutional capacity for the effective audit of public administrations; contributing in the establishment of the infrastructure in the public administrations as foreseen in the Law No.5018; improving the processes as well as the infrastructure for the fair, speedy, transparent and effective trial function; leveraging the institutional management capacity and enhancing communication for the effective and efficient functioning of the TCA operations. As a consequence of implementing this plan, the TCA aims to contribute to the establishment of accountability and transparency in public financial management and the accurate management of public resources by means of developing the public financial management system and improving the financial transactions of public entities.

The development of accountability and transparency in public entities within the framework of Law numbered 5018 depends on the having established mechanisms that will properly meet the system requirements. Setting up and establishing public financial management in public entities requires that institutional strategic plans, annual performance programs and accountability reports are prepared and finalized according to legal requirements starting from the objectives foreseen in the development plans, and that a well-functioning internal control system is built. As a consequence of implementing this plan, the TCA aims to contribute to the establishment of accountability and transparency in public financial management and the accurate management of public resources by means of developing the public financial management system and improving the financial transactions of public entities. In this objective TCA’s duties are:

- To contribute to the establishment of accountability and transparency in public administrations and of the required infrastructure as per the PFMC Law No.5018 for the use of the power of the purse by the TGNA through conducting audits in accordance with international auditing standards.
- To enhance audit capacity, the understanding of and approach towards audit for effective audit of public administrations.
- To enhance the processes and infrastructure for fair, speedy, transparent and effective trial.
- To reinforce the corporate management capacity and human resource management for effective fulfillment of the TCA’s functions
- To take actions to promote the TCA to the public in order to contribute to the development of the principles of accountability and transparency.

There are some problems about disclosure of financial statements which required by law and accounting standards for general government sector. To solve this problems is depend on Financial Ministry's action. When Financial Ministry authority gives support for applying government accounting standards, and all government entities begin to prepare there financial statements, TCA will able to audit the financial information of the government entities.

REFERENCES

ISSA 20, Principles of transparency and accountability

INTOSAI STRATEGIC PLAN 2011-2016

http://www.intosai.org/about-us.html

October 2010 International Organization Of Supreme Audit Institutions (Intosai) Mutual Experience Benefits All Strategic Plan 2011-2016

Reporting on Audited Financial Statements: Proposed New and Revised International Standards on Auditing (ISAs www.iaasb.org

http:/www.ifac.org/pulic-sector/about-ipsasb

INTOSAI Financial Audit Subcommittee, Preamble ISSAI 1000–2999)

General introduction to the INTOSAI financial audit guıdelınes.par.14

General introduction to the INTOSAI financial audit guıdelınes.par.15

General introduction to the INTOSAI financial audit guıdelınes.par.24-26

Assoc. Prof. Dr. Recai Akyel President of the TCA METHOD EMPLOYED IN STRATEGIC PLANNING AND SITUATION ANALYSIS

FINANCIAL AND COMPLIANCE AUDIT MANUAL EUROPEAN COURT OF AUDITORS 2012 s 16

Strategic Plan 2014-20182018 The Turkish Court Of Accounts,p25

Strategic Plan 2014-20182018 The Turkish Court Of Accounts 8

Glossary of terms to the INTOSAI Financial Audit Guidelines p.54

Accountability Report-2012

EVALUATING THE FINANCIAL PERFORMANCES OF THE BANKS LISTED ON ISTANBUL STOCK EXCHANGE BANKS INDEX BY DATA ENVELOPMENT ANALYSIS AND MALMQUIST INDEX

Ahmet Selçuk DİZKIRICI*
Ahmet GÖKGÖZ**

ABSTRACT

In order to compare the performances of the banks listed on Istanbul Stock Exchange Banks Index; efficiency values of the banks selected from the mentioned index are calculated by Data Envelopment Analysis (DEA) based on their financial ratios for each year of 2010-2013 period. So that estimated rates for the banks are evaluated as a result of the analyses applied. Additionally; each of the efficiency changes of the banks examined is calculated via Malmquist Index to determine the improvement or decline in the course of time.

Keywords: *Efficiency, Measurement of Performance, Istanbul Stock Exchange Banks Index (BIST XBANK), Data Envelopment Analysis (DEA), Malmquist Index*

Jel Classification: *G32, L25*

* Assistant Professor, Sakarya University, Faculty of Business Management, International Trade Department, asdizkirici@sakarya.edu.tr
** Assistant Professor, Yalova University, Faculty of Economics and Administrative Sciences, International Trade and Finance Department, agokgoz@yalova.edu.tr

1. INTRODUCTION

Due to the competitive character of the markets; using of the limited resources is reasonably crucial for the companies today so it is needed to apply beneficial performance measurement systems in order to evaluate the company's performance and carry efficient activities to be able to grow gradually. As efficiency is determined to be the adequate level of reaching goals; efficiency needs to be observed and measured in order to evaluate the consequences of different company policies (DPT, 2000: 75; Tarım, 2001). There are various methods to analyze the performance and the efficiency of companies as they are mentioned in the study.

Since banking sector is one of the most important factors about development of an economy, Turkish banks are evaluated continuously to achieve a stronger sector. The conditions of today's financial sector where the levels of terms of competition are high, force banks to make use of their resources in the most effective way (Doğan, 2013a: 215). Hereupon; evaluating the financial performances of the banks to measure their efficiency values and calculate their efficiency changes in time are aimed in the study.

Following the introduction section of the study; the second one includes literature review. In the third section DEA and Malmquist Index methodologies are explained thus aim, scope and limitations are described in the fourth section of the study. Consequently; findings of the banks measured via DEA and Malmquist Index are indicated in the fifth section so the sixth one comprehends the results.

2. LITERATURE REVIEW

There are plenty of studies in the literature held about performance measurement and efficiency in banking sector. Besides; multi-criteria decision-making methods such as Analytical Hierarchy Process (AHP), Analytical Network Process (ANP), Data Envelopment Analysis (DEA), TOPSIS (Technique for Order Preference by Similarity to An Ideal Solution), Gray Relational Analysis (GRA) and Electre methods are observed to be used in academic studies concerning measurement of financial performances of banks (Doğan, 2013a: 215-216). In this study; although analyses such as DEA and Malmquist Index are used for performance measurement in Turkish Banking Sector, all the studies having the same purpose and being held recently are mentioned below.

Özgür (2008) measures financial efficiency of Turkish public capitalized deposit banks via Data Envelopment Analysis due to its importance owing to the fact that public banks' share in economic system is realized as 28%.

Eken and Kale (2011) measure the efficiency of bank branches via DEA to determine their strengthful and weak characteristics. They comprehend that branch size and scale efficiency are related to each other; as branch size increases scale efficiency increases too additionally after the most productive scale size, however, as size increases efficiency decreases.

Ata (2009) compares the domestic and foreign banks operating in Turkey by their financial performances additionally analyzes the effect of foreign capital on the performances of the banks; consequently, domestic banks are evaluated to be more efficient than foreign banks with respect to performance criteria.

Doğan (2013a) measures and compares financial performances of banks traded in Istanbul Stock Exchange (ISE) between the years of 2005-2011 via Gray Relational Analysis (GRA) method and comprehends that a bank with high “Return on Assets” could also have a high financial performance.

Doğan (2013b) compares the financial performances of participation and conventional banks which have been active from 2005 to 2011 in Turkey and no statistical significant difference is detected between the mentioned bank groups about profitability rates.

As a similar study to Ata (2009); Doğan (2013c) compares the financial performances of foreign and domestic banks which operate in Turkish Banking Sector. It is determined that domestic banks are more efficient than foreign banks while foreign banks are suggested to have better capital adequacy ratios.

Aktaş and Avcı (2013) compare the efficiency values of participation banks, interest based private and public banks by using Data Envelopment Analysis also Malmquist Index. In consequence of their mutual study; public banking is evaluated as the most efficient while participation banking is the increasing one according to productivity rates.

Koçyiğit (2013) investigates the relation between the efficiency of listed deposit banks in Istanbul Stock Exchange and its stock returns for the period of 2006-2011 by using DEA and panel data analysis that a statistically significant relationship is not found between the efficiency of deposit banks and its stock returns.

Sakarya and Kaya (2013) conduct a comparative analysis between participation banks and deposit banks operating in Turkey and investigate the main areas of differentiation. They examine the Turkish banking system for 2005-2012 period in their study by using panel data analysis.

3. DATA ENVELOPMENT ANALYSIS (DEA) AND MALMQUIST INDEX METHODOLOGIES

DEA is a linear programming-based approach developed by Charnes, Cooper and Rhodes in 1978 built on Farrell’s (1957) theoretical study to determine performance efficiency. DEA evaluates the relative efficiency of Decision Making Units (DMUs) (Golany and Yu, 1997: 28) which can be defined as the entities responsible for converting input(s) into output(s) and whose performances are to be evaluated. The term “relative” is rather important since an institution identified by DEA as an efficient unit in a given data set may be deemed inefficient when compared to another set of data (Yeh, 1996: 981).

In efficiency analysis, observations are generated by a finite number of DMUs using the same kind(s) of input(s) and output(s); however, DEA offers the advantage of being able to process multiple inputs and outputs with each being stated in its own unit of measurement. Cenger (2011: 34) states that technical efficiency concept; meaning the process of acquiring maximum outputs by using minimum inputs or acquiring more outputs by using same amount of inputs, underlies in reasoning Data Envelopment Analysis method.

There are two basic kinds of DEA models: CCR (Charnes, Cooper, Rhodes) and BCC (Banker, Charnes, Cooper). The CCR model is built on the assumption of constant returns to scale (CRS) of activities, and the other one is about variable returns (VRS). The CCR model assumes frontier to have constant returns to scale (CRS) characteristics since Banker et al. (1984) (BCC) relaxed CRS assumption and introduced VRS frontier in 1984 (Eken and Kale, 2011: 890).

DEA model is a non-parametric approach to solve a linear programming formulation for each DMU, DEA measures efficiency of a DMU by maximizing the ratio of weighted outputs over weighted inputs so the ratio is normalized according to the best practical peers and efficiency is calculated to be between 0 and 1; as 1 representing the efficient unit (Boussofiane et al., 1991).

As in the other non-parametric measurement methods; DEA models can be characterized in the groups called as input orientated and output orientated. Due to the fact that firms in a highly competitive global market intend to minimize the costs; input orientated DEA models are more preferred but output orientated ones should be benefited if more outputs are intended to be obtained by the same amount of inputs (Coelli, 1998: 7 in Cenger, 2011: 35).

The constraints and necessary steps to implement the Data Envelopment Analysis (DEA) can be asserted as selection of DMUs, determining sets of input and outputs, measurement of the relative efficiency and evaluation of results; respectively (Özgür, 2008: 253).

The mathematical expression of output / input ratio introduced by Charnes, Cooper and Rhodes for Data Envelopment Analysis Model in 1978 is indicated below (Cooper and Seiford, 2000: 35 in Kaya et al., 2010: 134):

Efficiency = Output / Input

$$\text{Max } h_k = \frac{\sum_{r=1}^{s} u_{rk}\, y_{rj}}{\sum_{i=1}^{m} v_{ik}\, x_{ij}}$$

Herein; $x_{ij}>0$ parameter indicates i inputs used by j DMUs and yrj>0 parameter denotes r outputs used by j DMUs. Reference variables for this equation meeting maximization condition are shown as v_{ik} and u_{rk} meaning the weights given by k decision making units for i inputs and r outputs.

The constraint obtaining the efficiency not to be counted as more than 100 % when reference weights of k organizational decision making units are also used by other decision making units is indicated as;

$$\frac{\sum_{r=1}^{n} urk\ yrj}{\sum_{i=1}^{m} vik\ xij} \leq 1, \quad u_r \geq 0, v_i \geq 0$$

Herein j and k = 1,…………, n

The businesses to be evaluated by DEA must have the same input-output sets in order to acquire reasonable results (Yolalan, 1993: 65 in Özcan, 2005: 25).

Data Envelopment Analysis (DEA) is a subject to study related to operations research, management and econometrics indicating the efficiency of activities in both production and services sectors (Wei, 2001).

The greatest number possible to be able to represent the amount of inputs and outputs are to be preferred to maximize decomposition ability of DEA and while there exist m inputs and p outputs, the number of DMUs evaluated should be at least (m+p+1) or 2.(m+p) in terms of the significance of the study (Boussofiane et al., 1991: 7-8 in Özcan, 2005: 69).

Malmquist Index abbreviation for “Malmquist Total Factor Productivity Index” is used to measure the changes in total factor productivity and its components as Efficiency Change, Technical Efficiency Change, Scale Efficiency Change and Pure Efficiency Change, in time. The Malmquist Index value is comprehended to be the change in total factor productivity so that efficieny increases when the mentioned values excess 1.

Malmquist Index is calculated as the multiplication of Efficiency Change and Technical Efficiency Change (Karacabey, 2002: 191 aktaran Özgür, 2008: 252) while Efficiency Change is occurred by multiplying Scale Efficiency and Pure Efficiency changes (Işık ve Hassan, 2003: 302 aktaran Çakır ve Perçin, 2012: 55).

4. AIM, SCOPE AND LIMITATION OF THE STUDY

It is aimed to measure the financial efficiencies of the banks listed on Istanbul Stock Exchange Banks Index (XBANK) in the period of 2010-2013 by using DEA over their financial ratios.

Despite the existence of 16 banks listed on the mentioned index; 4 of them are excluded from the study due to the fact that there are 2 participation banks and 2 investment banks within the index. The excluded companies are as following; Albaraka Türk (ALBRK), Asya Katılım Bankası (ASYAB), Türkiye Kalkınma Bankası (KLNMA) and Türkiye Sınai Kalkınma Bankası (TSKB). Hence the rest 12 depositary banks analyzed in the study are indicated in the table below:

Table 1: The Depositary Banks Analyzed in the Study

Code	Company	Code	Company
AKBNK	AKBANK	ISCTR	İŞBANKASI
ALNTF	ALTERNATİF BANK	SKBNK	ŞEKERBANK
DENIZ	DENİZBANK	TEBNK	TÜRK EKONOMİ BANKASI
FINBN	FİNANSBANK	TEKST	TEKSTİL BANK
GARAN	GARANTİ BANKASI	VAKBN	VAKIFBANK
HALKB	TÜRKİYE HALK BANKASI	YKBNK	YAPI ve KREDİ BANKASI

Due to the fact that input variables are more likely to be controlled in the competitive market, input orientated DEA models are mostly preferred for the similar studies; however, output orientated DEA is suggested to be applied in the study since profitability rates of the banks for long term are considered. Afterwards; input and output variables as Liquid Adequacy, Capital Adequacy, Loan Ratio, Return on Assets, Return on Equities and Management Effectiveness are selected in accordance with the decision of analysis to compare the financial performances of the mentioned DMUs.

The input and output variables benefited in the study are indicated below in Table 2.

Table 2: Input and Output Variables of the Study

Inputs	Outputs
Liquid Adequacy (Liquid Assets/Total Assets)	Return on Assets – ROA (Net Profit of the Period/Total Assets)
Capital Adequacy (Total Equities/Total Assets)	Return on Equity – ROE (Net Profit of the Period/Total Equities)
Loan Ratio (Total Loans/Total Deposits)	Management Effectiveness (Interest Income/Total Assets)

According to the model, input and output variables determined; data of the depositary banks analyzed are gathered from the official web site of Public Disclosure Platform (www.kap.gov.tr) via their balance sheets and income statement tables. Hence; the mentioned ratios are calculated and ran in Banxia DEA Frontier Software Program afterwards efficiency values belonged to each depositary bank are compared via DEAP 2.1 Program (Win4DEAP) to determine the improvements and decreases in terms of efficiency.

Since Boussofiane et al. (1991: 7-8 in Özcan, 2005: 69) declares that the number of DMUs evaluated should be at least (m+p+1) or 2.(m+p) in terms of the significance of the study while m inputs and p outputs exist, as a limitation of the study, both of the conditions are met in the study.

5. FINDINGS OF THE ANALYSIS

Both CRS and VRS models are used in Banxia DEA Frontier Software Program while data related to the study are employed; consequently, it is observed that there is not much difference in the rates acquired. Thus; scale efficiency change is suggested to be insignificant so merely CRS model is preferred in the study to indicate the results of analysis. The efficiency values of the banks obtained via output orientated CRS model for each of the years between 2010 and 2013 are indicated below, respectively.

Table 3: Efficiency Values of the Banks in 2010

Decision Making Unit (DMU)	Score	Decision Making Unit (DMU)	Score
AKBNK	98,35%	ISCTR	84,32%
ALNTF	100,00%	SKBNK	74,07%
DENIZ	88,80%	TEBNK	94,65%
FINBN	88,03%	TEKST	67,11%
GARAN	87,58%	VAKBN	81,40%
HALKB	100,00%	YKBNK	99,45%

Efficiency values based on the financial performances of the banks analyzed in 2010 are indicated in Table 3 by their scores and it is observed that only ALNTF and HALKB are evaluated as efficient while the others have different efficiency values from 67% to 99%. Even though the 10 banks need improvement; it is clear that their scores can not suggested to be very low in the year of 2010.

Table 4: Efficiency Values of the Banks in 2011

Decision Making Unit (DMU)	Score	Decision Making Unit (DMU)	Score
AKBNK	78,16%	ISCTR	66,86%
ALNTF	100,00%	SKBNK	100,00%
DENIZ	96,58%	TEBNK	75,10%
FINBN	96,82%	TEKST	80,90%
GARAN	80,77%	VAKBN	78,64%
HALKB	100,00%	YKBNK	85,50%

The efficiency values belonged to 2011 indicate that ALNTF, HALKB and SKBNK are efficient while the rest 9 banks’ performances are between 66% and 97%.

Table 5: Efficiency Values of the Banks in 2012

Decision Making Unit (DMU)	Score	Decision Making Unit (DMU)	Score
AKBNK	66,69%	ISCTR	66,68%
ALNTF	100,00%	SKBNK	100,00%
DENIZ	82,85%	TEBNK	77,92%
FINBN	84,35%	TEKST	77,40%
GARAN	73,78%	VAKBN	76,35%
HALKB	100,00%	YKBNK	67,86%

According to the efficiency rates of 2012; ALNTF, HALKB and SKBNK are evaluated to be efficient and the other banks analyzed have efficiency rates from 66% to 85%.

Table 6: Efficiency Values of the Banks in 2013

Decision Making Unit (DMU)	Score	Decision Making Unit (DMU)	Score
AKBNK	74,05%	ISCTR	71,03%
ALNTF	100,00%	SKBNK	100,00%
DENIZ	100,00%	TEBNK	89,64%
FINBN	97,33%	TEKST	86,62%
GARAN	78,23%	VAKBN	88,72%
HALKB	100,00%	YKBNK	100,00%

Table 6 indicates that while ALNTF, DENIZ, HALKB, SKBANK and YKBNK are efficient, the performances of the others are calculated between 71% and 98% in 2013.

So; 2010 and 2013 are observed to be better than 2011 and 2012 for banks according to their efficiency values in the period besides ALNTF and HALKB are evaluated to be efficient in each year of the period while SKBNK is suggested to be inefficient only in 2010. DENIZ and YKBNK are calculated as efficient banks merely in 2013 additionally AKBNK, FINBNK, GARAN, ISCTR, TEBNK, TEKST and VAKBN need improvement during the 2010-2013 period even though their performances deserve to be defined as fine.

Afterwards; efficiency values belonged to each of the DMUs are compared via DEAP 2.1 Program (Win4DEAP) to determine improvements and decreases. The results of Malmquist Index Summary based on Total Factor Productivity Change and its components are shown in the tables below:

Table 7: Malmquist Index Summary 2011

Decision Making Unit (DMU)	Efficiency Change	Technical Efficiency Change	Pure Efficiency Change	Scale Efficiency Change	Total Factor Productivity Change
AKBNK	0.792	0.840	0.829	0.955	0.666
ALNTF	1.000	1.129	1.000	1.000	1.129
DENIZ	1.085	0.989	1.080	1.005	1.073
FINBN	1.099	0.908	1.000	1.099	0.998
GARAN	0.918	0.869	0.905	1.015	0.798
HALKB	1.000	0.912	1.000	1.000	0.912
ISCTR	0.793	0.942	0.710	1.117	0.747
SKBNK	1.349	0.995	1.270	1.062	1.343
TEBNK	1.056	1.277	1.000	1.056	1.348
TEKST	1.173	0.872	1.027	1.143	1.023
VAKBN	0.965	0.984	0.933	1.034	0.950
YKBNK	0.861	0.827	0.878	0.980	0.712
MEAN	0.996	0.955	0.960	1.037	0.951

All Malmquist index averages are geometric means.

According to Table 7; total factor productivity changes belonged to ALNTF, DENIZ, SKBNK, TEBNK and TEKST exceed 1 so that the efficiency values of the 5 mentioned banks are suggested to be improved.

Table 8: Malmquist Index Summary 2012

Decision Making Unit (DMU)	Efficiency Change	Technical Efficiency Change	Pure Efficiency Change	Scale Efficiency Change	Total Factor Productivity Change
AKBNK	0.855	1.106	0.968	0.883	0.945
ALNTF	1.000	1.362	1.000	1.000	1.362
DENIZ	0.859	1.026	0.858	1.001	0.881
FINBN	0.872	1.142	0.997	0.875	0.996
GARAN	0.916	1.031	0.940	0.975	0.945
HALKB	1.000	0.976	1.000	1.000	0.976
ISCTR	0.999	1.061	1.091	0.915	1.060
SKBNK	1.000	1.225	1.000	1.000	1.225
TEBNK	0.779	0.842	0.793	0.983	0.656
TEKST	0.982	1.290	0.949	1.035	1.266
VAKBN	1.017	1.092	0.994	1.024	1.111
YKBNK	0.793	1.012	0.873	0.908	0.802
MEAN	0.919	1.089	0.952	0.965	1.000

All Malmquist index averages are geometric means.

Rates in 2012 show that ALNTF, ISCTR, SKBNK, TEKST and VAKBN improve their efficiency, then. According to cumulative average data of 2012; total factor productivity is fixed, technical efficiency increase while the others decrease.

Table 9: Malmquist Index Summary 2013

Decision Making Unit (DMU)	Efficiency Change	Technical Efficiency Change	Pure Efficiency Change	Scale Efficiency Change	Total Factor Productivity Change
AKBNK	1.109	0.799	1.076	1.030	0.886
ALNTF	1.000	0.910	1.000	1.000	0.910
DENIZ	1.207	0.882	1.166	1.035	1.065
FINBN	1.154	0.716	1.003	1.150	0.826

GARAN	1.060	0.823	1.052	1.008	0.872
HALKB	1.000	0.895	1.000	1.000	0.895
ISCTR	1.064	0.819	1.065	0.999	0.871
SKBNK	1.000	0.743	1.000	1.000	0.743
TEBNK	1.158	0.730	1.153	1.004	0.845
TEKST	1.119	0.655	1.208	0.926	0.733
VAKBN	1.109	0.779	1.124	0.987	0.864
YKBNK	1.473	0.820	1.304	1.129	1.208
MEAN	1.115	0.794	1.092	1.021	0.885

All Malmquist index averages are geometric means.

According to Table 9; merely DENIZ and YKBNK have improvement in total factor productivity. ALNTF and HALKB have decrease due to the decline in technical efficiency change. The cumulative average data of 2013 illustrates that total factor productivity decrease because of the change in technical efficiency even though pure efficiency and scale efficiency arise.

As it is indicated below in Table 10; total factor productivity decrease year by year except 2012 meaning that the mentioned rate is the same both in 2011 and 2012.

Table 10: Malmquist Index Summary of Annual Averages

Year	Efficiency Change	Technical Efficiency Change	Pure Efficiency Change	Scale Efficiency Change	Total Factor Productivity Change
2011	0.996	0.955	0.960	1.037	0.951
2012	0.919	1.089	0.952	0.965	1.000
2013	1.115	0.794	1.092	1.021	0.885
MEAN	1.007	0.938	0.999	1.007	0.944

Finally; Malmquist Index Summary of each bank's means are indicated below:

Table 11: Malmquist Index Summary of DMU Means

Decision Making Unit (DMU)	Efficiency Change	Technical Efficiency Change	Pure Efficiency Change	Scale Efficiency Change	Total Factor Productivity Change
AKBNK	0.909	0.905	0.952	0.954	0.823
ALNTF	1.000	1.119	1.000	1.000	1.119
DENIZ	1.040	0.964	1.026	1.013	1.002
FINBN	1.034	0.905	1.000	1.034	0.936
GARAN	0.963	0.903	0.964	0.999	0.870
HALKB	1.000	0.927	1.000	1.000	0.927
ISCTR	0.944	0.936	0.938	1.007	0.884
SKBNK	1.105	0.967	1.083	1.020	1.069
TEBNK	0.984	0.922	0.971	1.014	0.907
TEKST	1.089	0.903	1.056	1.031	0.983
VAKBN	1.029	0.943	1.014	1.015	0.970
YKBNK	1.002	0.882	1.000	1.002	0.883
MEAN	1.007	0.938	0.999	1.007	0.944

According to Table 11; ALNTF, DENIZ and SKBNK have decrease in total factor productivity in the 4-year period that most of the efficiency declines are results of technical efficiency changes.

6. RESULTS AND CONCLUSION

In the study; 12 depositary banks listed on Istanbul Stock Exchange Banks Index (BIST XBANK) are evaluated through their financial performances via DEA over financial ratios to compare themselves in 2010-2013 period.

Based on the results of DEA; ALNTF and HALKB are evaluated as efficient in 2010 while ALNTF, HALKB and SKBNK are suggested to be efficient in 2011. According to the results acquired; ALNTF, HALKB, SKBNK and ALNTF, DENIZ, HALKB, SKBANK, YKBNK are calculated as the efficient banks in the years of 2012 and 2013, respectively. Consequently; ALNTF and HALKB are the efficient banks in each of the years besides SKBNK is efficient in three years of the mentioned period. In respect of the analysis held; most of the banks need improvement even though their performances deserve to be defined as fine.

Afterwards; efficiency values belonged to each of the banks are compared to determine improvements and decreases via Malmquist Index. According to their total factor productivity changes; ALNTF, DENIZ, SKBNK, TEBNK, TEKST improve their efficiency in 2011 and ALNTF, ISCTR, SKBNK, TEKST, VAKBN have better efficiency in 2012 comparing to the previous year. Finally in 2013; only DENIZ and YKBNK have improvement in total factor productivity so that the others decrease related to efficiency comparing to 2012. In conclusion; ALNTF, DENIZ, ISCTR, SKBNK, TEBNK, TEKST, VAKBN and YKBNK have better efficiency rates in different years of the mentioned period even if non of them are able to improve efficiency rates in each of the following years.

The results illustrate that depositary banks listed on Istanbul Stock Exchange Banks Index can suggested to be efficient as well in the period between the years of 2010 and 2013 according to the analyses held via DEA and Malmquist Index. For the following studies; the comparisons of financial efficiency of the banks examined can be held with their share earnings, corporate governance ratings or foreign shares (if available).

REFERENCES

Aktaş, M. and Avcı, T., (2013), "Türkiye'de Katılım Bankacılığı ile Faize Dayalı Bankacılığın Etkinlik Açısından Karşılaştırılması", Finans Politik & Ekonomik Yorumlar, Cilt: 50, Sayı: 576, pp. 85-98.

Ata, H.A., (2009), "Banka Yabancılaşmasının Türkiye'deki Yerli ve Yabancı Bankalar Açısından Karşılaştırılması", Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi, Cilt: 23, Sayı: 4, pp. 109-124.

Banker, R., Charnes, A., Cooper, W.W., (1984), "Models for Estimation of Technical and Scale Inefficiencies In Data Envelopment Analysis", Management Science, Vol. 30, pp. 1078-1092.

Boussofiane, A., Dyson, R.G., Thanassoulis, E., (1991), "Applied Data Envelopment Analysis", European Journal of Operational Research, Vol. 52, Issue 1, pp. 1-15.

Cenger, H., (2011), "İMKB'de İşlem Gören Çimento Şirketlerinin Performanslarının Ölçülmesinde Veri Zarflama Analizi Yaklaşımı", Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi, Cilt: 25, Sayı: 3-4, pp. 31-44.

Charnes, A., Cooper, W.W., Rhodes, E., (1978), "Measuring the Efficiency Of Decision Making Units", European Journal of Operational Research, Vol. 2, pp. 429-444.

Coelli, T., (1998), A Guide to DEAP Version 2.1: A DEA Computer Program, CEPA Working Paper, University of New England.

Cooper, W.W., Seiford, L.M., (2000), DEA: A Comprehensive Text With Models, Applications, References and DEA-Solver Software, Kluiwer Academic Publishes, London.

Çakır, S. and Perçin, S., (2012), "Kamu Şeker Fabrikalarında Etkinlik Ölçümü: VZA - Malmquist TFV Uygulaması", Anadolu Üniversitesi Sosyal Bilimler Dergisi, Cilt: 12, Sayı: 4, pp. 49-64.

Devlet Planlama Teşkilatı, (2000), Kamu Yönetiminin İyileştirilmesi ve Yeniden Yapılandırılması, Özel İhtisas Komisyonu Raporu, Ankara.

Doğan, M., (2013a), "Measuring Bank Performance with Gray Relational Analysis: The Case of Turkey", Ege Akademik Bakış, Cilt: 13, Sayı: 2, Nisan 2013, pp. 215-225.

Doğan, M., (2013b), "Katılım ve Geleneksel Bankaların Finansal Performanslarının Karşılaştırılması: Türkiye Örneği", Muhasebe ve Finansman Dergisi, Sayı: 58, Nisan/2013, pp. 175-188.

Doğan, M., (2013c), "Comparison of Financial Performances of Domestic and Foreign Banks: The Case of Turkey", International Journal of Business and Social Science, Vol. 4, No. 1, January 2013, pp. 233-240.

Eken, M.H., Kale, S., (2011), “Measuring Bank Branch Performance Using Data Envelopment Analysis (DEA): The Case of Turkish Bank Branches”, African Journal of Business Management, Vol. 5, No.3, pp. 889-901.

Farrell, M.J., (1957), “The Measurement of Productivity Efficiency”, Journal of the Royal Statistical Society, Vol. 120, pp. 253-290.

Golany, B., Yu, G., (1997), “Estimating Returns to Scale in DEA”, European Journal of Operational Research, Vol. 103, pp. 28-37.

Işık, İ. and Hassan, M.K., (2003), “Financial Disruption and Bank Productivity: The 1994 Experience of Turkish Banks”, The Quarterly Review of Economics and Finance, Vol: 43, pp. 291–320.

Karacabey, A.A., (2002), “Türk Bankalarındaki Üretim Değişiklikleri ve Nedenleri”, İktisat, İşletme ve Finans, Cilt: 17, Sayı: 191, pp. 68-78.
Kaya, A., Öztürk, M., Özer, A., (2010), “Metal Eşya, Makine ve Gereç Yapım Sektördeki İşletmelerin Veri Zarflama Analizi ile Etkinlik Ölçümü”, Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi, Cilt: 24, Sayı: 1, pp. 129-147

Koçyiğit, M.M., (2013), “Mevduat Bankalarının Etkinliği ve Hisse Senedi Getirileri Arasındaki İlişki”, Muhasebe ve Finansman Dergisi, Sayı: 57, Ocak/2013, pp. 73 -88.

Özcan, A.İ., (2005), Celal Bayar Üniversitesi’ne Bağlı Meslek Yüksekokullarının Etkinliklerinin Veri Zarflama Analizi ile Ölçülmesi, Yayınlanmamış Yüksek Lisans Tezi, Celal Bayar Üniversitesi Sosyal Bilimler Enstitüsü, Manisa.

Özgür, E., (2008), “Kamu Bankalarının Finansal Etkinliği”, Afyon Kocatepe Üniversitesi Sosyal Bilimler Dergisi, Cilt: 10, Sayı: 3, pp. 247-260.

Sakarya, B. and Kaya, Y., (2013), Türk Bankacılık Sektöründe Katılım ve Mevduat Bankaların Performans Farklılaşması, EY International Congress on Economics I: “Europe and Global Economıc Rebalancing, Ankara, October 24-25, 2013.

Tarım, A.,(2001), Veri Zarflama Analizi: Matematiksel Programlama Tabanlı Göreli Etkinlik Ölçüm Yaklaşımı, Sayıştay Yayınları, Sayı: 15, Ankara

Wei, Q. (2001), “Data Envelopment Analysis”, Chinese Bulletin Science, Vol. 46, No. 16, pp. 1321-1332.

Yeh, Q.J., (1996), “The Application of Data Envelopment Analysis in Conjunction with Financial Ratios for Bank Performance Evaluation”, The Journal of the Operational Research Society, Vol. 47, No. 8, pp. 980-988.

Yolalan, R., (1993), İşletmelerarası Göreli Etkinlik Ölçümü, MPM Yayınları, No: 483, Ankara.

www.kap.gov.tr, Accession Date: 06.15.2014

IMPORTANCE OF INTELLECTUAL CAPITAL IN ENTERPRISES FOR FINANCIAL PERFORMANCE AND A RESEARCH FOR CORUM ENTERPRISES

Selcuk Kendirli[*]

Hulya Cagiran Kendirli[**]

Abstract

The study mainly consists of two parts. The first part includes of theoretical knowledge, the second part includes application-oriented information.

In the theoretical part of the study, intellectual capital and SMEs are emphasized in general. In the study's application-oriented part, a field research will be done for Corum SME. In this study, the demographic structure of Çorum SMEs, intellectual capital structure and financial performance of this structure related to the reflection of a field research will be done. The resulting data will be analyzed in this context. The businesses operating in Çorum Organized Industrial Zone and matching to the definition of SME will be taken in to the research scope. Surveys will be applied by interweavers face to face and each survey will be evaluated individually. After the evaluation, a model will be proposed.

The aim of our study is to evaluate the relationship between components of intellectual capital in SMEs and the business performance. For this reason, a survey will be conducted for SMEs. As the results of the study will be shared with the scientific circles and public opinion it is though that these results will have guiding properties for Çorum SMEs.

Keywords: *SME, Intellectual Capital, Human Capital, Structural Capital, Relational Capital, Çorum SMEs*

Jel Classification: *C83, F65, M21*

[*] Assoc. Prof. Dr. Selcuk Kendirli, Hitit University, Banking and Finance Department, selcukkendirli@hitit.edu.tr

[**] Assist. Prof. Dr. Hulya Cagiran Kendirli Hitit University, Business Department, hulyacagirankendirli@hitit.edu.tr

1. INTRODUCTION

In today's commercial environment where the global competition experienced intensely, the success rates of SMEs have been started to be linked to intellectual capital assets increasingly. Accordingly, to develop their intellectual capital SMEs should achieve to activate the basic capabilities and features which are expanding the mind, encouraging innovation and ensuring the integrity. Therefore, it can be expressed that, intellectual assets such as productivity, human resources, behavior, education, technological skills, managerial skills, innovation and creativity in marketing activities, cooperation and coordination have effect on SME's performance.

Intellectual capital includes, legally applicable intellectual asset rights (patents, trademarks, copyrights, etc.) and both tangible and intangible aspects of intellectual knowledge which a business has accumulated and developed over the years (Yu, 2001). The value of the business's intellectual capital assets is the difference between the book value of the businesses and the market value.

Until the 1980s, management theory, as a basis for understanding of competitive advantage has focused on business environment (Roos and Roos, 1997). According to Porter (1980), five structural variables affect the company's competitive edge and profitability: supplier power, threat of new market entrants, the threat of substitutes, industry competition and the power of the recipient. According to this model; a business's profit potential is determined by out of entrepreneurs' business industry characteristics However, most of the company's resources are heterogeneous and cannot be easily imitated. These resources serve as potential sources of competitive advantage. This resource-based perspective on competitive advantage has a significant impact on environmental factors (Moon and Kym, 2006).

Basic skills are usually considered as information which is about the intangible values of the organization and forms the basis of the competitive advantage (is accepted). This basic skill contains information technology (Mata, Fuerst and Barney, 1995; Powell, 1997), human resources management (Lado and Wilson, 1994) and organizational culture (Fiol, 1991) contains nudes.

While many researchers accept the intellectual capital as a basic element and source of competition; managers and administrators (authorized holder) have difficulty in defining and evaluating it. According to Handy (1990), most of the managers use only 20% of the information the organizations. However they do not benefit from the remained %80 part with which they can provide better evaluation, management and communication. Since the 1980s, as a result of the increasing importance of the intellectual capitals evaluation, researchers have proposed some intellectual capital assessment tools (Moon and Kym, 2006).

The process called as knowledge economy and created by the development waves in information and communication technology, has made the information as the most important economic power in the enterprises. Which have the vision and mission of intellectual capital (Pirtini, 2004:13). Especially for SMEs; to develop products and services, strengthen and make valuable the intellectual property, adapt to rapid changes in the market better and continue innovation knowledge management carries great importance. Today when the knowledge-based global economy develops finding developing, storing and sharing the intellectual capital have become SMEs one of the most important economic functions. (Stewart, 1997:13).

2. INTELLECTUAL CAPITAL

Concept of "intellectual" has been used for the first time in the late 1960s. In 1969 economist John Kenneth Galbraith wrote in a letter to Polish economist Michal Kalecki, “I wonder if you realize how much those of us in the world around have owed to the intellectual capital you have provided over these past decades.” he ensured its entry into the literature of the concept by using the expression (Erkal, 2006:42).

Galbraith, has been associating individual intellectual unit with the individual performance. But previous years, Peter Drucker coined the term “knowledge worker" (1995). According to Drucker knowledge takes place across geographic boundaries and in the center of key resources and intellectual capital is a resource that adds value by creating competitive advantage for enterprises in the marketing. (Drucker, 59-60)

The concept of intellectual capital didn’t come on the agenda for many years after the 1960s, and didn’t capture attention among the other organizational topics. As the result of appearance of new **intangible** elements which were related to development of technologies that took place in 1980’s, new economic structure so-called “knowledge economy” came on the agenda. (Erkal, 2006:41).

Within the framework of the search of new values of creation for organizations and in term to response to the questions of how to use resources more efficiently and more effectively and how to created better results with the existing resources , the subject was opened again for the discussion in Japan, 1980s, (Kanıbir, 2004: 78).

Japanese Hiroyuki Itami’s book "Invisible Assets" written in 1980 which was about the impact of virtual assets on Japanese companies and their management, didn’t draw much interest initially, but his book translated into English by 1987, and has been used in studies on intellectual capital (Itami, 1987).

Sveiby, pioneered on the development of appropriate accounting methods for intangible assets, expressing the necessity of assessing the human capital. All the work done in 1989, collected in his book "Invisible Balance Sheet" and suggested a theory in term of measurement of knowledge capital. In 1993, Swedish Service Sector Council decided to standardize Sveiby's theory on Annual Reporting and it had been the first standard that was made applicable. Sveiby, has been analyzing intellectual capital within the scope of intangible assets under three sets of external structure, internal structure and individual competence;

External structure includes brands, customers, supplier relationships; internal structure includes management of an organization, legal structure, functioning systems, approach attitude and R & D activities; the individual competence includes education and experience of study. (Edvinsson, 1998). Leif Edvinsson who affected by the ideas of Sveiby renamed, intangible assets as intellectual capital (Yıldız ve Tenekecioğlu, 2004: 580-581).

Edvinsson (1997), determines intellectual capital as a "knowledge, that ensures advantage in market, in enterprises, experience, organizational technology, customer relationships and professional skills". And divides it into two main groups as human capital and structural capital. In his article "Your Company's Most Valuable Asset: Intellectual Capital" , written in 1994, Stewart describes Intellectual Capital as "knowledge and know-how unit of individual which is the source of inventor ship and innovation" and "talent, skill and expertise that embedded in human brain" (Stewart, 1994 ; 30).

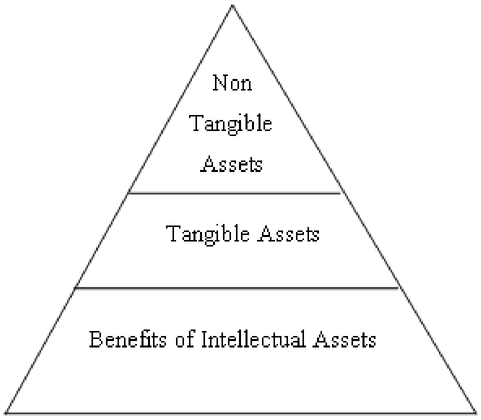
In addition, according to Stewart (1997), the intellectual capital includes the processes of organization, technologies, patents, ability of employees and the information about customers, suppliers and other related parties (Stewart, 1997:7).

Barney who studied Intellectual Capital in 1991, 1996 and 2002, classified business resources under the four groups: financial capital, physical capital, human capital and organizational capital. According to Barney (1991, 1996), the **financial capita**l includes all financial resources. **Physical capital** is the existing technology of enterprise. **Human capital**, is related to levels of training, experience, justice, knowledge, communication and understanding of enterprise employees. **Organizational capital** includes formal and informal structures of an enterprise.

In addition, organizational capital also includes: the business culture, business reputation, factors such as relationship of the operating with other businesses and between their own groups. (Barney, 1996, 2002).

Intellectual capital in the pyramid in Figure 1, include the rights of tangible of the assets, intangible assets and intellectual assets. This pyramid is very important. Namely, the knowledge that enterprises possess, includes business relationships involving the use of outsourcing, telecommunication, the rapid development in technology, application like attitude towards common risks involved global market. (Rose, 2000).

Figure 1: Pyramid of Intellectual Capital



Source: Adapted from Brown Jr. and others, 2005:35.

Analyzing the pyramid of intellectual capital we can see the intangible assets at the top of it. These assets include employee's knowledge and skills, innovative ideas about products and marketing strategies, relationship with customers and suppliers. The success of intangible assets, may be affected by some activities and instruments such as marketing, purchasing, human resources, engineering and manufacturing, commercial cooperation and earnings of enterprise. It can ensure the financial capacity and human capital of the business. Though they were not having a physical form, intangible assets are as valuable as tangible assets and legally enforceable intellectual property. Protection of intangible assets is very difficult and largely depends on human beings of the business.

For success in today's business world, to manage intangible assets as strategic instruments has become an important requirement. Tangible assets located in the middle of the pyramid. Tangible assets can be carried into or out of business, either physical or electronic way. These assets, contain all the sources of information as well as databases and operating records, at the same time they contain past information and documented procedures that include the structure of current employment experience and capability. The success of these assets, may be effected by purchasing, trade cooperation and earnings and engineering and by activities and tools such as manufacturing and information technology of enterprise. At the bottom of the pyramid is replaced legally enforceable intellectual property. These contain such rights as patents, trademarks, copyrights, trade secrets and licenses.

Activities and instruments, such as commercial co-operation and benefits, engineering and manufacturing, information technology, legal staff, has an impact on success of the rights of intellectual assets. Legally enforceable intellectual property and enterprises appertaining to tangible and intangible assets can be faced with such difficulties as intellectual capital theft, trademark piracy, identity theft and false claims, inadequate law and global inconsistency (Brown Jr., 2005).

3. CONCEPTUAL FRAMEWORK OF INTELLECTUAL CAPITAL AND A MODEL STUDY IN AN INDUSTRIAL ZONE –ÇORUM INDUSTRIAL ZONE-

According to resource-based perspective non-operating, according to resources of industry internal resources are considered as the basic assets for sustainable competitive advantage. These internally generated resources cover intangible assets and core competencies. (Barney,1986, Wernerfelt, 1984). The concept of core competency is often used instead of the concepts like absorptive capacity (Cohen and Levinthal, 1990), strategic assets (Amit and Schoemaker, 1993), the core capability (Zander and Kogut, 1995) and intangible assets (Hall, 1992). Core competencies are considered as knowledge about intangible value of organization which usually forms the bases of competitive advantage (is accepted). These core competencies include information technology (Mata, Fuerst and Barney, 1995; Powell, 1997), human resources management (Lado and Wilson, 1994) and organizational culture (Fiol, 1991).

Andriessen (2004) made the needed explanation about three basic questions (What, Why and How?) which should be taken into account for evaluation of intellectual capital. “What” question, is related to the classification scheme content of intellectual capital. “Why” question is related to causes of assessment or measurement of intellectual capital. Finally, the “How” question is related with evaluation of variety of intellectual capital and measuring approaches.

Intellectual capital is defined according two approaches. The first approach is thought to occur in three dimensions of intellectual capital: human capital, structural capital and relational capital. There is several proposed assessment for each measure (Moon and Kym, 2006). Sveiby (1997:10), defined human capital, as “an ability which has operations in wide variety of positions in order to create tangible and intangible assets”, structural capital, he defined as “patents, concepts, models, computer and management systems” and relational capital, he defined as “relationship with customers and suppliers”. Edvinsson and Malone (1997), Brooking (1996), Sveiby (1997), Bontis and others (2000) adopt this approach. The second approach, Saint-Onge (1996) and Knight (1999) explain with examples. The authors define the base dimensions of intellectual capital, but didn’t find any proposal to measure them (Moon and Kym, 2006).

In this study, intellectual capital dimension evaluation in the sphere of suggestions of the researchers which take the first approach as a base and the impact of this dimension on achievement level and business performance of intellectual capital is being analyzed.

The researchers conducted in the scope of the first approach, define each basis dimension of intellectual capital and thus an index is obtained for each dimension. Together with this approach, intellectual capital is defined perfectly well and the best measure of value is modified for intellectual capital. Different measures of value were used for human capital in many research works. (Moon and Kym,2006).

These measures can be expressed as annual staff turnover rate, leading indicators, education levels of managers (Edvinsson and Malone, 1997), technical information, education, cultural differences, work-related knowledge, professional assessments, psychometric evaluation (Brooking, 1996) consecutive training programs, competency level of ideas, program planning skills, do without thinking, to reduce underemployment, employees give it their all (Bontis et al., 2000), the ability turnover, change in the value added per employee, change in the rate of working, growth in average of professional experience (Sveiby, 1997). In this study the relationship between intellectual capital level of success that is effected by intellectual capital dimension and business performance are evaluated.

In this sense, an indirect relationship between business performance and human capital can be tested with hypothesis developed below:

H1: The more business performance increases the more increases success level of Intellectual capital affected by human capital.

Lost customers, the number of consumer visits, satisfied customer index, days spent visiting customers, per employee education, employee satisfaction index, administrative error rate, R & D expenditures for administrative expenses, IT expenses per employee (Edvinsson and Malone, 1997), management philosophy, corporation culture, leadership style, knowledge base, expert networks and teams, managing process, patents, design rights, trademarks, service marks, copyrights, trade dress (Brooking , 1996), the lowest cost per transaction, the development of the best ideas in the industry, improving the costs per revenue (Bontis et al., 2000) takes place among measures of value which can be used in structural capital assessment that took place among the intellectual capital dimensions can be helpful in assessing the performance of businesses.

In this sense, an indirect relationship between business performance and **structural** capital can be tested with the following developed hypothesis:

H2: The more business performance increases the more increases success level of Intellectual capital effected by structural capital.

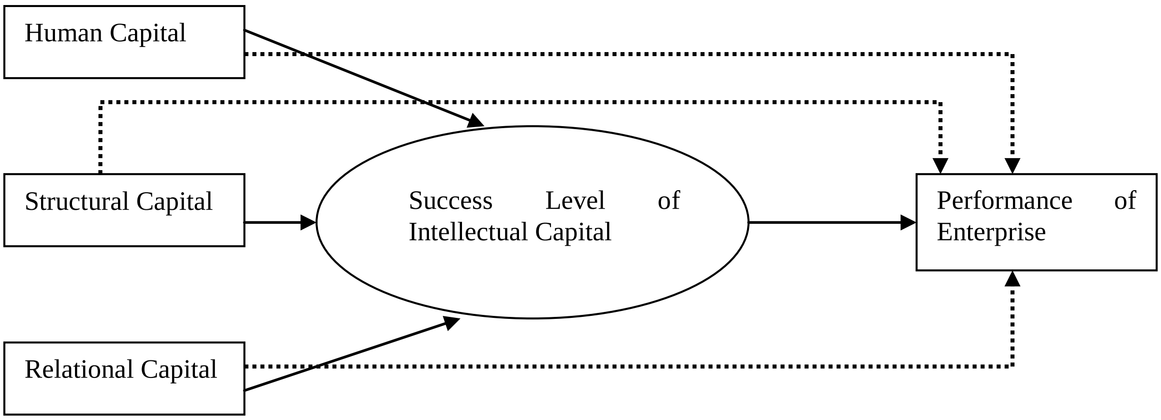
Relational capital which is another dimension of intellectual capital, also effects directly the level of success of intellectual capital, and thus business performance. Brands, consumer loyalty, distribution channels, licensing agreements, appropriate contracts, commercial cooperation, customer depth and width (Brooking, 1996), in general, satisfied customers, reduce time to resolve the problem, improving market share, the highest market share, long-lasting relationships (Bontis et al., 2000). In this sense, an indirect relationship between business performance and relational capital can be tested with the following developed hypothesis:

H3: The more business performance increases the more increases success level of Intellectual Capital effected by relational capital

H4: The more success level of Intellectual capital, effected by customer capital, increases, the more increases business performance.

In this context, a model that can be created about the impact of intellectual capital on business performance can be shown as follows.

Figure 2: Model of Research



3.1. A Study in Corum Industrial Zone

Purpose

The purpose of the survey is to investigate the intellectual capital in SMEs operating in the Corum Organized Industrial Zone and the impacts of the intellectual capital on the business performance.

Assumptions

The assumptions of the study are followings;

- The information given by the enterprises reflects the reality.
- It is assumed that in the enterprises taken in to the working scope, the survey questions were correctly detected and they were answered according to that.
- The business performance increases as the success level of the intellectual capital affected by human capital increases.
- The business performance increases as the success level of the intellectual capital affected by structural capital increases.
- The business performance increases as the success level of the intellectual capital affected by relational capital increases.

According to the conditions of the study, new hypotheses will be developed.

Analyze of Data and Findings

The raw data obtained as a result of the survey technique was evaluated statistically. In analyzing the data, percentage, frequency, mean, median and mode were used for descriptive statistics which shows values.

Descriptive Statistics for Research Model

From descriptive statistics of variables related to characteristics of the surveyed enterprises the following distributions are used: percentage, frequency, mean, median and mode.

Table 1: Characteristics of enterprises

The number of employees employed in the enterprise	**n**	**%**	**Mean**	**Median**	**Mod**
1-9	15	24.2	1.95	2.00	2.00
10-49	36	58.1	1.95	2.00	2.00
50-250	10	16.1	1.95	2.00	2.00
250 +	1	1.6	1.95	2.00	2.00
Total	62	100.0			
The age of enterprise	**n**	**%**	**Mean**	**Median**	**Mod**
less than a year	-	-	-	-	-
2-7 year	15	24.2	4.11	4.00	4.00
8-13 year	8	12.9	4.11	4.00	4.00
14-19 year	11	17.7	4.11	4.00	4.00
20-25 year	11	17.7	4.11	4.00	4.00
25 +	17	27.4	4.11	4.00	4.00
Total	62	100.0			
The number of patent the enterprise possess	**n**	**%**	**Mean**	**Median**	**Mod**
not any	25	40.3	1.74	2.00	2.00
1-3	30	48.4	1.74	2.00	2.00
4-6	5	8.1	1.74	2.00	2.00
7-9	2	3.2	1.74	2.00	2.00
10 +	-	-	-	-	-
Total	62	100.0			
The amount of the undertaking R & D investments	**n**	**%**	**Mean**	**Median**	**Mod**
less than 5 000.00	58	93.5	1.18	1.00	1.00
5.000.00 - 20.000.00 TL	1	1.6	1.18	1.00	1.00

21.000.00 - 50.000.00 TL	-	-	-	-	-
51.000.00 - 100.000.00 TL	2	3.2	1.18	1.00	1.00
100.000.00 TL +	1	1.6	1.18	1.00	1.00
Total	62	100.0			
How often is business market research performed	**n**	**%**	**Mean**	**Median**	**Mod**
Never	5	8.1	2.45	3.00	3.00
Once a year	24	38.7	2.45	3.00	3.00
Once in 6 years	33	53.2	2.45	3.00	3.00
Total	62	100.0			

Examining **Table 1**, variables related to operational characteristics of the mean, median and mode values, the values were found close to each other. In this case, it can be said distribution of data is normal. We found that 58% of surveyed enterprises had employing 50 people and over, 27% of displayed activity more than 25 years in the same sector, 48% had patents between 1 and 3, 95% of R & D investment amount was less than 5.000.-TL 53% of enterprises said they made a market examining once in six months. In the following table are given values of performance indicator of the surveyed enterprises for the last 5- year.

Table 2: Performance Values of enterprises participating in the survey.

Please indicate the level of satisfaction in the last 5 years the following activities of your business.	**Exactly satisfactory**	**Satisfactory**	**Various**	**Not Satisfactory**	**Never Satisfactory**	**Total**
Profit growth in the share	**n/%**	**n/%**	**n/%**	**n/%**	**n/%**	**n/%**
Revenue growth	10/16.1	25/40.3	10/16.1	11/17.7	6/9.7	62/100.0
Market leadership	9/14.5	31/50.0	7/11.3	9/14.5	6/9.7	62/100.0
Profitability per Consumer	8/12.9	29/46.8	15/24.2	7/11.3	3/4.8	62/100.0
Success rate of new products and services	10/16.1	24/38.7	17/27.4	10/16.1	1/1.6	62/100.0
Revenue from new products and services	11/17.7	33/53.2	11/17.7	4/6.5	3/4.8	62/100.0
Investment surplus	4/6.5	29/46.8	17/27.4	8/12.9	4/6.5	62/100.0
Sales growth	9/14.5	23/37.1	16/25.8	11/17.7	3/4.8	62/100.0
Corporate reputation (image)	16/25.8	17/27.4	18/29.0	8/12.9	3/4.8	62/100.0
Growth of social assets	24/38.7	27/43.5	6/9.7	4/6.5	1/1.6	62/100.0
Sales revenues	12/19.4	26/41.9	15/24.2	1/11.3	2/3.2	62/100.0
Consumer products and services to meet the needs of	16/25.8	26/41.9	11/17.7	8/12.9	1/1.6	62/100.0
Ability to meet new market demands	15/24.2	33/53.2	7/11.3	5/8.1	2/3.2	62/100.0
Potential emerging market opportunities for new	19/30.6	26/41.9	10/16.1	5/8.1	2/3.2	62/100.0

products and services, ability to predict						
Please describe what the status of the last 5-year market share	16/25.8	32/51.6	6/9.7	6/9.7	2/3.2	62/100.0
Increased	**n**			**%**		
Unchanged	43			69.4		
Low	10			16.1		
Total	9			14.5		
Profit growth in the share	62			100.0		

When Table 2 was examined for the last 5- year, found that, 69% of the surveyed enterprises' market shares constantly increasing. The evaluation operating statuses of enterprises in the last 5 years were asked. As a result of evaluation 82.2% of the enterprises' stated satisfaction about corporation image, 77.4% about the needs of consumer products and services, and still 77.4% about activities of the potential market opportunities, activities dealing with ability to predict new products and services. The aim of study is to determine factors related to intellectual capital variables that are effective on business performance. For this purpose, factor analysis was used. Basic criteria for business performance in factor analyses determined as market share assessments of businesses in the past 5-year. The dependent variable in the factor analysis is market share. Intellectual capital variables are independent variables in the analysis. The analysis results are provided in detail in the following section.

Descriptive Statistics for Determination of Factors Related to Intellectual Capital Variables That Effect Business Performance

In this sector realized reliability in order determine the factors formed of intellectual capital variables that effects business performance of surveyed enterprises and assessment on factor analysis carried out. During the analysis in determination of variables that value doesn't represent, which needed to be measured, was benefitted by Cronbach alpha and Item-Total Correlation (Chief, 2006:193).

Intellectual capital variables which effect the business performance consists of 38 sub-components relating to human capital, innovation and development, structural capital and customer capital. Cronbach alpha of these variables is determined as 83.9%. 5 variables that do not represent the common value of these variables will be excluded from the analysis and new alpha is determined as Cronbach alpha 93.3%.

Internal reliability of the factors formed of the remaining 33 variables of intellectual capital was determined by testing their reliability respectively. The reliability of factor 1, that consists of Innovation and Development variables found to be 88.0%; the reliability of factor

2 that consists of Human capital variables is 79.0%; the reliability of factor 3 that consists of structural capital variables is 83.0%; and the reliability of factor 4 that consists of customer capital variables is 84.4%. Also the total reliability represented by these 4-factor was calculated as 93.3%.

Therefore, factors that consist of intellectual capital, effective on business performance were found to be reliable. After the reliable test, factor analysis was used to verify quantitatively, the structure of factor that affects business performance.

Appropriateness of factor analysis is determined by KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy. KMO is a ratio and is desirable to be over 60% (Nakip, 2006:429). KMO value in our study was 74.5%. KMO measure of sampling adequacy is over 60%. It shows that the scale of the variables is appropriate to factor analysis. The results of factor analysis are shown in Table 3.

Factor analysis was carried out using principal component analysis and the technique of varimax vertical rotation. With the help of Principal component analysis, on the bases of the factors reduction, variables are eliminated of which factor loadings are fewer than 33.9%. In addition, values of skewness and lowness revised in order to examine the appropriateness of normal distribution of variables which will be subjected to the factor analyses. Values were found to be approximately between -1 and +1 and the data were appropriate to normal distribution. As a result of the analysis we found that eigenvalues of four factors of which internal reliability tested, was over 1, and factor structure was quantitatively verified. Innovation and development variables describe 64.45% of the total variance in Factor 1; human capital variables describe 3.96% of the total variance in Factor 2; structural capital variables describe 3.33% of total variance in Factor 3 and customer capital variables describe 3.14% of the total variance in Factor 4.

	FAKTÖR 1	FAKTÖR 2	FAKTÖR 3	FAKTÖR 4
Intellectual Capital Variables	Innovation & Developme nt	Human Resources	Structural Capital	Customer Capital
s3.1.21. Intellectual assets have a useful function.	0.710			
s3.1.18. Intellectual assets increases our capacity to work.	0.701			
s3.1.23. Intellectual assets are strong supporters in ensuring our competitive conversion.	0.646			
s3.1.16. Intellectual assets can help the realization of functional activities.	0.643			
s3.1.17.*Our institution acquire quickly adapts technological developments*	0.629			
s3.1.22. Intellectual assets can be used by companians.	0.612			
s3.1.14. Our institute has been increasingly investing in information infrastructure(computer, internet and intranet networks, data bases)	0.572			
s3.1.19. There are commercial opportunities we can offer our business partners.	0.554			
s3.1.20. Intellectual assets provides financial gains to our organization.	0.547			
s3.1.24. We can provide resources we need from non-business sources quickly	0.527			
s3.1.15. IT infrastructure (computers, internet and intranet) facilitating information sharing within the organization.	0.498			
s3.1.13. I*ntellectual assets are difficult to imitate by competitors.*	0.358			
s3.1.10. We give an importance to new ideas of our work-related employees.		0.709		
s3.1.5. Differences in status and the status of each of our employees are defined		0.650		
s3.1.4. Our staff has the capabilities to do the best jobs		0.618		
s3.1.8. Employees are trained and their skills developed through programs and activities such as in-house training, job rotation, delegation of authority, such as.		0.525		
s3.1.6**. Supply** qualified workers out of enterprises or other units of it, provided gaining employees with new capabilities.		0.566		
s3.1.9 Company we have a large part of our staff consists of qualified labor.		0.519		
s3.1.2. Training expenses per employee is increasing on a regular basis.		0.472		

s3.1.11.In order to find new ideas we look up other resources than business		0.374		
s3.1.1. Our employees have the authority to control decisions about their work.		0.339		
S3.1.28.Company information is different from the knowledge of each department.			0.725	
S3.1.27.Our employees are assigned to tasks that they have the appropriate knowledge and qualifications.			0.716	
S3.1.30.Our company has a system that allows easy access to enterprise information.			0.670	
S3.1.31.Procedures is available to support innovation in our plants.			0.643	
S3.1.29.Our company is an efficient company.			0.525	
S3.1.26.In-house resources (competition, environment, market, consumer demands and technological change) can be adapted to changes easily.			0.459	
s3.2.4. Loyal customer ratio is high.				0.690
s3.2.5. Effectiveness of communication with customers is high.				0.689
s3.2.2. Suppliers are visited frequently.				0.633
s3.2.3. A company known and recognized in the market that we, according to our competitors is an advantage to us.				0.481
3.2.6. The number of customers is high.				0.424
s3.2.7. Brand name recognition is high.				0.375
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.745			
Bartlett's Test	X^2= 1.388E3 sd= 528 p= 0.000			

Table 3: Arising factors in the Context of Description Of Variables at the result of Factor Analysis.

Model developed under the four main hypotheses has tasted. Hypothesis validity was tested with the method of Chi-square. The results of the analysis provided in the table below:

Table 4: The Relationship Between Business Performance with the Intellectual Capital Variables

HYPOTHESİS		Value	df	P	RESULT
H_1: The more success level of Intellectual capital, effected by Innovation and development, increases, the more increases business performance.	Chi-square test	10.344	8	0.026	+
	Chi-square Relation Coefficient	9.876	8	0.001	
H_2: The more success level of Intellectual capital, effected by Human capital, increases, the more increases business performance.	Chi-square test	24.204	8	0.002	+
	Chi-square Coefficient	19,503	8	0.000	
H_3: The more success level of Intellectual capital, effected by structural capital, increases, the more increases business performance.	Chi-square	21.894	8	0.005	+
	Chi-square Relation Coefficient	17.827	8	0.023	
H_4: The more success level of Intellectual capital, effected by customer capital, increases, the more increases business performance.	Chi-square test	20.666	8	0.008	+
	Chi-square Relation Coefficient	*16.622*	*8*	*0.021*	

Examining Table 4, the business performance was positively correlated with the intellectual capital variables of 0,05 significance level. The research hypotheses is considered at p <0,05. The basic assumption of the study is that, the four factors formed of intellectual capital variables which effects business performance is effective on the classification according to enterprises performance levels. Which of the factors affecting business performance have a role in discrimination, has been tested with discriminant analysis? The analysis results are provided in detail in the following section.

Performance Level Discriminant Analysis

Discriminant analysis is one of multivariate statistical techniques, aiming to estimate the relationship between categorical dependent variables and metric independent variables. One of the aims of the discriminant analysis is to be able to determine effective and non- effective variables in distinguishing groups. For the implementation of the analysis, some assumptions must be valid. These can be expressed as: (1) variables have multiple normal distributions, (2) for all groups their covariance matrices are equal and (3) there is no direct multi co linearity problem among independent variables (Eroglu (a), 2006:335). Looking at skewness and lowness values, variables are decided to be appropriate to multiple normal distributions.

Assumptions of equality of covariance matrixes for all groups were examined by using Box's M test (Eroglu (a), 2006: 341). Table 4 shows the result of the test.

Table 5: Box's M Test Results

Box's M		15.581
F	Approx.	4.805
	df1	3
	df2	9.726E3
	Sig.	0.002

Tests null hypothesis of equal population covariance matrices.

According to table 5, p=0,05 on significance level Sig. was designated as 0,033 and covariance matrices were seen equal between groups. Correlation results between variables were analyzed for assumption confirmation of lack of powerful correlation among independent variables and found out that there doesn't exist a high correlation between them. Thus, the condition is provided for independence of factors and thanks to this for not to exist a high correlation between variables. In order to determine the effectiveness in classification of the factors according business performance level, enterprises divided them into binary classification such as high levels of business performance (A1) and lower performance level (A2). This classification is based on assessments of market shares of enterprises in the past 5 years. The groups' equality test, structural matrix and Fisher's discriminant function takes place in Table 6.

Table 6: The Groups' Equality Test, Structural Matrix and Fisher's Discriminant Function

Variable	Wilks λ	F	Sd1	Sd2	p	Structural Matrix	Y1 (High)	Y2 (Low)
Factor 1								
s3.1.18	0.844	6.095	1	51	0.019	0.576	1.574	0.258
s3.1.14	0.738	6.924	1	51	0.003	0.412	2.294	0.700
s3.1.17	0.705	12.981	1	51	0.001	0.530	2.269	1.006
s3.1.13	0.547	8.061	1	51	0.000	0.236	5.622	2.086
s3.1.15	0.334	13.948	1	51	0.001	0.359	4.467	2.791
Factor 2								
s3.1.1	0.913	4.663	1	51	0.036	0.696	2.319	1.537
s3.1.11	0.863	4.771	1	51	0.037	0.276	2.544	1.681
s3.1.5	0.809	5.322	1	51	0.008	0.533	2.661	1.908
s3.1.9	0.725	6.192	1	51	0.005	0.110	3.617	2.536
s3.1.2	0.483	10.351	1	51	0.000	0.303	5.397	3.671
Factor 3								
s3.1.29	0.854	8.696	1	51	0.003	0.671	6.336	3.555
s3.1.30	0.836	4.710	1	51	0.014	0.562	2.887	3.772
s3.1.31	0.788	6.732	1	51	0.001	0.116	1.279	1.033
s3.1.26	0.780	10.385	1	51	0.005	0.649	2.878	1.276
s3.1.28	0.763	11.828	1	51	0.001	0.774	5.083	2.327
Factor 4								
s3.2.4	0.898	3.971	1	51	0.054	0.528	2.226	0.243
s3.2.2	0.643	5.749	1	51	0.003	0.303	2.069	0.961
s3.2.6	0.396	10.673	1	51	0.000	0.282	12.521	8.512
(Constant)							-36.022	-16.851

F values in Table 6 p = 0,05 significant level indicates weather there exist significant differences between enterprise groups composed according to their business performance. Accordingly, the innovation and development factors s3.1.18, intellectual assets increase our capacity to work, s3.1.14 (institute of information infrastructure (computer, internet and intranet networks, data bases) has been increasingly investing in), 3.1.17 (institution acquired quickly adapts technological developments), s3.1.13 (intellectual assets are difficult to imitate by competitors), s3 .1.15 (IT infrastructure (computers, internet and intranet networks, data bases) facilitates information sharing within the organization); s3.1.1 from human capital factors (employees have the authority to control decisions about their work), 3.1.11 (In order to find new ideas we look up other resources than business), s3.1.5 (status and status of each of the differences of our employees are defined), s3.1.9 (in our company the majority of the qualified labor force consists of employees), s3.1.2 (education expense per employee is increasing on a regular basis), of structural capital factors s3.1.29 (our enterprise is an efficient enterprise), s3.1.30 (easy access to enterprise information system that allows easy access to features), s3.1.31 (There are procedures that support our business innovation), s3.1.26 (In-house resources (competition, environment, market, consumer demands and technological change) can be adapted to changes easily.), s3.1.28 (company information is different from the knowledge of each department), customer capital s3.2.4 factors (high percentage of loyal customers), s3.2.2 (Suppliers are visited often), s3.2.6 (higher number of customers) from businesses participating in the survey were found significant differences in terms of performance levels ($p < 0,05$).

Building matrix, expresses correlation between discriminant function and discriminant variables (Akgül and Çevik, 2003:414).

Factor 3 composed of discriminant function, which generated according performance level in structural matrix, and intellectual capital variables. Variables related to Factor 3, (s3.1.28 (0,774)) is seen to have the highest correlation coefficient among them.

In addition, coefficients relating to Factor 1, which composed of variables of innovation and development, to Factor 2, composed of human capital variables, Factor 3, composed of customer variables are the other significant coefficients in the structure matrix. In discrimination of business groups according to their performance level, from the variables related to Factor1, Factor2, Factor 3, and Factor4, those that take place in Table 5 appear to be decisive.

Columns Y1 and Y2 in Table 5, show Fisher's discriminant function coefficients. Fisher linear discriminant function coefficients enable the evaluation of the importance of the independent variables (Eroglu (b), 2006:342). Y1 column of the high level of performance, Y2 column shows the coefficients of the function of enterprises with low levels of performance. These coefficients describe independent variables how they contribute to separate the groups (Morales and Fernandez, 2004). The large coefficients indicate high contribution; small coefficients indicate a low contribution in the columns of Y1 and Y2. Coefficients related to variables of the 4 factors in columns Y1 and Y2 are positive and statistically significant.

According to this, for the business groups with high level of performance variables relating to the 4 factors in Table 5, contribute highly. For businesses with low levels of performance these factors contribute lowly.

Functions	eigenvalues	canonical correlation	Wilks λ	X^2	sd	p
1	1.407	0.538	0.771	11.607	2	0.003

According to Eigenvalues and Wilks λ Values (Level Of Performance Of Enterprises), property of eigenvalues is greater than 1, so it indicates that differential feature of the discriminant function is "good". However, canonical correlation explains 100% of the total variance of coefficient and 53.8% of intergroup difference. Canonical correlation is 0,538. It can express that the function is a good discriminator of intergroup separation. Also Wilks λ (0,771) analysis by the value of X^2 is 2 degrees of latitude was statistically significant (X^2 = 11.607, $p<0,001$). In Table 7 the results of the classification are made according to the level of performance.

Table 7: Classification Results (business performance levels)

Real Group Membership	Estimated Group Membership		Total
	Y1(high)	Y2(low)	
G1	36	7	43
%	83.7	16.3	100.0
G2	8	11	19
%	42.1	57.8	100.0

Correct Classification Rate of 81.1%

In Table 7 according to the level of the performance of the classification, 83.7% of the 43 enterprises with high level of performance and 57.8% of the 19 enterprises with low levels of performance are correctly assigned. High correct classification rate is considered as an indicator of success of the analysis (Akgül and Çevik, 2003:415). Discriminant function's weighted average rate of correct classification was 81.1%. These results are sufficient for distinctive features of discriminant function.

4. RESULTS AND EVALUATIONS

Today global markets show rapid development and take part in intense competition. For this reason enterprises especially, SMEs that cover 99.89% of our country business, will be able to increase business performance by creating value through relationship with intellectual assets existing among already non-tangible values such as, human resources, brands, customers, and marketing channels. Consumers and customers are placed in focal point of basic activities of businesses.

That is why, intellectual capital that expressed as a common brain power and knowledge is necessary to be evaluated perspective of business performance intellectual capital components and business performance in small and medium-sized enterprises.

A survey questionnaire that prepared within the scope of this aim, applied in 130 enterprises which is operating in Çorum and valid 62 of them were analyzed statistically. At the result of analyzing, when looking at the number of employees of businesses participating in our investigation, we saw that 73% of employee is under 250 staff, which was carried by the nature of the SMEs.

As a result of research, we found that, 98.4% of enterprises are under 25 years, 40% of them have no patents and 48% of the enterprises have got between 1-3 patents. When enterprises performing specific amounts of R&D expenditure, can be said that it is not sufficient. 94% of enterprises of those who go on R & D expenditure have been spending under 5,000.-TL (Nearly 2,500.-€) in this area. This is quite inadequate expenditure.

Analyzing from within the framework of factor, four factors appear studying the activity of enterprises' intellectual capital. These factors have been explaining the 75% level of impact on business performance of intellectual capital of business. The factor 1 which is formed of innovation and development variables explains 64.45% of the total variance; the factor 2 which is formed of human capital variables 3.96%, the factor 3 which is formed of structural capital variables 3.33%, and the factor 4 which is formed of customer capital variables 3.14% of the total variance.

As a result of the tests of the hypotheses developed in the cope of research models, we found out the existence of positive relation in the concept of $p<0,005$, between activity levels and concept of innovation of components of intellectual capital and business performance.

In short the synergy which is formed by intellectual capital components of small and medium-sized enterprises has a direct impact on enterprises' performance. In very aggravated and hardened competitive conditions, SMEs need to invest intellectual capital elements, in order to sustain their existence effectively. Enterprises that do not make the components of intellectual capital investment, even if they maintain their existence, they would lose their current positions day by day.

REFERENCES

Akgül A. ve Çevik O., (2003), İstatistiksel Analiz Teknikleri SPSS' te İşletme Yönetimi Uygulamaları, Emek Ofset, Ankara.

Amit, R., Schoemaker, P.J.H. (1993), "Strategic Assets And Organizational Rent". Strategic Management Journal, 14, 33-46.

Andriessen, D. (2004), "IC Valuation and Measurement: Classifying the State Of The Art". Journal Of Intellectual Capital, 5(2), 230-242.

Barney, J.B. (1986), "Organizational Culture: Can It Be A Source Of Sustained Competitive Advantage?". Academy Of Management Review, 11(3), 656-665.

Baş, Türker, (2006); Anket Nasıl Hazırlanır? Anket Nasıl Uygulanır?, Anket Nasıl Değerlendirilir?, Ankara, Şeçkin YayıneviNakip, Mahir. (2006). Pazarlama Araştırmaları. Ankara: Seçkin Kitabevi.

Bontis, N., Keov, W., Richardson, S. (2000), "Intellectual Capital and The Nature Of Business In Malaysia", Journal Of Intellectual Capital, I(1), 85-100.

Brooking, A. (1996), Intellectual Capital: Core Assets For The Third Millennium Enterprise. London: Thompson Business Pres.

Brown Jr Andrew, Twila Osborn, James M Chan, Venkat Jaganathan (2005), "Managing Intellectual Capital", Research Technology Management, Nov/Dec, 48, 6, 34-41.

Cohen, W., Levinthal, D. (1990), "Absorptive Capacity: A New Perspective On Learning And Innovation". Administrative Science Quarterly, March, vii-xvi.

Drucker P. F.(1995), "The Information Executives Truly Need", Harward Business Rewiev.

Edvinsson, L.(1997), "Developing Intellectual Capital at Skandia", Long Range Planning, Vol:30, Issue: 3, s.366-373.

Edvinsson, L., Malone, M.S.(1997), Intellectual Capital: Realizing Your Company's True Value By Finding Its Hidden Brainpower. New York: Harper Business.

Erkal, Zekeriya (2006); Entelektüel Sermaye Ölçülmesi ve Raporlanması, Derin Yayınları.

Eroğlu, Abdullah (a)(2006); "Faktör Analizi", SPSS Uygulamalı Çok Değişkenli İstatistik Teknikleri, Editör: Kalaycı, Şeref, Ankara: Asil Yayın Dağıtım.

Eroğlu, Abdullah, (b)(2006). "Diskrimnant Analizi", SPSS Uygulamalı Çok Değişkenli İstatistik Teknikleri, Editör: Kalaycı, Şeref, Ankara: Asil Yayın Dağıtım.

Fiol, C.M. (1991), "Managing Culture as a Competitive Resource: An Identity-Based View Of Sustainable Competitive Advantage". Journal Of Management, 17, 191-211.

Hall, R. (1992), "The Strategic Analysis Of Intangible Resources". Strategic Management Journal, 13, 135-144.

Handy, C. (1990); Inside Organisations Twenty One Ideas For Managers, Penguin Business.

Itami, Roehl (1987); Mobilizing Invisible Assets. Mass.:Harvard Business Review.

Kanıbir H., “Yeni Bir Rekabet Gücü Kaynağı Olarak Entelektüel Sermaye ve Organizasyonel Performansa Yansımaları”, Havacılık ve Uzay Teknolojileri Dergisi, Cilt: 1 Sayı: 3, 2004.

Knight, D.J. (1999), “Performance Measures For Increasing Intellectual Capital”. Strategy & Leadership, 29(1), 22-28.

Lado, A.A., Wilson, M.C. (1994), “Human Resource Systems And Sustained Competitive Advantage: A Competency-Based Perspective”. Academy Of Management Journal, 19(4), 699-727.

Mata, F.J., Fuerst, W.L., Barney, J.B. (1995), “Information Technology And Sustained Competitive Advantage: A Resource-Based Analysis. MIS Quarterly, 19, 487-505.

Moon, Yun Ji, Kym, H.G. (2006), “A Model for the Value of Intellectual Capital”, Canadian Journal of Administrative Sciences, Sep. 23(3), 253-269.

Morales, F. X.M. ve Fernandez, M.M.T (2004), “How much difference is there between industrial district firms? A net value creation approach”, Research Policy, 33, s.473–486.

Pirtini, Serdar (2004); Pazarlama Yönetimi Açısından Entelektüel Sermaye, Türkmen Kitabevi, Ankara.

Porter, M. (1980), Competitive Strategy. New York: Free Press.

Powell, T.C. (1997), “Information Technology As Competitive Advantage: The Role Of Human, Business, And Technology Resources”. Strategic Managemet Journal, 18, 375-405.

Roos, G., Roos, J. (1997), “Measuring Your Company’s Intellectual Performance”. Long Range Planning, 30(3), 413-426.

Rose, Ian (2000), Valuing Intellectual Capital. Summary Report: IBR Consulting Services Ltd., March, 17, 5.

Saint-Onge, H. (1996), “Tacit Knowledge: The Key to The Strategic Alignment Of Intellectual Capital”, Strategy&Leadership, 24(2), 10-14.

Stewart, T. A. (1991). Brainpower, Fortune, 127:44-66.

Stewart, T. A. (1994). Your Company’s Most Valuable Asset: Intellectual Capital, Fortune, 130(7):28-33.

Stewart, T. A. (1997). Intellectual Capital The New Wealth Of Organizations. New York:Bantam Doubleday Dell Publishing Group, Inc.

Sveiby, K.E. (1997), Intellectual Capital: The New Wealth Of Organizations. New York: Doubley/Currency.

Wernerfelt, B. (1984), "A Resource Based View Of The Firm". Strategic Management Journal, 5(2), 171-180.

Yildiz B. Ve Tenekecioğlu B.; "Entelektüel Sermayenin İşletmelerin Piyasa Değeri Üzerindeki Etkisi Ve İmkb 100 İşletmelerinde Görgül Bir Çalışma", 3.Ulusal Bilgi, Ekonomi ve Yönetim Kongresi (Eskişehir), 2004, ss.579-590.

Yu, Peter K. (2001), From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-First Century. Cordozo Public Law Research Paper No. 34, Amecian University Law Review, Vol 50, 08/15/2001, 131-243.

Zander, U., Kogut B. (1995), "Knowledge And The Speed Of The Transfer And Imitation Of Organizational Capabilities: An Empirical Test. Organization Science, 6(1), 76-92.

THE RELATION BETWEEN EXPORT AND PROFITABILITY: AN ANALYSIS ON TOP 1000 EXPORTERS IN TURKEY

Bayram TOPAL*
Hakan TUNAHAN**
Sinan ESEN***

ABSTRACT

This study aims to find out if there are significant *differences between the profitability of Top 1000 Exporters of Turkey that export at different level by performing Anova and Chi Square tests over their financial datas for the year 2012. The results of both tests show that the companies that export less get higher profit and the companies that export more get lower profit.*

Keywords: *Export, Export Orientation, Profitability, Internationalization, Top 1000 Exporters*

Jel Classification: *F23, F65, G30*

* Associate Professor, University of Sakarya, Faculty of Management, Department of Management, (0264) 295 7266 ,btopal@sakarya.edu.tr,

** Associate Professor, University of Sakarya, Faculty of Management, International Trade Department, (0264) 295 7138 htunahan@sakarya.edu.tr

*** Assistant Professor, University of Sakarya, Faculty of Management, International Trade Department, (0264) 295 3206, sinanesen@sakarya.edu.tr

1. INTRODUCTION

On the global scale, a significant trend has emerged toward export, because of its positive macroeconomic effects such as inflow of foreign exchange to the national economy, increase in employment and economic growth. As a result of this trend, Turkey increased its export from the level of $ 3 billion in 1980 to $ 150 billion at the end of 2013 by the export-oriented industrialization policy begun at the second half of the eighties so the number of exporters in the past ten years has increased by 50% and reached to 60,000 (Ministry of Economy, 2013).

From the company’s perspective, firms tend to export to improve themselves by the force of global competition, to get rid of excess capacity, to react against the effects of cyclical and structural fluctuations by market diversification and to get higher profit expectation.

Whether the firms reach the aims above has been the subject of the studies especially made in international literature. This study aims to find out if Turkey's recent record breaking level of exports make significant changes in the exporter firms' profitability. One of the important issues motivating this study that researches analyzing the behavior of firms without macro variables in export analysis is rare.

In the following parts, after the literature review, profitability behavior of exporting firms over the export rate is analyzed.

2. LITERATURE REVIEW

Following groundbreaking article of Bernard, Jensen and Lawrence of (Bernard et al., 1995) the comparative studies between non-exporting and exporting firms based on productivity, profitability, wages and probability of surviving have been increasing in the literature.

The studies about the relation between export and profitability that is subject of this study are still few. Main focus on the micro econometrics literature of international trade has been to understand if the productivity advantage of exporting firms leads to profitability advantage, in spite of bearing extra cost and paying higher wage, compared to the firms that are similar but do not export. Productivity that can be easily observed from the data sets whereas limits in measuring profitability has led researchers to measure performance over efficiency. However, theoretical perspective is taken in to account; profit, the company's main purpose, will be more meaningful instead of productivity (Wagner, 2012).

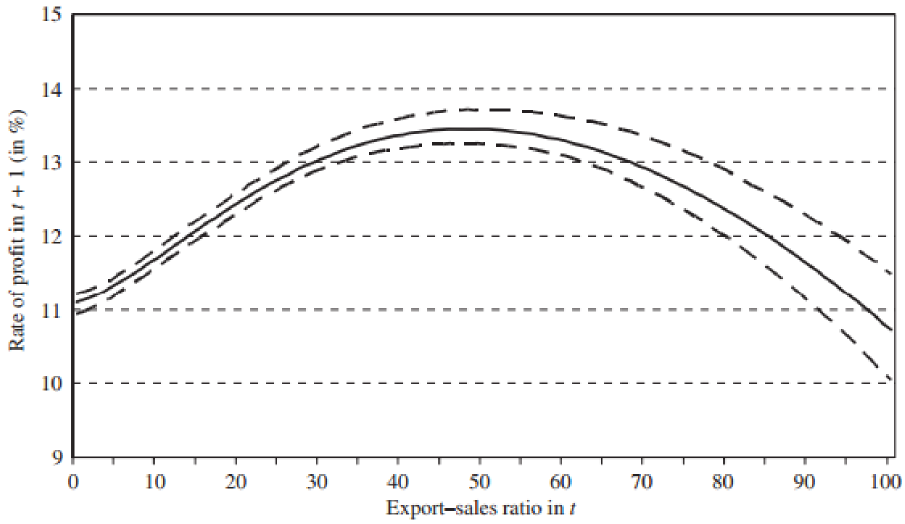
The studies on the relationship between exports and profitability has reached different results and conclusions. The results of the studies can be categorized into three groups. These are; positive relationship, inverse relationship and no relationship. These studies are given on the base of relationships below:

Qian and Li (2003) find out in their study on the impact of internationalization on assets, equity and sales profitability including 67 company in the biotechnology industry for the period of 1995 - 1997 that internationalization and profitability have positive relationship. Qian et al. (2003) conclude in their study based on export level of 271 SMEs by t-test that profitability of multinational SMEs is higher than other businesses. Furthermore they claim based on their regression analysis that as the export ratio increases, profitability rises. Kuivalainen and Sundqvist (2006) in their study on the data of 783 Finnish exporters performed by Structural Equation Model show that export growth in small businesses positively affect sales and profitability, while large enterprises only benefit from profitability. Kongmanilav and Takahashi (2009) determine in their research by using the three years datas of a garment firm located in Laos that export intensity, measured as foreign sales to total sales, has strongly positive impact on profitability expressed as net profit to total assets and total sales. This relation is strongly positive especially in return on asset. Kneller and Pisu (2010), find out that the export has a positive impact on profitability for the companies having high rates of exports and have been exporting for many years in their regression analysis. Furthermore, these companies state that exporting enables them to sell in higher prices. Abor (2011), in his regression analysis on the data of the manufacturing firms operating in Ghana between 1991-2002 suggests that there is a positive relationship between exports and profitability. Wyrobek (2012) in his study on the publicly traded companies in Poland conclude that gross profitability of the exporters is higher than others. Okuyan (2013) finds out in his study including Turkey's Top 1000 industrial enterprises that exporters are more profitable compared to the other ones and suggests that this is because of the efforts to keep the costs and expenditures under control keeping up with international competition. Vu et al. (2014), one of the new studies, used panel data quantile regression approach conclude that export participation is positively related to profitability for those firms with high profit growth.

Kumar (1984) claims that the impact of the trade with overseas countries on the profitability is non significantly inverse. Lu and Beamish (2006) conclude that export is inversely proportional to the profitability by using General Linear Square Random-Effects Models on the datas of 164 SMEs operating in 19 different industries in Japan between 1986-1997.

Fryges and Wagner (2010), by using the data of 18,000 business located in Germany in the 1999-2004 period conclude that export has positive effects on the profitability. Furthermore, this effect of exports reaches a maximum level at the point where export/sales ratio is 49%, but it starts to diminish and even reaches to zero for the companies which export at very high level. Researchers claim that this is because of extra expenditures and increasing labor cost arising from export. Figure 1 shows this situation.

Figure 1: Estimated Dose – Response Function



(Fryges and Wagner, 2010, p. 416)

Solid lines: estimated conditional expectation of firms' profits in t+1 given the export - sales ratio in t and the estimated generalised propensity score (GPS). Dotted lines: simulated 90% confidence interval, using the 5th and 95th percentiles of the bootstrap distribution (100 replications)

Shaked (1986) do not find out a significant difference between multinational enterprises and local businesses in terms of profitability in period of 1980-1982 in the United States. Vogel and Wagner (2009) suggest that exporter companies are more productive compared to non-exporters in service sector between 2003-2005. But they claim that additional cost arising from wages eliminate the advantage generating from productivity in export. As a result they conclude that export does not have impact on profitability. Grazzi (2012), in his study made by non-parametric tests and regression analysis on the database of Italy Statistics including 60.000 manufacturers find out that export does not have an effect on the profitability. Temouri et al. (2013) determine that the service sector exporters in Germany, France and the UK are more efficient, but analyses show that export does not have an effect on profitability in all three countries since the companies have to pay higher wages.

3. AIM, SCOPE AND METHOD

This study aims to analyze the profitability of the exporters in Turkey that export at different levels. This research has been motivated by the reason that there are few international and Turkish studies on this subject.

We use the database of Top 1000 Exporters Research of Turkish Exporters Assembly (TIM) including producers – exporter, group foreign trade companies and Sectoral Foreign Trade Companies and Foreign Trade Capital Companies for the period of 01.01.2012 and 31.12.2012. However, 411 companies are included in the research, because of missing data in some companies and / or the figures.

Variables of the study are determined as Export Ratio and Amount of Profit Before Tax (PBT) of the exporter companies.

Export ratio used in the study is defined as the export sales / total sales. We evaluate that as the export ratio increases, exporter character of the companies improves or vice versa. The total amount of export sales of the companies realized in 2012 is the total FOB amount of the direct export based on USD according to Export Regime of Turkey. Following sales types are excluded: Export realized by a company having a different corporate body even if it is a group company, export from free zones, export provided sales and deliveries, transit trade, goods delivered abroad temporarily, export without returns, export realized not in 01.01.2012 and 31.12.2012 and goods and services export to the foreigners not defined in The Export Regime.

Profit variable in the study is determined as the amount of profit before tax.

The datas over USD is translated in to Turkish Lira over the average exchange rate determined by Central Bank of Turkey for 2012

Effect of export ratio over profit is analyzed by Variance Analysis (Anova). The export ratios of the companies are classified over export quartiles.

Furthermore, profits before tax of the companies are classified according to quartiles and Chi-Square Test of Independence is performed to find out if the profitability depends on the level of exporting. The findings are explained in the following parts

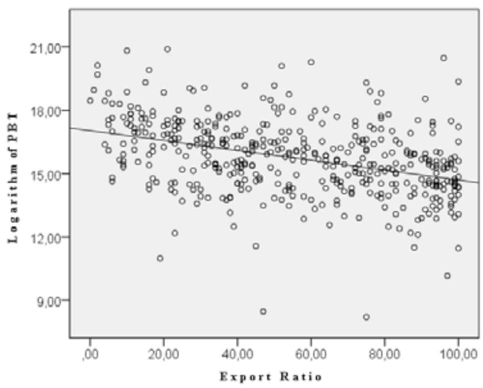
4. THE ANALYSIS AND THE FINDINGS

In the study, first of all, Profit Before Tax variable is normalized by taking its logarithm before analyzing. Later, the relation between Profit Before Tax variable and export ratio is researched through Pearson Correlation Coefficient and following table and illustration of correlation are formed. As one can see from the Table and Figure, increasing rate of export of companies affect their profit negatively (r = - 0,385). Pearson Correlation Coefficient is statistically significant at 1% level.

Table 1: The Correlation Analysis Results Regarding the Analysis of Relation Between Export Ratio and Logarithm of PBT

	Export Ratio
Pearson Correlation	-,385**
Sig. (2-tailed)	,000
N	441

Figure 2: The Graphical Display of Relation Between Export Ratio and Logarithm of PBT



4.1 Analyzing of Effect of Export Ratio on Profitability by Variance Analysis (Anova)

In this part of the analysis, the effect of export ratio on profitability is searched by Variance Analysis (Anova) by taking the export quartiles (25 % slices) in to consideration. To perform the variance analysis, data has to be normally distributed. Since PBT variable is not normally distributed, logarithm conversion is performed and Kolmogorov Smirnov test is used to search the normality of converted data. The results are given in Table 2

Table 2 : Kolmogorov-Smirnov Test Results

Variable	Kolmogorov-Smirnov*		
	Statistic	df	Sig.
Logarithm of PBT	,034	441	,200*

(*) Normal distribution hypothesis is accepted at 1 %

According to Table above, it is understood that logarithm conversion of Profit before tax dependent variable is normally distributed. Later, Levene test is performed for the homogeneity of variances of dependent variable (profit) based on export categories. Results are as follows:

Table 3: The Test of homogeneity of variances of logarithm of PBT Variable

Levene Statistic	df1	df2	Sig.
,380	3	437	,768

It is understood from Levene Test that variances of PBT Variable based on export categories are homogeneous at 1% level. Therefore, variance analysis is made since necessary assumptions are met.

In this part, profitability of the companies exporting at different levels is searched through variance analysis. For this aim, the companies are enumarated according to their export ratio and classified by 25% slices. Thus, variance analysis is performed to find out if the profitability of the exporter companies differ according to their export ratio. The results are summarized at Table 4

Table 4: The Results of Variance Analysis According to Export Category

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	194,512	3	64,837	24,108	,000
Within Groups	1175,297	437	2,689		
Total	1369,808	440			

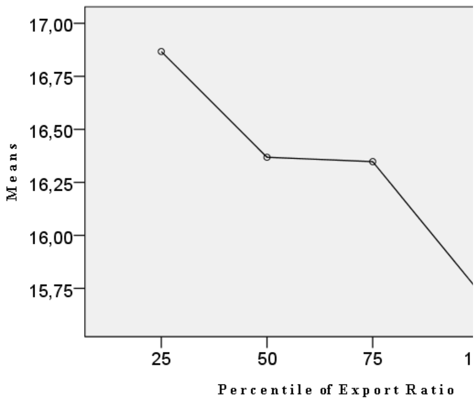
As can be seen from The Table 4 , profitability of the companies differs according to export category at 1% level. Pairwise Comparison Test is performed to find out how the profitability shows difference according to export category (25 % slices). Because of homogeneity of variances (see Table 3), homogeneous groups, that is, groups of similar profits are determined by performing Tukey HSD Test. The results are shown in Table 5 and Figure 3

Table 5: Homogeneous subsets of Logarithm Values of PBT According to Export Ratio Percentiles

Tukey HSD Test

Export Ratio (%)		Subset		
		1	2	3
100	10	14,8603		
75	08		15,5213	
50	13		15,8615	
25	10			16,7056
Sig.		1,000	,370	1,000

Figure 3: Marginal Means for the Logarithm Values of PBT According to Export Ratio



As one can see from the Table and the Figure above; while profits of the companies having higher export ratio decrease, on the other side, the profits of the companies having lower export rate increase. In other words, as the exporter character of the companies improves, their profits decrease vice versa.

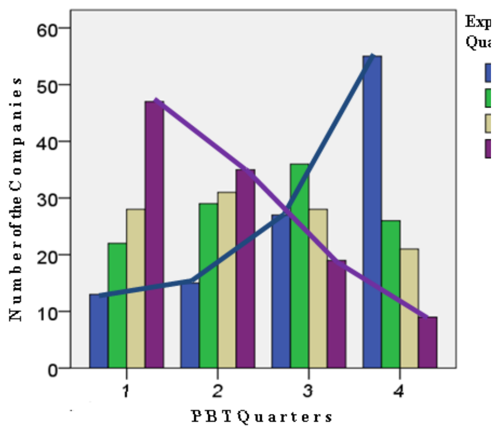
4.2. Analyzing The Profit According to Export Ratio by Chi Square Test

In this part, export ratio symbolizing the exporter character of the company that is thought to have an effect on the profitability of the companies is analyzed with cross-tables. For this purpose, Chi-square independence test has been applied to the data. The null hypothesis shows that there is no relationship between profitability and exporting qualification of firms. For this, the following results as shown in Table 6 and Figure 4 are obtained.

Table 6: The Relation Between Exporter Character and PBT

		Export Quarters				otal
PBT Quarters	,00	3	2	8	7	10
	,00	5	9	1	5	10
	,00	7	6	8	9	10
	,00	5	6	1		11
al	Tot	10	13	08	10	41
	χ^2	77,285				

Figure 4: Graphical Display of the Relation Between Exporter Character and PBT



Independence hypothesis is rejected for % 1 level and 9 degree of freedom. So there is a relation between exporter character and profitability of the companies. As it can be seen from the Tables and Figures, as the exporter character of the companies improves, profits decreases, on the other side, as the exporter character of the companies weaken, profits increases.

5. RESULT AND CONCLUSION

This study aims to analyze the profitability of the companies exporting at different levels. To get this goal, Anova and Chi-Square Test are performed.

Anova analysis shows that profitability of the companies based on export categories (25 % Slices) is statistically significant at 1% level. The analysis reveals that as the export ratio symbolizing the exporter character of the company improves, their profits declines. That is, higher export ratio leads to lower profit or lower export ratio leads to higher profit.

Chi-Square Test performed to determine the profitability based on exporter character produces same result and it is found out that there is statistically significant relation between export ratio and the profitability. The profitability decreases as the character of exporter weakens and the profitability increases as the exporter character lowers.

This study reaches the similar results with the study of Fryges and Wagner (2010) on German manufacturing companies as it is mentioned in the literature part of our study. Decreasing profit over higher export ratio may be cause of engaging extra costs (e.g. rising coordination and control costs) in parallel with the increasing export and bearing higher labor cost for the sake of productivity.

The higher profit expectations as the export rate increases is one of the factors that may affect the companies to become an export orientated one. In addition to general explanation above, the following characteristics of Turkish economy and Turkish companies may be effective on lower profit despite higher export volume or vice versa.

- Substantial number of high-volume-exporting firms in Turkey operate as a subsidiary of a multinational company or export to the world's major multinational companies. As a result, the profits of these companies, exports remain lower than those of other firms due to dependence.

- Turkish companies do not get higher profits even in high amount of export sales since the export goods of Turkey mostly include low technology products having limited brand value.

- The duty free import of raw materials, material and supplementary materials used in the structure of exported goods by The Inward Processing Regime reduces the added value of goods exported.

- With the exception of the crisis period, demand in domestic markets of Turkey is satisfactory and the level of profitability is higher compared to the overseas markets. Therefore, the low profitability resulting from lower exports is compensated with high profits generated from the domestic market

REFERENCES

ABOR, J. (2011). Do Export Status and Export Intensity Increase Firm Performance, *Thunderbird International Business Review, Vol:53, No:1,* P:9-18

BERNARD, A. B., J. Bradford Jensenand, Robert Z. Lawrence (1995) Exporters, jobs, and wages in US manufacturing: 1976–1987, *Brookings, Papers on EconomicActivity, Microeconomics*, P: 67–119.

FRYGES, H. and J. Wagner (2010). Exports and Profitability: First Evidence for German Manufacturing Firms, *The World Economy, 2010 Blackwell Publishing Ltd.,* P:399-423

GRAZZI, M. (2012). Export and Firm Performance: Evidence on Productivity and Profitability of Italian Companies, *J. Ind Compet Trade, Vol:12,* P:413-444

GIRMA, S., H. Görg and E. Strobl (2004). Exports, International Investment and Plant Performance: Evidence From a Non-Parametric Test, *Economic Letters, Vol:83,* P:317-324

KNELLER, R. and M. Pisu (2010). The Returns to Exporting: Evidence from UK Firms, *Canadian Journal of Economics, Vol:43, No:2,* P:494-519

KONGMANILAV, X. and Y. Takahashi (2009). Innovation, Export Performance and Profitability of Lao Garment Exporters, *International Journal of Economics and Management, Vol: 3(2),* P:225-236

KUIVALAINEN, O. and S. Sundqvist (2006). Profitability of Rapid Internationalization: The Relationship Between Internationalization Intensity and Firms Export Performance, *Journal of Euromarketing, Vol:16,* Issue1/2, P:59-69

KUMAR, M. S. (1984) Comparative Analysis of UK Domestic and International Firms, *Journal of Economic Studies, Vol. 11 Iss: 3,* P: 26 – 42

LU, J.W. and P. W. Beamish (2006). SME Internationalization and Performance: Growth vs. Profitability, *J. Int. Entrepr. Vol:4,* Page:27-48

OKUYAN, H. A. (2013). The Profitabilty Analysis of the Largest 1000 Industrial Firms in Turkey, *Business and Economics Research Journal, Volume: 4 Number: 2,* P:23-36

QIAN, G., and L. Yangand and D. Wang (2003). Does Multinationality Affect Profit Performance? An Empirical Study of US SME's, *Journal of General Management, Vol:28, No:4,* P:37-46

QIAN, G. and L. Li (2003). Profitability of Small and Medium Sized Enterprises in High-Tech Industries: The Case of the Biotechnology Industry, *Strategic Management Journal, Vol:24,* P:881-887

SHAKED, I. (1986). Are Multinational Corporations Safer?, *J.Int. Bus. Stud. 17 (1),* P: 83–106.

TEMOURI, Y., A. Vogel ve J. Wagner (2013). Self-Selection in to export markets by business services firms – Evidence from France, Germany and the United Kingdom, *Structural Change and Economic Dynamics, Vol:25*, P:146-158

VOGEL, A. and J. Wagner (2009). Exports and profitability: First evidence for German business services enterprises, *University of Lüneburg Working Paper Series in Economics, No:129*

VU, H., M. Holmes, S. Lim and T. Tran (2014). Exports and Profitability: A Note From Quantile Regression Approach, *Applied Economics Letters, Vol:21, No:6,* P:442-445

WAGNER, J. (2012). International Trade and Firm Performance: A Survey of Empirical Studies Since 2006, *Review of World Economics, Volume: 148,* P: 235–67.

WYROBEK, J. (2012). The Impact of Export on the Sales and Profitability of Companies Listed on the Warsaw Stock Exchange. *Cracow Review of Economics and Management, Vol:877,* P:99-114

The Ministry of Economy (2013), Export According to Cities, Access: 26.06.2014, www.ekonomi.gov.tr/upload/AC413E8B-D8D3-8566.../eko14.xls

Turkish Exporters' Assembly (TIM) (2012) First 1000 Exporters, Access: 20.02.2014, http://www.tim.org.tr/tr/ihracat-arastirma-raporlari-ilk-1000-ihracatci-arastirmasi.html

3rd International Symposium on Accounting and Finance
ISAF 2014 TOKYO

THE CONTAGION EFFECTS IN THE JAPANESE STOCK MARKET OF THE GREAT EAST JAPAN EARTHQUAKE

Yasushi Yoshida*

ABSTRACT

This paper examines the contagion effects in Japanese stock market caused by earthquake and Fukushima Daiichi Nuclear Power Plant accident of the Great East Japan Earthquake. Miyagi Prefecture is the worst-affected area by earthquake and tsunami among 47 prefectures in Japan, and Fukushima Daiichi Nuclear Power Plant is located in Fukushima Prefecture next to Miyagi Prefecture. In the chaotic aftermath of the earthquake, there were many timely disclosures from listed companies by TDnet, which gathers timely disclosure releases of listed companies throughout Japan and disseminated this information to investors in real-time by website, but the contents of the disclosure were too abstract to evaluate the amount of losses, and the nuclear accident was on going. Stock market could estimate the loss ratio by location of important business facilities. We find that the market estimated the losses on the Great East Japan Earthquake by the ratio of important business facilities in main damage area such as Fukushima Prefecture, Miyagi Prefecture, Iwate Prefecture, and Ibaraki Prefecture by the event study method using daily cumulative abnormal return of each firm listed Tokyo Stock Exchange 1st Section, except for electric power industry and financial industry. From the multivariate regressions, the ratio of important business facilities in Miyagi and Fukushima are significant immediately after the earthquake. But from 23rd March to 1st April, only Fukushima is significant. The observed contagion effects are consistent with the information effect rather than the pure contagion effect. But by the information uncertainty, the negative valuation effects of nuclear crisis are stronger than earthquake and tsunami.

Keywords: *Information uncertainty, event study, loss on disaster, timely disclosure*

Jel Classification: *G14, G12*

* Tokyo Keizai University, E-mail: yyoshida@tku.ac.jp, Tel: +81-42-328-7711,
Postal address: 1-7-34 Minami-cho, Kokubunji-shi Tokyo 185-8502, JAPAN

1. INTRODUCTION

This paper evaluates contagion effects of the Great East Japan Earthquake losses on the stock markets. The Earthquake struck the north-east coast of Japan at 14:46 on 11 March 2011, triggering a massive tsunami waves along broad area of the Pacific coast. The tsunami caused Fukushima Daiichi Nuclear Power Plant accident. Aftermath of the earthquake, we can find the big sudden decline of Nikkei 225 and TOPIX, which is a composite stock price index of all common stocks listed on the First Section of the Tokyo Stock Exchange (hereafter abbreviated as TSE). We can easily identify the time when the earthquake happened and from when losses started to be occurring. In the cases of other management information, such as revision information of earnings forecast, press release on M&A or new product, it is sometimes difficult to identify the starting point of the event happened. Under such a great disaster like the Great East Japan Earthquake, the timely estimation of loss amount on disaster is difficult even by the management. There are damage which cannot be identified at the immediately after the earthquake, some of the damage will be affected in a future. If such damage occurred, the investigation for the amount of damages and the influence on management frequently will require a long time.

On the other hand, Fukushima Daiichi Nuclear Power Plant accident was ongoing. The accident was reported by TV in real time. However, it was unclear how and when the problems at the plant would be resolved.

Therefore, the negative effect for stock price is divided into two information uncertainty types about the loss on disaster, and these information uncertainty influence different contagion effects.

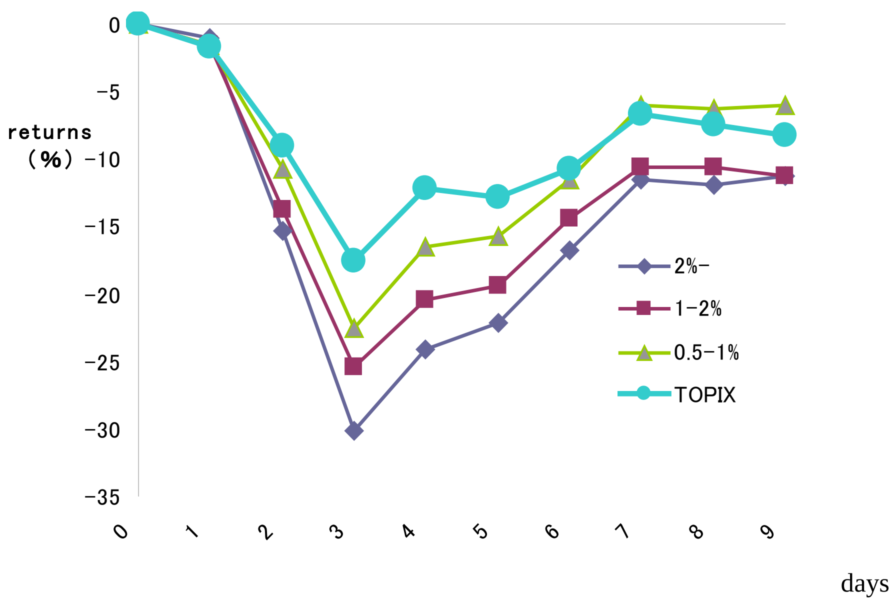
According to the definition of contagion effects by Aharony and Swary (1983), many empirical studies on contagion effects have focused on various events related banks, because contagion effects arise due to the heterogeneity of bank assets. Peavy and Hempel (1988) document contagion effects caused by Penn Square Bank’s failure, Aharony and Swary (1996) provide additional evidence consistent with information-based contagion effects, and Docking, Hirschey, and Jones (1997) explore contagion effects of bank loan-loss reserve announcements. Bessler and Nohel (2000) test contagion effects associated with announcements of dividend cut by money-center banks. On the other hands Lamb (1995) explore contagion effects of property-liability insurer around Hurricane Andrew. Bowen, Castanias, and Daley (1983), Hill and Schneeweis (1983), and Spudeck and Moyer (1989) document the effects of the accident at Three Mile Island. Fields and Janjigian (1989) and Kalra, Henderson and Raines (1993) investigate the effects of the accident at Chernobyl. Recently, Betzer, Doumet, and Rinne (2011), Ferstl, Utz, and Wimmer (2011), Kawashima and Takeda (2012), Lopatta and Kaspereit (2012), Mama and Bassen (2011), and Serita and Xu (2012) analyze the effects of the Fukushima nuclear accident. These studies expand the scope of contagion effects and some studies use a global sample. But they are limited to intra-industry effects from nuclear accidents such as energy industry or electric utility industry. Asongu (2012) investigate the whole effects of earthquake plus resulting tsunami and nuclear disaster on the stability of the correlation structure in international stock and foreign exchange markets. This paper is intended Japanese stock market but broaden the coverage to all listed individual companies except electric power companies and financial business companies.

The rest of this paper is organized as follows. Section 2 provides hypotheses development. Section 3 describes the sample selection procedures and methodology. Empirical results are presented in section 4. Section 5 concludes the study.

2. HYPOTHESES DEVELOPMENT

On February 1st, 2004 TSE started to offer real-time updates of announcements from listed companies via website service named the Timely Disclosure Information Browsing Service, which allows listed companies to fulfill the requirements of laws and regulations pertaining to publication measures for insider trading regulation regarding corporate information. This system is very useful for investors to access to information made by management generally. However over one thousand announcements were made in 3 days from the quake, it took few weeks or later to announce the rough amount damage caused by the quake, and it took more than one month to announce the loss amount. But the stock market distinguishes the difference of the loss in few days, as we see in Figure 1.

Figure1: Cumulative Returns by Loss Ranking Portfolio from the 0 Day



The portfolios in the Figure 1 are ranked by loss rates of the asset in financial statements for fiscal year ending March 31st 2011, which were disclosed in earnings reports (kessan tanshin) after May. The rates are loss on disaster disclosed after May divided by total asset in previous period. The trends of decline are varied by loss rates before the disclosure of loss amount. This decline is a typical information-based contagion effects in the stock market (Aharony & Swary, 1996). The market could estimate the losses by the rate of fixed assets in the damage area such as Fukushima Prefecture and Miyagi Prefecture, disclosed previous financial reports. Thus, the first hypothesis is as follows:

$\mathbf{H_1}$: The rate of fixed assets in the heavily-damaged area such as Fukushima Prefecture and Miyagi Prefecture are negatively affected stock prices of listed companies.

In addition, the information uncertainty requires risk premium, and the information uncertainty of Fukushima Daiichi Nuclear Power Plant accident is greater than tsunami. The negative effects of stock price of companies with high rates of fixed assets in Fukushima Prefecture are stronger than companies in other area. Thus, the second hypothesis is as follows:

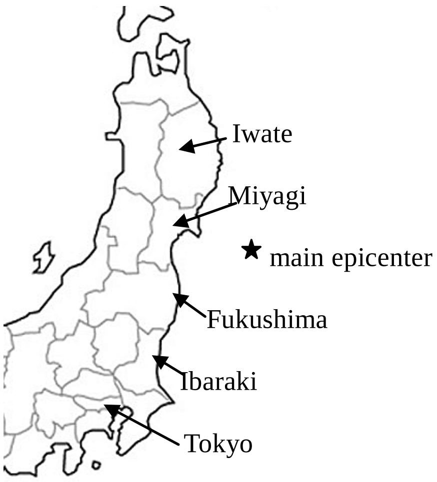
$\mathbf{H_2}$: The rate of fixed assets in Fukushima Prefecture affects the stock price stronger than the rate in Miyagi Prefecture.

3. DATA AND METHODOLOGY

3.1. Data

This study uses a sample of firms listed on the first section of TSE, except for electric power companies and banks. These electric power companies are claimed against the damage caused by Fukushima Daiichi Nuclear Power Station, and controversy over the safety of the other nuclear power plants are arising. The banks may be plagued by non-performing loans caused by the quake. This means another investigation should be made such as Serita and Xu (2012). The sample is limited to firms with fiscal year ended March 31, 2011, because the timing of account closing may affect the estimation of loss amount. The rates of returns of each stock are calculated by Quick Astra Manager. In this paper cumulative returns are defined by return from the day before the earthquake (March 10). The 3 factors for Japanese market are generated by Kubota and Takehara (2003).

Figure 2: 4 Prefectures and Main Epicenter



The losses caused by the earthquake are searched by eol. The business facility ratio in devastated area is calculated by sum of book value of business facility in Iwate Prefecture, Miyagi Prefecture, Fukushima Prefecture, or Ibaraki Prefecture divided by total asset in annual securities reports in 2010.

Table 1: Damage Situation by Prefecture

Prefecture	Personnel damages(Person)				Property damages(Door)			ire Place)
	illed	issing	Injured		Total collapse	Half collapse	Partially damaged	
				Severely				
Hokkaido						4	7	
Aomori			11	25	308	701	1,005	1
Iwate	,086	,145	12	3	18,460	6,563	14,191	3
Miyagi	0,449	,299	,145	504	82,889	155,099	222,781	37
Akita			1	4			5	
Yamagata			5	10		14	1,241	
Fukushima	,057	26	82	20	21,190	73,021	166,758	8
Ibaraki	5		12	34	2,625	24,225	185,332	1
Tochigi			33	7	261	2,118	73,125	
Gunma			0	14		7	17,679	
Saitama			04	10	24	199	16,451	2
Chiba	2		56	29	801	10,117	54,879	8
Tokyo			17	20	16	193	5,884	5
…								
Total	8,703	,674	,220	5,325	126,574	272,302	759,831	30

Source: Fire and Disaster Management Agency, 2013

There are 47 prefectures, provincial area, in Japan. The 3 worst-hit prefectures, Ibaraki prefectures and Tokyo are located as in Figure 2, and we can find Miyagi Prefecture is the most heavily damaged area shown in Table 1. There are 150 firms disclose the book value of business facility in these 4 prefecture in March 2010.

3.2. Methodology

The Fama and French (1993) 3 factor model is used to measure stock price reaction to the event.

$$R_{it} - R_{ft} = \alpha_i + \beta_i\left(R_{mt} - R_{ft}\right) + s_i SMB_t + h_i HML_t + \varepsilon_{it}$$

where:

R_{it}: the daily return for *i*th stock at day *t*,

R_{ft}: the risk free rate at day *t*,

R_{mt}: the return of market portfolio at day *t*,

SMB_t: the SMB factor for Japanese market at day *t*,

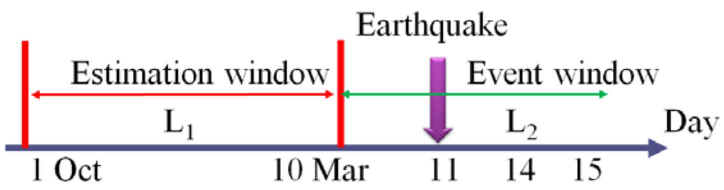
HML_t: the HML factor for Japanese market at day *t*,

α_i: a constant,

β_i, s_i, h_i: coefficients, and

ε_{it} : error term of *i*th stock at day *t*.

Figure 3: Time Line of Event Study



The time line in this paper is shown in figure 3. The estimation window is from 1st October to 10th March. The abnormal return AR_{it} is the difference between observed and predicted returns, and the cumulative abnormal return CAR_{it} is the cumulative sum of the abnormal return from 11th March.

$$AR_{it} = R_{it} - \left(\hat{\alpha}_i + \hat{\beta}_i\left(R_{mt} - R_{ft}\right) + \hat{s}_i SMB_t + \hat{h}_i HML_t + R_{ft}\right)$$

To examine the information-based contagion hypothesis, a multivariate regression analysis is conducted. The effects of information on the individual stock return are measured by OLS as following:

$$CAR_{it} = \delta_t + \sum_{j=1}^{4} \gamma_{jt} ROBF_{ji} + \lambda_t \log(A_i) + e_{it}$$

where:

CAR_{it}: the cumulative return of ith stock,

$ROBF_{ji}$: the ratio of business facility in damaged prefecture, j = Fukushima Prefecture, Miyagi Prefecture, Iwate Prefecture, or Ibaraki Prefecture,

A_i: the total asset of ith stock,

δ_t, γ_t, h_t, λ_t: coefficients, and

e_{it}: error term of ith stock.

3.2.1. Basic Statistics

Basic statistics of dependent variables in regression are shown in Table 2a and correlation coefficient matrix is in Table 2b.

Table 2a: Basic Statistics n=150

Variable	Mean	Std. Dev.	Min	Max
$ROBF_{\text{Iwate}}$ (%)	0.653	2.522	0.000	20.231
$ROBF_{\text{Miyagi}}$ (%)	1.257	3.327	0.000	22.219
$ROBF_{\text{Fukushima}}$ (%)	2.736	6.562	0.000	52.489
$ROBF_{\text{Ibaraki}}$ (%)	2.543	5.178	0.000	31.392
log(*Total Asset*)	11.861	1.350	8.825	15.768

ROBF = the ratio of business facility in damaged prefecture

Table 2b: Correlation Coefficient Matrix

	$ROBF_{\text{Iwate}}$	$ROBF_{\text{Miyagi}}$	$ROBF_{\text{Fukushima}}$	$ROBF_{\text{Ibaraki}}$	log(*Total Asset*)
$ROBF_{\text{Iwate}}$	1.0000				
$ROBF_{\text{Miyagi}}$	0.0151	1.0000			
$ROBF_{\text{Fukushima}}$	−0.0306	−0.0885	1.0000		
$ROBF_{\text{Ibaraki}}$	−0.0472	−0.1284	−0.1160	1.0000	
log(*Total Asset*)	−0.1817	−0.0548	−0.1881	−0.0663	1.0000

ROBF = the ratio of business facility in damaged prefecture

4. EMPIRICAL RESULTS

Table 3 shows the estimation results of coefficients and *P*-values. Iwate and Ibaraki ratio are insignificant and Miyagi ratio is significant in only two days. But Fukushima ratio is strongly significant and negative. These results are consistent with $\mathbf{H_1}$ and $\mathbf{H_2}$.

Table 3: Cumulative Return Equation (OLS)

Date	Day	Constant	P-Value	$ROBF_{Iwate}$	P-Value	$ROBF_{Miyagi}$	P-Value	$ROBF_{Fukushima}$	P-Value	$ROBF_{Ibaraki}$	P-Value	log(*Total Asset*)	P-Value
11-Mar	0	0.7154	0.295	−0.0101	0.729	−0.0167	0.446	0.0028	0.806	0.0240	0.091	−0.0679	0.222
14-Mar	1	−0.5398	0.845	0.0302	0.798	−0.1518	0.089	−0.1091	0.019	−0.0148	0.797	0.0665	0.768
15-Mar	2	3.6555	0.356	0.1143	0.497	−0.3258	0.011	−0.1761	0.008	−0.0618	0.453	−0.3218	0.319
16-Mar	3	4.7049	0.229	0.1318	0.427	−0.2895	0.022	−0.0742	0.252	−0.0044	0.957	−0.4487	0.159
17-Mar	4	1.7678	0.634	0.1072	0.498	−0.0634	0.595	−0.0316	0.609	0.0158	0.838	−0.2191	0.469
18-Mar	5	1.6952	0.605	0.0272	0.845	0.0045	0.966	−0.0643	0.239	−0.0426	0.532	−0.1549	0.562
22-Mar	6	−2.2009	0.502	−0.0530	0.704	0.0868	0.410	−0.0947	0.083	−0.0664	0.330	0.1751	0.511
23-Mar	7	−0.4194	0.908	−0.0876	0.570	0.0740	0.525	−0.1239	0.041	−0.0091	0.904	0.0091	0.975
24-Mar	8	−0.1571	0.970	−0.1335	0.449	−0.0278	0.835	−0.1690	0.015	−0.0125	0.885	−0.0208	0.951
25-Mar	9	2.3352	0.580	−0.1770	0.325	−0.0848	0.532	−0.2184	0.002	−0.0260	0.767	−0.1799	0.601
28-Mar	10	3.1792	0.463	−0.1631	0.376	−0.1286	0.355	−0.2487	0.001	−0.0178	0.843	−0.2405	0.495
29-Mar	11	0.4982	0.912	−0.1442	0.452	−0.0604	0.677	−0.2709	0.000	0.0382	0.683	−0.0182	0.960
30-Mar	12	−0.9462	0.832	−0.1611	0.397	−0.0611	0.670	−0.2347	0.002	0.0823	0.376	0.1110	0.760
31-Mar	13	−0.8608	0.848	−0.0006	0.998	−0.0899	0.533	−0.2384	0.002	0.1174	0.209	0.1129	0.757
1-Apr	14	−1.7334	0.703	0.0085	0.965	−0.1325	0.365	−0.2357	0.002	0.0909	0.337	0.1627	0.660
4-Apr	15	−3.5525	0.486	0.0499	0.818	−0.1710	0.297	−0.0339	0.689	0.1240	0.242	0.2653	0.522
5-Apr	16	−2.5166	0.634	0.0819	0.716	−0.2463	0.149	−0.0792	0.367	0.0982	0.372	0.2129	0.621

Table 4 shows the relation between realized loss and book value ratio of business facility in damaged prefecture. The rates of fixed assets in the damage area are positively correlated by actual loss disclosed by listed companies. As a result stock market could estimate the loss ratio by book value ratio of business facility in each prefecture ratio.

Table 4: Estimation Result of Loss Ratio Equation (OLS)

	Coefficient	t value	P value
$ROBF_{Iwate}$	0.263	3.030	0.003
$ROBF_{Miyagi}$	0.631	9.880	0.000
$ROBF_{Fukushima}$	0.182	5.660	0.000
$ROBF_{Ibaraki}$	0.100	2.530	0.012
log(*Total Asset*)	0.167	1.970	0.050
constant	−0.963	−0.940	0.346
R^2	0.2095		

Independent variable is loss on disaster ratio.

5. CONCLUSION

We find that the market estimates the losses on the Great East Japan Earthquake by the rate of fixed assets in main damage area such as Fukushima Prefecture, Miyagi Prefecture by the event study method using multivariate regressions. Stock market could estimate the loss ratio by book value ratio of business facility in Miyagi and Fukushima area ratio. The observed contagion effects are consistent with the information effect rather than the pure contagion effect. But by the information uncertainty, the negative valuation effects of Fukushima area are stronger than Miyagi area. The speed of adjustment is higher than the case of the Kobe Quake (Yoshida et al. 2002). The scale of the disaster is one of the factors causing the higher speed. It is important to disclose detail information such as location place before disaster to decrease information asymmetry.

ACKNOWLEDGEMENTS

We would like to thank the anonymous reviewers and the conference participants at the 2013 NFA (Nippon Finance Association) 21st Conference, APRIA(Asia-Pacific Risk and Insurance Association) 2013 Annual Conference, 14th Annual Conference of the Asian Academic Accounting Association and 6th IFABS(International Finance and Banking Society) International Conference for their helpful comments and suggestions. This work is supported by JSPS KAKENHI Grant Numbers Grant-in-Aid for Scientific Research(C) 25516012, the Japanese Association for Research in Disclosure, and Tokyo Keizai University Research Grant.

REFERENCES

Aharony, J., & Swary, I. (1983). Contagion effects of bank failures: evidence from capital markets. *Journal of Banking and Finance,* 20, 57-69.

Aharony, J., & Swary, I. (1996). Additional evidence on the information-bases contagion effects of bank failures. *Journal of Business,* 56, 305-322.

Asongu, S. A. (2012). The 2011 Japanese earthquake, tsunami and nuclear crisis: Evidence of contagion from international financial markets. *Journal of Financial Economic Policy* 4, 340-353.

Bessler, W., & Nohel, T. (2000). Asymmetric information, dividend reductions, and contagion effects in bank stock returns. *Journal of Banking and Finance,* 24, 1831-1848.

Betzer, A., Doumet, M., & Rinne, U. (2011). How policy change affect shareholder wealth: the case of the Fukushima Daiichi nuclear disaster. *Schumpeter Discussion Paper Series* 2011–011.

Bowen, R., Castanias, R. P., & Daley, L. A. (1983). Intra-industry effects of the accident at Three Mile Island. *The Journal of Financial and Quantitative Analysis,* 18, 87-111.

Docking, D. S., Hirschey, M., & Jones, E. (1997). Information and contagion effects of bank loan-loss reserve announcements, *Journal of Financial Economics,* 43, 219-239.

Ferstl, R., Utz, S., & Wimmer, M. (2011). The effect of the Japan 2011 disaster on nuclear and alternative energy stocks worldwide: an event study. *Business Research*

Journal, 5, 25-41.

Fields, M. A., & Janjigian, V. (1989). The effect of Chernobyl on electric-utility stock prices. *Journal of Business Research*, 18, 81–87.

Hill, J., & Schneeweis, T. (1983). The Effect of Three Mile Island on electric utility stock prices: a note. *The Journal of Finance* 38, 1285-1292.

Kalra, R., Henderson Jr., G. V., & Raines, G. A. (1993). Effects of the Chernobyl Nuclear Accident on utility share prices. *Quarterly Journal of Business and Economics*, 32, 52–77.

Kawashima, S., & Takeda, F. (2012). The effect of the Fukushima nuclear accident on stock prices of electric power utilities in Japan. *Energy Economics*, 34, 2029-2038.

Kubota, K., & Takehara, H. (2003). Financial sector risk and the stock returns: Evidence from Tokyo Stock Exchange firms. *Asia Pacific Financial Markets*, 10, 1-28.

Lamb, R. P. (1995). An exposure-based analysis of property-liability insurer stock values around Hurricane Andrew. *The Journal of Risk and Insurance*, 62, 111-123.

Lopatta, K., & Kaspereit, T., (2012). The cross-section of returns, benchmark model parameters, and idiosyncratic volatility of nuclear energy firms after Fukushima Daiichi. Working paper.

Mama, H.B., & Bassen, A. (2011). Contagion effects in the electric utility industry following the Fukushima nuclear accident. Working paper.

Peavy, J.W., & Hempel, G. H. (1988). The Penn Square Bank failure, effect on commercial bank security returns. *Journal of Banking and Finance*, 12, 11-150.

Serita, T., & Xu, P. (2012). The Fukushima nuclear accident, damage compensation resolution and energy stock return. Working Paper.

Spudeck, R. E., & Moyer, R. C. (1989). A note on the stock market's reaction to the accident at Three Mile Island. *Journal of Economics and Business*, 41, 235-240.

Yoshida, Y., Kunimura, M., & Fukuda, T. (2002). The explanatory power of filling information on the Kobe Earthquake (in Japanese). *Japan Journal of Finance*, 22, 35-49.

RELATIONS BETWEEN BORSA ISTANBUL AND TOKYO STOCK EXCHANGE

Mehmet Fatih BAYRAMOĞLU*

ABSTRACT

Nowadays, the stock markets are becoming a crucial part of economies in many countries. Moreover, the stock markets are becoming increasingly dependent on each other. This paper investigates the relationship between Borsa Istanbul (BIST) and Tokyo Stock Exchange with VAR model by using data of 1987:M1-2013:M12. According to impulse response functions, the reaction of BIST 100 Index in response to an impulse given to Japan Nikkei 225 Index is statistically meaningful and positive during the entire period. However the response of this variable exists in short time and it shows a gradually decreasing tendency.

Keywords: *Stock Price Indices, Impulse-Response, Vector Autoregression (VAR), Variance Decomposition.*

Jel Classification: *G15*

* Assist.Prof.Dr., Bulent Ecevit University, Faculty of Economics and Administrative Sciences, fatih.bayramoglu@beun.edu.tr

1. INTRODUCTION

In the Finance related literature, it is supposed that information flow to the market creates an impact on the security prices. As such, the markets, in which security prices reflect all kind of information on that moment, are defined as efficient markets (Fama, 1965: 90). However, in accordance with the results of studies, which analyze the efficiency levels of markets especially since 1960s, there is no strong-form efficient market. Consequently, in general, the finance related studies conclude four results. These are (i) finance markets are not strong-form efficient, (ii) some markets are semi-strong efficient during certain periods; (iii) some markets are weak-form efficient during certain periods and (iv) some markets are not efficient in any form (Khan and Vieito, 2012; Dicle and Levendis, 2011; Kumar et.al., 2011; Atan et.al., 2009; Bildik and Gülay, 2008; Lagoarde-Segot and Lucey, 2008; Çinko, 2006).

These results, which are obtained following a great number of tests conducted on several markets across the world and based on certain facts frequently stated in finance literature, indicate that not only the markets react to new information, but also this information is not is not equally distributed to the different parties in the market. As such, it is possible to acquire an income better than the average by using certain signals previously obtained in a non-efficient market by investors thanks to analysis of the relations between different markets or between markets and several macro and micro variables through certain econometric models.

Thus, the results of certain studies conducted on efficiency also highlight this aspect of the issue. It is presented that information becomes usable in decision making process when there is no strong-form efficiency in the markets by the technical analysts as the pioneers of the related literature, by analyzing the previous observation data of a financial variable (Hamzaçebi and Bayramoğlu, 2007; Özdil and Yılmaz, 2006; Yao et.al., 1999); by fundamental analysts by associating a variable itself to the previous observation data of other macro and micro variables (Özdil and Yılmaz, 2006; Ülgen and Teker, 2006; Yalçıner et.al., 2004); and by behavioral analysts by analyzing irrational reactions of investors under certain circumstances and market anomalies (Taner and Akkaya, 2005; Thaler, 1987). Besides, it is also suggested that the interaction between different markets increases as the openness of the markets increase, as such, a market may also affect another market in another continent by several empirical studies (Visaltanachoti and Yang, 2010; Abdmoulah, 2010; Hammoudeh and Li, 2008; Fifield and Jetty, 2008; Pasquariello, 2008; Lim et.al., 2008; Lim, 2007).

Consequently, in capital markets, where the opportunity to obtain information is not equally distributed to each investor, interpretation of the obtained information thanks to finance theory by investors or using mathematical models with the purpose of predicting the future have certain importance. Consequently, investors is going to have the opportunity to conduct important investment activities such as decision making to invest for their portfolios, protecting themselves against certain risks and establishing internationally diversified portfolio thanks to this information, which they obtain. In this study, the causality relation between Borsa Istanbul and Tokyo Stock Exchange was tested with the method used by fundamental analysts and it was presented whether there is a short or long term correlation between these markets with regard to the perspective of openness of markets.

2. LITERATURE REVIEW

There are several international and national studies in the literature on the correlation between stock indexes and other stock markets and macroeconomic variables. Some of these studies are discussed below:

Evlimoğlu and Çondur (2012) analyses the short-term correlations between Borsa Istanbul and other stock markets for pre-mortgage crisis and post-mortgage crisis period through VAR model. In accordance with the results of this study, the correlation between Borsa Istanbul and other selected stock markets is getting stronger in post-mortgage crisis period. With a more precise explanation, it is presented in the study that the response of Borsa Istanbul to a shock incurred in other stock markets is much bigger in the post crisis period in comparison with the pre-crisis period.

Agnello and Sausa (2011) analyses the impact of a shock in financial policies of ten different industrial countries on stock prices through Panel VAR method. The results of the study indicate that a shock incurred in a financial policy creates a short term impact on stock prices.

Arouri and others (2011) analyses the impacts of changes in oil prices on the capital markets of Bahrain, the United Arab Emirates, Qatar, Kuwait, Saudi Arabia and Oman between 2005 and 2010 in their studies. In conclusion, in this study, it is presented that the mobility in oil prices arising from supply and demand changes has a direct impact on shocks in capital markets and on the arise of high volatility in stock prices.

Savaş and Can (2011) analyzes the impacts of Euro/Dollar Parity and CPI based Effective Real Exchange Rate Index on the BIST 100 Index. In accordance with the results of the study, which based on monthly data of the period between January 2000 and July 2009, Euro/Dollar Parity and CPI based Effective Real Exchange Rate Index explains the BIST 100 Index by 77.5% and affects positively. Besides, this study also suggests that there is causality from the BIST 100 Index to exchange rates.

Çağlı and others (2010), in their study, which analyses the correlation between the BIST 100 Index and macroeconomic variables for the period between 1988 and 2008, conclude that the BIST 100 Index is co-integrated with GDP, crude oil prices of the United States and industrial production index.

Vuran (2010) tests the long-term correlation between the BIST 100 Index and Bovespa, CAC 40, Dax, FTSE 100, Nikkei 225, Mexico-IPC, Merval and SP 500 indexes with the daily data of the period between January 2006 and January 2009 through Johansen Co-integration

Analysis. The findings of the study indicate that there is a long term correlation between BIST Index and FTSE100, Dax, Bovespa, Merval and IPC indexes in the related period.

Zügül and Şahin (2009) conducts the analysis of the correlation between BIST 100 Index and macroeconomic variables. In the study, which includes the period between January 2004 and December 2008, exchange rates, money supply, interest rates and inflation rates are accepted as macroeconomic variables. In accordance with the results of the study, there is a negative correlation between BIST 100 Index and exchange rates, money supply and interest rates despite the positive correlation between BIST 100 Index and inflation rates

Yuang Lin and others (2007), in their study on for Asian countries, analyzes the correlation of stock prices with money supply and budget deficit. The study indicates that stock prices do not react to the changes in money supply and budget deficit in the short term, however, in the long term; there is a meaningful correlation between these variables.

Lenardon and Amirdjanova (2006), in their studies based on daily data of CAC 40, DAX, DJI, FTSE 100, Hang Seng, Nasdaq, Nikkei 225, SP 500 and Straits Times indices between 1990 and 2004, stated that there is a delay in the transmission of shocks from U.S. indices to European and Asian indices, yet European indices change together as do the United States indices.

Ceylan (2006) analyses the impacts of stock indices of G7 countries on BIST 100 Index through SVAR model. In accordance with the findings of the study on the period between 1988 and 2004, the six countries excluding Nikkei 225 index have a positive and statistically significant impacts on Borsa Istanbul, and Nikkei 225 index has a short term and limited positive impact on Borsa Istanbul.

Çıtak (2003), analyses the correlation between macroeconomic policies and stock prices at the Istanbul Stock Exchange. The study analyses the correlation between money supply and stocks of Istanbul Stock Exchange and between budget surplus (or deficit) and stocks of Istanbul Stock Exchange through VAR model. Findings of the study indicate that although Borsa Istanbul is information efficient in terms of monetary policy, it is not information efficient in terms of fiscal policy.

3. ECONOMETRIC MODEL

The econometric analysis conducted within the framework of this study is Vector Autoregression (VAR) method as an efficient method to indicate the interaction between variables.

VAR method is used with the purpose of analyzing the relation between macroeconomic variables and analyzing the dynamic impact of random shocks on the system of variables. Standard VAR model with two variables is indicated below:

$$y_t = a_1 + \sum_{i=1}^{p} b_{1i} y_{t-i} + \sum_{i=1}^{p} b_{2i} x_{t-i} + v_{1t} \qquad (1)$$

$$x_t = c_1 + \sum_{i=1}^{p} d_{1i} y_{t-i} + \sum_{i=1}^{p} d_{2i} x_{t-i} + v_{2t} \tag{2}$$

In the model indicated above, the period of delays are indicated with p. v_{1t} and v_{2t} indicate the random error terms, whose covariance with its lagged values is zero and variances, are fixed with a normal distribution. The assumption of that, in the VAR model, errors should be unrelated to its lagged values shall not constraint the model, since it is possible to solve the auto-correlation problem by extending the lagged values of the variables. Besides, error terms are unrelated to the all variables at the right side of the model. Since only lagged values of endogenous variables are placed at right side of the model, simultaneity problem does not occur. In such a case, it is possible to forecast each equation in the model thanks to the Least Squares Method (Özgen and Güloğlu, 2004:96).

In the phase in which the VAR model is to be forecasted, instead of interpreting the obtained parameters, it is possible to forecast by analyzing the residuals obtained through system forecasting. Within this scope, when one gives a shock by a unit of standard deviation to the variables in the model, the response of other variables is measured by impulse-response functions. Another method used in the analysis of residuals is variance decomposition. Thanks to this method, it is possible to see the impacts of statistical shocks on variables. It is possible to explain the economic relations between variables by calculating the explanation rate of the shock on a variable by other variables (Tarı and Bozkurt, 2006:5)

4. DATA SET AND METHODOLOGY

In this study, the relationship between Borsa Istanbul and Tokyo Stock Exchange has been investigated with the method used by fundamental analysts and whether there is a short-term or long-term relation between these two markets has been presented with regard to the openness perspective. With this purpose, a VAR analysis has been conducted with the monthly data of the period between 1989:1 and 2013:12. In this study, seven variables have been used by considering the structural characteristics of Turkish economy and other studies in the related literature. The dependent variable of the model is BIST 100 Index representing the Borsa Istanbul, when independent variables are NIKKEI 225 Index which represent Tokyo Stock Exchange, M_1 money supply, Open Market Repo Interest Rates, CBRT Exchange Rates-Banknote Selling-, 1 ONS Gold London Selling Price and Consumer Price Index. The used data have been obtained from Central Bank of Republic of Turkey Electronic Data Delivery System and Tokyo Stock Exchange. With the purpose of providing a more effective interpretation of econometric results, all variables are indicated as percentage changes.

5. FINDINGS AND INTERPRETATION

In order to determine the statistically meaningful relations between variables through VAR analysis, each variable has to be stationarity. Thanks to unit root tests, it is proved whether the macroeconomic variables are stationarity or not. In this study, with the purpose of proving whether the macroeconomic variables are stationarity or not, Augmented Dickey Fuller (ADF) test and Phillips Perron (PP) test have initially been used. ADF stationarity test with three alternatives as none, trend and intercept and intercept is indicated below.

$$\Delta Y_t = \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} \Delta Y_{t-i} + \upsilon_t \tag{3}$$

$$\Delta Y_t = \beta_0 + \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} \Delta Y_{t-i} + \upsilon_t \tag{4}$$

$$\Delta Y_t = \beta_0 + \beta_1 t + \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} \Delta Y_{t-i} + \upsilon_t \tag{5}$$

In this equation, Y indicates the variable to be unit root tested, β_0 and β_1 stand for coefficients, t indicates trend variable, Δ stands for difference parameter, t indicates time, m stands for lag length and υ_t is used for error term. Lagged difference terms are also used in ADF test. The number of the lagged difference terms is generally determined empirically. The main reason of this method is to increase the number of terms used in the model as much as possible with the purpose of providing error terms without autocorrelation.

When testing for a unit root Phillips and Perron (1988) propose a nonparametric method of controlling for autocorrelation. The PP method uses the non-augmented version of DF test equations (eq.3, eq.4, eq.5), and modifies the t- statistics of the δ so that autocorrelation does not affect the asymptotic distribution of the test statistic. The PP test is based on the following statistic

$$\tilde{t}_\delta = t_\delta \left(\frac{\gamma_0}{f_0} \right)^{1/2} - \frac{T(f_0 - \gamma_0)\left(se(\hat{\delta})\right)}{2 f_0^{1/2} s} \tag{6}$$

Where $\hat{\delta}$ is the estimate, and t_δ the t-ratio of δ, $se(\hat{\delta})$ is coefficient standard error, and is the standard error of the test regression. The asymptotic distribution of the PP modified t - ratio is the same as that of the ADF statistic. The test results of ADF and Phillips Perron are indicated in Table 1.

Table 1: Unit Root Tests

Variables	Augmented Dickey Fuller	
	None	Intercept
BIST	-10.088*	-10.485*
GOLD	-12.244*	-12.715*
M1	1.279	-5.405*
NIKKEI	-12.318*	-12.285*
EXCH	-7,811*	-8,329*
INF	-3,401	-2,637***
IR	-2,247**	-3,623*
Variables	**Phillips Perron**	
	None	**Intercept**
BIST	-10.111*	-10.442*
GOLD	-12.270*	-12.718*
M1	3.544	-6.071*
NIKKEI	-12,408*	-12,377*
EXCH	-7,715*	-8,245*
INF	-1,856 ***	-1,510
IR	-5,673*	-9,146*

Note: The figures in parenthesis indicate possibility values.

*1 % indicates the significance at the level.

As it is indicated in Table 1, variables are stationarity in none and intercept model at the ADF and PP tests. All variables used in the model are stationarity at the 1 percent significance level. The stationarity tests have been conducted thanks to none, intercept and trend, and intercept test equations respectively. The test was continued until the refusal of the H_0 hypothesis, which assumes the series is not stationary. In this study, since it is observed that the series become stationary in none and intercept test equations, calculation of intercept and trend test equation becomes unnecessary as it is indicated in the Table 2.

In the phase following the determination of stationarity of each variable at its level value, the VAR model has been predicted. However, before the prediction of VAR model, optimal lag length had been determined in accordance with different criteria. The results are indicated in the Table 2.

Table 2: Determination of Lag Length for the VAR Model

Lag	LR	FPE	AIC	SC	HQ
0	NA	1.80e-05	8.938505	9.058570	8.987146
1	2134.600	2.28e-10	-2.336344	-1.375826	-1.947215
2	244.3847	9.42e-11*	-3.222335	-1.421365*	-2.492719*
3	87.31629*	9.43e-11	-3.226669*	-0.585245	-2.156564
4	51.36232	1.16e-10	-3.029165	0.452712	-1.618573
5	59.36812	1.34e-10	-2.898673	1.423656	-1.147593
6	49.57335	1.65e-10	-2.719698	2.443084	-0.628131

Note: LR: Likelihood Ratio Test, FPE: Final Prediction Error, AIC; Akaike Information Criterion, SC: Schwartz Information Criterion, HQ; Hannan-Quinn Information Criterion.

For the determination of lag length, Final Prediction Error-FPE, Akaike Information Criterion-AIC, Schwarz Information Criterion-SC, Hannan-Quinn Information Criterion-HQ along with the Likelihood Ratio Test were taken into consideration. For the prediction of the model, LR and AIC as the lag lengths selection criteria have been taken into consideration. The reason of the determination of lag length as 3 is that there is no autocorrelation problem in the model.

The optimal lag length selected for the VAR model should provide the given assumptions of error term. As such, an autocorrelation test hand been conducted for the error terms of the VAR model. In order to determine whether there is an autocorrelation in the Model or not, Lagrange Multiplier-LM test have performed. LM test results of predicted VAR model are indicated in the Table3.

Table 3: LM Test Results

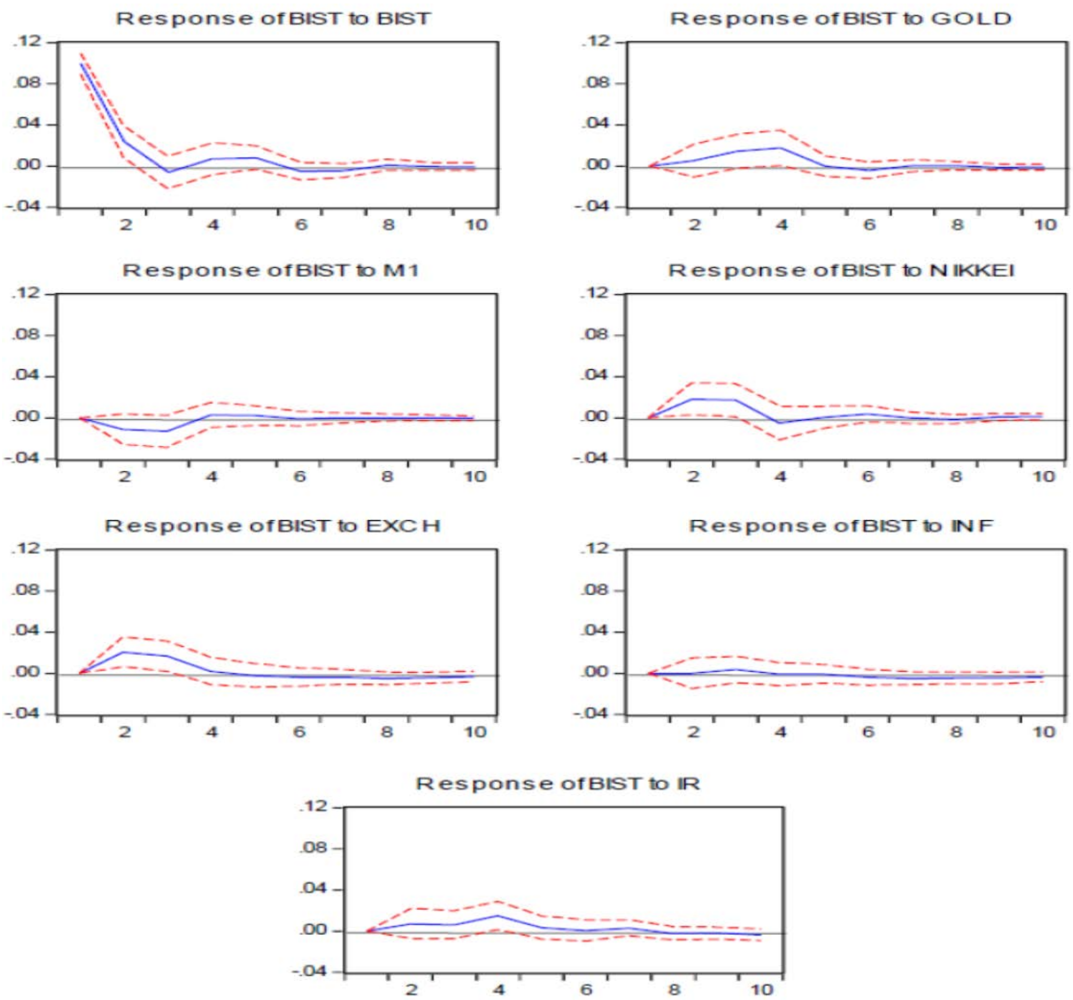
Lag	LM Statistics	Probability
1	53.13921	0.3178
2	58.08058	0.1755
3	47.56330	0.5315
4	48.26483	0.5029
5	59.94004	0.1360
6	36.07449	0.9152
7	53.54272	0.3042
8	49.20987	0.4647
9	51.91840	0.3608
10	56.79103	0.2074

In accordance with the results of the LM test, which has been performed in order to determine whether there is a relation between error terms, there is no autocorrelation problem in any of the lag level subject to the test.

The VAR model results can be interpreted thanks to impulse - response functions and variance decomposition. When a shock by a unit of standard deviation is implied to one of the variables in the model, the impulse - response functions indicate the response of other variables to this shock during a period of time. Variance decomposition provides the percentage of the impact of change in variables on other variables during a certain period of time.

In this study, with the purpose of interpretation of the results of the VAR model, impulse - response functions and variance decomposition have been conducted. In the Graph 1, the response of BIST 100 to the other variables is indicated.

Graph 1: Impulse-Response Functions



The main purpose of using impulse - response functions is to analyze the impact of a random shock incurred in Tokyo Stock Exchange on Borsa Istanbul and investigate the adaptation process of price index to shocks. As it is indicated in Graph 1, there is no certain impact of the shock incurred at Tokyo Stock Exchange on Borsa Istanbul at the first phase. Beginning from the second phase, the shock incurred in Tokyo Stock Exchange begins to create a positive impact on Borsa Istanbul. This positive impact begins to decrease in the 3rd phase and in the fourth phase, it create a slight negative impact. In the following period, the impact of the shock incurred at Tokyo Stock Exchange disappeared. In accordance with this result, Tokyo Stock Exchange has a short term impact on Borsa Istanbul; yet, this impact disappears in the long term. The main reason of the short term positive impact of Tokyo Stock Exchange on Borsa Istanbul is that Tokyo Stock Exchange as a developed Stock Exchange is a more expanded market and Japanese investors tend to invest in Borsa Istanbul due to international portfolio diversification particularly Carry Trade transactions.

One of the methods used for the purpose of analyzing the dynamic relations of the variables in VAR analysis is Variance Decomposition Analysis. This analysis indicates what percentage of the changes incurred in the variable used in the model is incurred autogenously and what percentage of the changes incurred arises from other variables. The results of the analysis are indicated in Table 4.

Table 4: Results of Variance Decomposition Analysis of BIST 100

Period	Std. Error	BIST	Gold	M1	NIKKEI	EXCH	INF	IR
1	0.100	100.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.107	91.686	0.228	1.135	2.879	3.648	0.000	0.424
3	0.112	84.406	1.815	2.474	4.977	5.566	0.092	0.670
4	0.114	80.748	4.114	2.403	4.953	5.328	0.095	2.360
5	0.115	80.718	4.088	2.419	4.923	5.333	0.102	2.418
6	0.115	80.378	4.191	2.410	4.992	5.401	0.227	2.402
7	0.115	80.118	4.169	2.397	4.966	5.474	0.425	2.450
8	0.116	79.786	4.152	2.387	4.964	5.651	0.580	2.481
9	0.116	79.490	4.148	2.378	4.949	5.784	0.745	2.507
10	0.116	79.228	4.141	2.375	4.941	5.860	0.847	2.608

The variance decomposition (forecast error decomposition) is the percentage of the variance of the error made in forecasting a variable due to a specific shock at a specific time horizon (Stock and Watson, 2001:4). According to results of Variance Decomposition, there is no impact of other variables on the prediction errors for the Period 1 of BIST 100, since 100% of the prediction errors are arising from BIST 100 shocks in the VAR model. However, 8.31 % of prediction errors for two periods of BIST 100 Index arise from shocks of other variables in the VAR model. In the second period, it is observed that the variables, which have the biggest impacts on BIST 100 prediction errors, are Exchange Rate with 3.468%, Nikkei 225 Index with 2.879 % and M1 money supply with 1.135 % respectively. Empirical findings indicate that this order does not change for the 3rd period; however, the gold prices take the third rank in the list between the 4th and 10th periods.

6. CONCLUSION

In capital markets, where the opportunity to obtain information is not equally distributed to each investor, interpretation of the obtained information thanks to finance theory by investors or using mathematical models with the purpose of predicting the future have certain importance. However, using only microeconomic or macroeconomic variables for the future predictions related to current capital markets is not adequate. As such, the relationships among stock exchange markets should be analyzed as well by considering that capital markets interact with developed or developing stock markets. Consequently, investors is going to have the opportunity to conduct important investment activities such as decision making to invest for their portfolios, protecting themselves against certain risks and establishing internationally diversified portfolio thanks to this information, which they obtain.

In this study, the relationship between Borsa Istanbul and Tokyo Stock Exchange has been investigated through VAR analysis. Besides, the analysis of the relationship between Borsa Istanbul with several macroeconomic variables also conducted. In accordance with the findings of the conducted analysis, there is no impact of a shock incurred at Tokyo Stock Exchange on Borsa Istanbul at the first phase; yet, beginning from the second phase, these shocks begin to create a positive impact on Borsa Istanbul. This positive impact begins to decrease in the 3rd phase and in the fourth phase, it create a slight negative impact. In the following period, the impact of the shock incurred at Tokyo Stock Exchange disappeared. This result indicates that Tokyo Stock Exchange has a short term impact on Borsa Istanbul; yet, this impact disappears in the long term.

Consequently, especially in accordance with the impulse - response functions, a shock incurred at Tokyo Stock Exchange creates a similar impact on Borsa Istanbul between the 2nd and 4th periods, as such; it may be useful to follow the news and information on Tokyo Stock Exchange by the investors especially for short term investment decisions. Besides, findings also present that investors from Turkey, who seek to make international investments or in other words, who seek to make an international diversification, should not invest in stocks at the Tokyo Stock Exchange in the short term and vice versa.

The empirical findings of this study not only indicates that there is a relation between macroeconomic variables and Borsa Istanbul, but also presents that the investors in Turkey should analyze the news and information on other capital markets in the decision making process to make investment.

REFERENCES

Abdmoulah, W. (2010), "Testing The Evolving Efficiency of Arab Stock Markets", *International Review of Financial Analysis*, Vol. 19, pp. 25–34.

Agnello, A. and R.M. Sausa (2011), "Fiscal Policy and Asset Prices", Bulletin of Economic Research, December.

Arouri, M., A. Lahiani and D. Nguyen (2011), "Return and volatility transmission between world oil prices and stock markets of the GCC countries", *Economic Modelling*, Vol. 28, pp. 1815–1825.

Atan, S.D., Z.A. Özdemir and M. Atan (2009), "Hisse Senedi Piyasasında Zayıf Formda Etkinlik: İMKB Üzerine Ampirik Bir Çalışma", *Dokuz Eylül Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, Cilt 24, Sayı 2, pp. 33-48.

Bildik, R. and G. Gülay (2008), "The effects of changes in index composition on stock prices and volume: Evidence from the Istanbul stock exchange", *International Review of Financial Analysis*, Vol. 17, pp. 178–197.

Ceylan, N.B. (2006), "G-7 Ülkelerinin Borsalarının İstanbul Menkul Kıymetler Borsası Üzerindeki Etkileri", *İMKB Dergisi (ISE Review)*, Vol. 8, No. 32, pp. 37-48.

Çağlı, E.Ç., U. Halaç and D. Taşkın (2010), "Testing Long-Run Relationship between Stock Market and Macroeconomic Variables in the Presence of Structural Breaks: The Turkish Case", *International Research Journal of Finance and Economics*, Vol. 48, pp. 49-60.

Çıtak, Levent (2003); "Para ve Maliye Politikalarının İMKB Endeksi Üzerindeki Etkilerinin İncelenmesi: İMKB, Makroekonomik Politikalar Açısından Bilgi Etkin Midir?", *Dumlupınar Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, Vol. 9, pp. 1–13.

Çinko, M. (2006), "Etkin Piyasa Hipotezi: İMKB'de Haftanın Günü Etkisi ve Tatil Anomalisi", *TİSK Akademi*, Vol. 1, No. 2, pp. 116-127.

Dicle, M.F. and J. Levendis (2011), "Greek market efficiency and its international integration", *Journal of International Financial Markets, Institutions & Money*, Vol. 21, pp. 229–246.

Evlimoğlu, U. and F. Çondur (2012), "İMKB ile Bazı Gelişmiş ve Gelişmekte Olan Ülke Borsaları Arasındaki Karşılıklı Bağlantıların Küresel Kriz Öncesi ve Sonrası Dönem İçin İncelenmesi", *Uludağ Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi (Uludağ Journal of Economy and Society)*, Vol. XXXI, No. 1, pp. 31-58.

Fama, E.F. "The Behavior of Stock-Market Prices", *The Journal of Business*, Vol. 38, 1965, pp. 34-105.

Fifield, S.G.M. and J. Jetty (2008), “Further Evidence on the Efficiency of the Chinese Stock Markets: A Note”, *Research in International Business and Finance*, Vol. 22, pp. 351–361.

Hammoudeh, S. and H. Li (2008), “Sudden Changes in Volatility in Emerging Markets: The Case of Gulf Arab Stock Markets”, *International Review of Financial Analysis*, Vol. 17, pp. 47–63.

Hamzaçebi, C. and M.F. Bayramoğlu (2007), “Yapay Sinir Ağları ile İMKB Ulusal 100 Endeksinin Tahmini”, *Yöneylem Araştırması ve Endüstri Mühendisliği 27. Ulusal Kongresi (YAEM 2007)*, 2-4 Temmuz, Izmir, Turkey.

Khan, W. and J.P. Vieito (2012), “Stock exchange mergers and weak form of market efficiency: The case of Euronext Lisbon”, *International Review of Economics and Finance*, Vol. 22, pp. 173–189.

Kumar, K., V. Mamidi and V. Marisetty (2011), “Global markets exposure and price efficiency: An empirical analysis of order flow dynamics of NYSE-listed Indian firms”, *Journal of International Financial Markets*, Institutions & Money, Vol. 21, pp. 686– 706.

Lenardon, M.J. and A. Amirdjanova (2006), “Interaction Between Stock Indices via Changepoint Analysis”, *Applied Stochastic Models in Business and Industry*, Vol. 22, pp. 573–586.

Lim, K.-P. (2007), “Ranking Market Efficiency for Stock Markets: A Nonlinear Perspective”, *Physica A*, Vol. 376, pp. 445-454.

Lim, K.-P., R.D. Brooks and J.H. Kim (2008), “Financial Crisis and Stock Market Efficiency: Empirical Evidence from Asian Countries”, *International Review of Financial Analysis*, Vol. 17, pp. 571–591.

Lagoarde-Segot, T. and B.M. Lucey, “Efficiency in Emerging Markets—Evidence from the MENA Region”, *Journal of International Financial Markets, Institutions & Money*, Vol. 18, 2008, pp. 94–105.

Özdil, T. and C. Yılmaz (2006), “İstanbul Menkul Kıymetler Borsası’nda (İMKB) Sektör Bazında İşlem Gören Hisse Senetlerinin Alım-Satım Kararlarında En Yüksek Getirili Stratejinin Belirlenmesi,” *Celal Bayar Üniversitesi İİBF Yönetim ve Ekonomi Dergisi*, Vol. 13, No. 2, pp. 211–224.

Özgen, F. and B. Güloğlu, (2004); “Türkiye'de İç Borçların İktisadi Etkilerinin VAR Tekniği ile Analizi,” *METU Studies In Development*, Vol. 1, pp. 93-114.

Pasquariello, P. (2008), “The Anatomy of Financial Crises: Evidence trom the Emerging ADR Market”, *Journal of International Economics*, Vol. 76, pp. 193-207.

Savaş, İ. and İ. Can, "Euro-Dolar Paritesi ve Reel Döviz Kuru'nun İMKB 100 Endeksi'ne Etkisi", *Eskişehir Osmangazi Üniversitesi İİBF Dergisi*, NİSAN 2011, Vol. 6, No: 1, pp. 323-339.

Stock, J.H. and M.W. Watson (2001), "Vector Autoregressions," *Journal of Economic Perspectives*, Vol. 15, No. 4, 101-115.

Thaler, R.H. (1987), "Anomalies: The January Effect," *The Journal of Economic Perspectives*, Vol. 1, No. 1, pp. 197–201.

Taner, B. and C. Akkaya (2005), "Yatırımcı Psikolojisi ve Davranışsal Finans Yaklaşımı," *Muhasebe ve Finansman Dergisi*, Vol. 27, pp. 47–54.

Ülgen, M. and S. Teker (2006), "İstanbul Menkul Kıymetler Borsası'nda İşlem Gören Sanayi Şirketleri İçin Bir Analitik Değerleme Tekniği Uygulaması," *İstanbul Teknik Üniversitesi Sosyal Bilimler Dergisi*, Vol. 2, No. 1, pp. 49–57.

Visaltanachoti, N. and T. Yang (2010), "Speed of Convergence to Market Efficiency for NYSE-Listed Foreign Stocks", *Journal of Banking & Finance*, Vol. 34, pp. 594–605.

Vuran, B. (2010), "İMKB 100 Endeksinin Uluslararası Hisse Senedi Endeksleri ile İlişkisinin Eşbütünleşim Analizi ile Belirlenmesi", *İstanbul Üniversitesi İşletme Fakültesi Dergisi (Istanbul University Journal of the School of Business Administration)*, Vol. 39, No. 1, pp. 154-168.

Yalçıner, K., M. Atan, M. Kayacan and D. Boztosun (2004), "İMKB 30 Endeksinde Etkinlik Analizi (Veri Zarflama Analizi – VZA) ile Hisse Senedi Seçimi," *Uluslararası Manas Üniversitesi Ekonomi Konferansı*, 23-24 Eylül, Bişkek-Kırgızistan, pp. 1-12.

Yao, J., C.L. Tan and H.-L. Poh (1999), "Neural Networks for Technical Analysis: A Study on KLCI," *International Journal of Theoretical and Applied Finance*, Vol. 2, No. 2, pp. 221–241.

Yuang Lin, C-Y., M.-W. Li and C-W. Liu (2007); "On Stock Market and Macroeconomic Variables: Evidences from Four Asian Tigers", *Second International Conference on Innovative Computing, Informatio and Control (ICICIC)*, Japan.

Zügül, M. and C. Şahin (2009), "İMKB 100 Endeksi ile Bazı Makroekonomik Değişkenler Arasındaki İlişkiyi İncelemeye Yönelik Bir Uygulama", *Akademik Bakış*, No. 16, Nisan, pp. 1-16.

THE MACROECONOMIC DETERMINANTS OF STOCK MARKET DEVELOPMENT IN EMERGING MARKETS ASIA

Deniz ŞÜKRÜOĞLU*

ABSTRACT

This paper examines the macroeconomic determinants of stock market development for emerging economies in Asia for the period 1991 to 2012. Using dynamic panel data methods the paper finds that macroeconomic factors such as income, gross capital formation, banking sector development, inflation and liquidity are important determinants of stock market development in emerging market countries.

Keywords: *Stock market development, Emerging market Asia, Dynamic panel data*

Jel Classification: *C23*

1. INTRODUCTION

Market capitalization has long been studied. There are lots of papers in the literature focusing on determinants of market capitalization. Such as Calderon-Rossell(1990), Pagano (1993), La Porta et al. (1997), Mishkin (2001). Unfortunately,the literature is not the same for developing countries. Garcia and Liu (1999),investigating macroeconomic determinants for Asian and Latin American countries.Mohtadi and Agarwal (2004) examined the relationship between stock market development and economic growth for 21 emerging countries. El-Wassal (2005), the relationship between stock market and economic growth, financial liberalization,and foreign investment; Yartey (2007), studying the importance offinancial intermediaries for stock markets. Naceur et al. (2007) investigates determinants of stock market development for Middle East and North Africa. Sahu (2011),investigates the direction of causality between stock market development and economic growth in India. Pradhan et al. (2013), the relation between stock market development and economic growth for 16 Asian countries.

2. METHODOLOGY AND DATA

This paper focuses on the macroeconomic determinants of stock market capitalization - defined as the total market value of all listed shares as a percentage of GDP- as proxy for stock market development. The analysis is based on a panel dataset of emerging market Asia countries, for the period of 1991-2012. The emerging markets Asia countries are China, India,

* *Bülent Ecevit Üniversitesi, Zonguldak, Turkey. E-mail:Dsukruoglu@gmail.com

Indonesia, Korea Republic, Malaysia, Philippines, Thailand and Taiwan.[1] The data for the study consists of annual time series from 1991 to 2012 and all the data were extracted from World Bank's World Development Indicators 2013.

Cadeleron-Rossell (1990) developed a behavioral structural model of stock market development. In their model economic growth and stock market liquidity are considered the main determinants of stock market development. Their analysis shows that economic growth and stock market liquidity are important determinants of stock market development. In this study this model is modified to incorporate other financial and economic variables that might affect stock market development. In particular, income level, saving rates, the role of banking sector and private capital flows are examined in explaining stock market development in emerging market Asia. The following dynamic panel data model is estimated.

$$MC_{it} = \alpha + \delta MC_{it-1} + \beta X_{it} + u_{it}$$

(1)

Where MC_{it} is market capitalization ratio. It is used to measure development of stock market. X_{it} is a matrix of control variables made up of credit to private sector (Cr) and its squared, stock market value (SMV), per capita gross domestic product (GDPPC), gross capital formation (GCF), Foreign direct investment (FDI), real interest rate (IR) and gross domestic savings (GDS).

Table-1: Mean value of variables

	C	(DPPC	MV	r	C r^2	CF	R	NF	DS	DI
China	3,01	(,1469	7,97	08,33	1 1974,05	1,47	1,490	,741	4,82	,057
India	0,21	(,0696	5,26	3,58	1 241,32	8,87	,754	,832	6,55	,098
Indonesia	28,40	(,1022	12,04	4,13	1 363,55	7,05	,369	0,769	0,71	,970
Korea	5,20	(,0707	05,36	3,79	1 0281,17	2,11	,088	,050	3,78	0,803
Malaysia	65,03	(,0757	9,37	16,96	1 4009,89	8,76	,667	2,839	1,80	,321
Philippines	5,70	0,0641	2,76	33,31	1179,43	21,14	,926	,158	15,99	,505
Thailand	1,13	(,0673	5,73	12,58	1 3145,66	0,13	,587	,562	3,21	,982
Overall	5,52	(,0852	9,78	6,10	7 599,30	9,93	,412	,707	2,41	,248

[1] Taiwan is not included due to data limitation.

-----Minimum value of the variables=====Maximum value of the variables.

Stock market capitalization - defined as the total market value of all listed shares divided by GDP - is one of the most commonly used indicators of stock market development. Market capitalization is the share price times the number of shares outstanding. Listed domestic companies are the domestically incorporated companies listed on the country's stock exchanges at the end of the year. Table-1 shows the average and overall value of the variables for each country. The first column in Table-1 shows the share of stock market capitalization in percent of gross domestic product (GDP). The overall average market capitalization in these countries was 65,52 percent between 1991 and 2012, Malaysia has the highest market capitalization relative to its GDP (165,03 percent of GDP).

Income has been found to be highly correlated with the size of stock market in lots of research. Growth of per capita GDP in US dollars is used to measure the effect of income on stock market development level. China has the highest growth rate in per capita GDP (% 0,1469) while the overall growth is % 0,0852.

The stock market liquidity level can be a good indicator of the stock markets development levels. Liquidity of a market indicates how easily and quickly economic agents can buy and sell securities. Liquidity increases the volume of stock trades; therefore, higher stock market development is expected. In this paper stock market liquidity is measured using value traded as a percentage of GDP (SMV). As shown in table-1 Korea has the highest stock market liquidity (105,36) while the overall mean is 49,78.

Banking sector development level is a good indicator for stock market capitalization Demirguc-Kunt and Levine(1996). Although M2 relative to GDP is generally using as a measure of financial depth according to King and Levine (1993) it does not tell us whether the liabilities are those of the central bank, commercial banks or other depository institutions. In this paper value of domestic credit provided by the banking sector to the private sector relative to GDP (Cr) is used as a measure of banking sector development. Its square also included in the model to understand the relationship between banking sector and stock market development. Demirgüç-Kunt and Levine (1996) empirically show that the stock market development is positively related to banking sector development. In this sample Malaysia has the highest level of banking sector development (116,96).

The main purpose of financial markets is bring savers and borrowers together and make funds transferable between them The source of savings for stock markets can be both domestic and foreign Van Agtmael&Errunza, (1982). Thus both foreign direct investment (FDI) and gross domestic savings (GDS) as a percentage of GDP is used in the regression analysis. The expected sings of both variables are expected to be positive. As seen in Table-1 Philippines has the minimum value of GDS relative to its GDP (21,14) while China has the highest ratio (41,47). The overall FDI level is 2,248. Malaysia again has the highest GDS level (4,321). As investment rate depends on saving rate, investment is also expected to be another important determinants of stock market development. Gross capital formation as a percentage of GDP (GCF) is used as a proxy of domestic investment level.

Macroeconomic stability is an essential factor for healthy financial systems. Interest rates and price levels are generally considered to be measures of macroeconomic stability in the literature Garcia and Liu (1999). In the model real interest rates (IR) and consumer prices (INF) are used as an indicator of macroeconomic stability on stock market development. Lending, borrowing and saving decisions become distorted during high inflation levels. Firms not only lower their capital accumulation but also supply less shares in stock markets. As a result reduction in financial activities as well as stock market activities is observed. McCarthy et al (1990); Chopin &Zhong, (2001); Apergis&Eleftheriou, (2002); Wongbangpo& Sharma, (2002); Larrain, (2010).On the other side Fisherian hypothesis suggest a positive relationship between inflation and stock returns. High risk levels has always a negative effect on financial markets. The expected sign of interest rate is expected to be negative considering the reverse relation with stock market capitalization.

The first step is checking stationarity of the variables. Panel data unit root tests have been very popular since the publications of the paper by Levin and Lin (1993a, b). Lots of alternative has been developed. In this paper the following five types of panel unit root tests are computed: Levin, Lin and Chu (2002), Harris-Tzavalis (1999), Breitung (2000), Im, Pesaran and Shin(2003), Fisher-type tests using augmented Dickey-Fuller and Philips-Perron tests (Maddala and Wu (1999) and Choi (2001)) to check whether the variables are stationary or not. the Hadri (2000) test is not used in this paper because it appears to over reject the null of stationarity, and may yield results that directly contradict those obtained using alternative test Hlouskova and Wagner (2006).

Table- 2 shows the panel unit root test results. Three different test equations are used to test for the null of unit root. The difference between the equations concerns the presence of the fixed effect and individual trend. Under the null hypothesis the first test equation has no exgeneous variables, the second adds individual intercept (Fixed effect) and the third equation includes both individual intercept and individual time trend. The second and third test equations are only used if the null hypothesis regarding unit root is not rejected at conventional significance levels in the previous test.

Table-2: Unit root tests

Null Hypothesis	Method		M C	r	S MV	r^2	G DPPC	CF	I R	I NF	C DS	F DI
Common Unit Root	Levin-Lin-Chu		-1,934***	,147	-3,209***	,267	-5,516***	0,003	-3,976***	-6,401***	-0,022	-2,232**
				0,783		0,62		1,678**			-2,687***	
		+T		2,128**		2,148**						
	Harris-Tzavalis		0,873***	,001	0,824***	,996	0,085***	,935***	0,335***	0,475***	0,988	0,789***
				,92		,911					0,727***	
		+T		,724		,727						
	Breitung		-1,457***	,077	-2,500***	0,133	-6,889***	1,764**	-4,591***	-3,343***	-0,696	-3,515***
				0,238		,321					-1,305*	
		+T		1,081		1,354*						
Individual Unit Root	Im-Pesaran-Shin		-2,77***	,233	-2,683***	0,545	-8,201***	0,768	-5,89***	-5,459***	-1,116	-3,685***
											-	

	+T		1,709**		1,908**		1,58*			1,312*	
Fisher (ADF)		0,133	1,130	1,718**	0,115	1,354***	0,271	3,809***	8,199***	0,199	7,152***
	+T	1,405*	,555		,552		,112**			-0,805	
Fisher (Philips Perron)		1,894**	1,251	2,133**	0,051	20,545***	,261	11,35***	14,627***	1,638*	6,13***
	+T		0,048		0,176		,592				

N: No exogeneous variables, F: Fixed effect, I:Individual trend

*, ** and *** indicate significance level at 10, 5 and 1 percent respectively

Table 2 shows that the null of unit root is rejected for all the variables except GCF Cr and its squared in every unit root test. The null of unit root cannot be rejected only in the Phillips_Perron type Fisher test for GCF. Cr is found to be stationary at level for only Levin-Lin-Chu and Im-Peseran-Shin test.Its squared (Cr^2) found to be stationary at level also in Breitung test.

The modified Calderon Rossel model (1) has lagged dependent variable (MC_{it-1}) as a regressor. Then it becomes a dynamic panel data model. In this situation the estimation procedure differs. Dynamic relations are characterized by the presence of a lagged dependent variable among the variables, Suppose we have a simple autoregressive panel data model with no additional regressors.

$$y_{it} = \delta y_{it-1} + u_{it}$$

(2)

Where $u_{it} = \mu_i + v_{it}$ with $\mu_i \sim IID\left(0, \sigma_\mu^2\right)$ and $v_{it} \sim IID\left(0, \sigma_v^2\right)$.

In a dynamic panel data model;

- Since y_{it} is a function of μ_i the OLS estimator becomes biased and inconsistent (Sevestre&Trognon, 1985).
- The Within transformation wipes out μ_i but y_{it-1} is still correlated with the $\bar{v}_i$ which contains $\bar{v}_{it-1}$ so the Fixed Effect estimator is biased (Nickell, 1981).
- The random effects GLS estimator is also biased (Anderson & Hsiao, 1981).
- Instrumental Variable (IV) estimation method suggested by Anderson and Hsiao (1981) gives not efficient parameter estimates. (Ahn& Schmidt, 1995)

Arellano-Bond (1991) suggests first differencing to eliminate the individual effects.

$$y_{it} - y_{it-1} = \delta\left(y_{it-1} - y_{it-2}\right) + \left(v_{it} - v_{it-1}\right)$$

(3)

y_{it-1} becomes a valid instrumental variable when t=3. In the third period we have

$$y_{i3} - y_{i2} = \delta\left(y_{i2} - y_{i1}\right) + \left(v_{i3} - v_{i2}\right)$$

(4)

For the next period y_{i1} and y_{i2} become a valid instrumentals and so on until $t = T - 2$. The variance covariance matrix for the differenced error terms in eq (2)

$$E\left[\left(v_{it} - v_{it-1}\right)\left(v_{it} - v_{it-1}\right)'\right] = \left(\frac{1}{N}\sum_{i=1}^{N} Z_i' H Z_i\right)^{-1} = A_N$$

(5)

Where H is a $(T-2)$ square matrix which has twos in the main diagonal, minus ones in the sub diagonal and the super diagonal and zeros otherwise.

$$H = \begin{bmatrix} 2 & -1 & 0 & \cdots & 0 & 0 & 0 \\ -1 & 2 & -1 & \cdots & 0 & 0 & 0 \\ 0 & -1 & 2 & \cdots & 0 & 0 & 0 \\ \vdots & \vdots & \vdots & \ddots & \vdots & \vdots & \vdots \\ 0 & 0 & 0 & \cdots & 2 & -1 & 0 \\ 0 & 0 & 0 & \cdots & -1 & 2 & -1 \\ 0 & 0 & 0 & \cdots & 0 & -1 & 2 \end{bmatrix}$$

(6)

The matrix Z_{it} contains all instruments for individual i with the following form.

$$Z_i = \begin{bmatrix} y_{i1} & 0 & 0 & 0 & 0 & 0 & \cdots & 0 & 0 & \cdots & 0 \\ 0 & y_{i1} & y_{i2} & 0 & 0 & 0 & \cdots & 0 & 0 & \cdots & 0 \\ 0 & 0 & 0 & y_{i1} & y_{i2} & y_{i3} & \cdots & 0 & 0 & \cdots & 0 \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \ddots & \vdots & \vdots & \ddots & \vdots \\ 0 & 0 & 0 & 0 & 0 & 0 & \cdots & y_{i1} & y_{i2} & \cdots & y_{iT-2} \end{bmatrix}$$

(7)

Pre-multiplying the eq (3) in vector form with the matrix of all instruments $Z = \left(Z_1^{'}, Z_2^{'}, \ldots, Z_N^{'}\right)^{'}$ gives

$$Z^{'}\bar{y}_{it} = \delta Z^{'}\left(\bar{y}_{it-1}\right) + Z^{'}\left(\bar{v}_{it}\right)$$

(8)

GLS estimator for this model gives us the below Arellano Bond (1991) type one-step estimator.

$$\hat{\delta}_1 = \frac{\bar{y}_{-1}^{'} Z A_N Z^{'} \bar{y}}{\bar{y}_{-1}^{'} Z A_N Z^{'} \bar{y}_{-1}}$$

(9)

Where $\bar{y} = \left(\bar{y}_1^{'}, \bar{y}_2^{'}, \ldots, \bar{y}_N^{'}\right)^{'}$, $\bar{y}_i = \left(\bar{y}_{i3}, \bar{y}_{i4}, \ldots, \bar{y}_{iT}\right)^{'}$ and $\bar{y}_{it} = \left(y_{it} - y_{it-1}\right)$ A consistent estimate of $\mathrm{av\hat{a}r}\left(\hat{\delta}\right)$ for arbitrary A_N is given by

$$\mathrm{av\hat{a}r}\left(\hat{\delta}\right) = N\frac{\bar{y}_{-1}^{'} Z A_N \hat{V}_N A_N Z^{'} \bar{y}_{-1}}{\left(\bar{y}_{-1}^{'} Z A_N Z^{'} \bar{y}_{-1}\right)^2}$$

(10)

The optimal choice for A_N is V_N^{-1} which produces the two- step estimator $\hat{\delta}_2$

$$\hat{V}_N = \frac{1}{N}\sum_{i=1}^{N} Z_i^{'}\hat{\hat{v}}_i\hat{\hat{v}}_i^{'} Z_i$$

(11)

Where the $\hat{\hat{v}}_i$ are obtained from the residuals from the one-step estimation. $\hat{\delta}_1$ and $\hat{\delta}_2$ will be asymptotically equivalent if the v_{it} are independent and homoscedastic both across units and over time. The two-step Arellano and Bond (1991) type GMM estimator is then

$$\hat{\delta}_2 = \frac{\overline{y}_{-1}^{'} Z V_N^{-1} Z^{'} \overline{y}}{\overline{y}_{-1}^{'} Z V_N^{-1} Z^{'} \overline{y}_{-1}}$$

(12)

The additional regressors x_{it} could be predetermined or strictly exogenous. if x_{it} are predetermined then for the period s, $\left[x_{i1}^{'}, x_{i2}^{'}, \dots, x_{is-1}^{'}\right]$ becomes a valid instrument. It should be added each diagonal element of the matrix Z_i according to s. When x_{it} are strictly exogenous then $\left[x_{i1}^{'}, x_{i2}^{'}, \dots, x_{iT}^{'}\right]$ becomes valid instruments. It should be added each diagonal element of the matrix Z_i. (Bencivenga& Smith, 1991).

The test statistics of Sargan test of over identifying restrictions (Hansen, 1982) for testing the validity of the moment conditions is given by

$$Sar = \frac{1}{N}\hat{\hat{v}}^{'} Z \hat{V}_N Z^{'} \hat{\hat{v}}$$

(13)

Where $\hat{\hat{v}}$ are the residuals from the two-step Arellano and Bond (1991) type GMM estimator.

Table 3 shows the Arellano-Bond type one step dynamic panel data parameter estimates. Test results for the autocorrelation and Sarganover identification tests indicate that the null is not rejected so all the models eq1 through eq6 are valid. The lagged value of market capitalization, domestic credit and its square, stock market value and per capita GDP variables are not only statistically significant at 1 percent significance level for all the equations but their signs also are found to be as expected. On the other side gross capital formation, real interest rate, inflation, gross domestic savings and foreign direct investment variables are not statistically significant in the present model.

Table 3: Estimation results

Variable	Eq1	Eq2	Eq3	Eq4	Eq5	Eq6
MC(-1)	-0,4991***	-0,4836***	-0,5114***	-0,5042***	-0,5011***	-0,4986***
	(-8,23)	(-7,47)	(-8,16)	-8,31	-8,3	-8,18
Cr	2,2449***	2,3629***	2,1553***	2,1743***	2,1667***	2,2504***
	(2,73)	(2,81)	(2,6)	2,64	2,64	2,72
SMV	0,6171***	0,6186***	0,6177***	0,6191***	0,617***	0,6174***
	(9,71)	(9,75)	(9,74)	9,77	9,76	9,69
GDPPC	61,724***	63,6421***	66,783***	68,0302***	62,3324***	61,8301***
	(4,1)	(4,16)	(4,06)	4,19	4,15	4,09
Cr^2	-0,0113***	-0,0116***	-0,0107***	-0,0108***	-0,011***	-0,0113***
	(-3,09)	(-3,15)	(-2,85)	-2,94	-3	-3,08
GCF		-0,4475				
		(-0,67)				
IR			-0,3148			
			(-0,76)			
INF				0,3706		
				(1,01)		
GDS					1,0770	
					(1,19)	

	FDI						-0,1376 (-0,08)
1)	AR(	-0,48 [0,632]	-0,35 [0,729]	-0,48 [0,633]	-0,46 [0,644]	-0,24 [0,813]	-0,49 [0,623]
2)	AR(	-0,79 [0,428]	-0,62 [0,537]	-0,74 [0,459]	-0,76 [0,446]	-0,91 [0,364]	-0,82 [0,414]
an test	Sarg	134,37 [0,155]	134,72 [0,139]	134,55 [0,141]	134,49 [0,142]	134,57 [0,141]	134,67 [0,14]

t-statistics are in parenthesis for all coefficients

*, ** and *** indicate significance level at 10, 5 and 1 percent respectively

p values are in brackets for Sarganover identification, AR(1) and AR(2) auto correlationtests.

3. CONCLUSION

This paper examines empirically macroeconomic determinants of stock market development for emerging market Asia, using annual data for the period 1991-2012. A dynamic panel data estimation is used that covers selected 7 Asian countries. The Dynamic Panel Data estimation technique was used to assess the relation between stock market development and the macro economic variables. The results show that lagged value of market capitalization ratio has a negative effect on current stock market development. The other statistically and financially significant variable is domestic credit provided by the banking sector to the private sector relative to GDP. The sign of this variable is found positive as expected while it's square is found also statistically significance and it's sign is negative as expected. This conclusion suggests that the domestic credit provided by the banking sector are crucial for stock market performance. Another variable used in this analysis is value traded as a percentage of GDP which is proxy for stock market liquidity. The result showed that the value traded as a percentage of GDP has a positive impact on stock market development level. Finally growth in GDP per capita as proxy for income level is found to have the highest effect on stock market development level. This result indicate that income level is found to be the most effective determinant of stock market development in selected Asian countries.

REFERENCES

Ahn, S.C., & Schmidt, P. (1995). Efficient estimation of models for dynamic panel data. Journal of Econometrics, 68, 5–27.

Anderson, T. W., & Hsiao, C. (1981). Estimation of dynamic models with error components. Journal of the American Statistical Association, 76, 598–606.

Apergis, N., & Eleftheriou, S. (2002). Interest rates, inflation, and stock prices: the case of Athens stock exchange. Journal of Policy Modeling, 24, 231-236.

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. Review of Economic Studies, 58, 277–297.

Bencivenga, V. R., & Smith, B. D. (1991). Financial intermediation and endogenous growth. Review of Economic Studies, 58(2), 195–209.

Breitung, J. (2000). The local power of some unit root tests for panel data. In Advances in Econometrics, Volume 15:Nonstationary Panels, Panel Cointegration, and Dynamic Panels, ed. B. H. Baltagi, 161-178. Amsterdam: JAI Press.

Calderon-Rossell, R. J. (1990). "The structure and evolution of world stock markets. In S. Ghon Rhee, & Rosita P. Chang (Eds.), Pacific basin capital markets research proceeding of the first annual Pacific Basin Finance Conference, Taipei, China, 13-15 March 1989, (Amsterdam: North Holland).

Choi, I. (2001). Unit root tests for panel data. Journal of International Money and Finance, 20, 249-272.

Chopin, M., &Zhong, M. (2001). Stock returns, inflation and the post-war macro economy: the long- and shor trun dynamics. Advances in Investment Analysis and Portfolio Management, 8, 1-18

Demirguc-Kunt, A., & Levine, R. (1996). Stock markets, corporate finance and economic growth: an overview. The World Bank Economic Review, 10(2), 223-239.

El-Wassal, A. K. (2005). Understanding the growth in emerging stock markets. Journal of Emerging Market Finance, 4(3), 227-261.

Garcia, V. F., & Liu, L. (1999). Macroeconomic determinants of stock market development (May) Journal of Applied Economics, 11(1), 29-59.

Hansen, L.P. (1982). Large Sample Properties of Generalized Method of Moment Estimators. Econometrica, 50, 1029-1054.

Harris, R. D. F., & E. Tzavalis. 1999. Inference for unit roots in dynamic panels where the time dimension is fixed. Journal of Econometrics 91: 201-226.

Hadri, K. (2000). Testing for Stationarity in Heterogeneous Panel Data. Econometric Journal, 3, 148–161.

Hlouskova, J.,& M. Wagner (2006). The Performance of Panel Unit Root and Stationarity Tests: Results from a Large Scale Simulation Study. Econometric Reviews, 25, 85-116.

Im, K. S., M. H. Pesaran, & Y. Shin. 2003. Testing for unit roots in heterogeneous panels. Journal of Econometrics, 115, 53-74.

King, G. R., & Levine, R. (1993). Finance and growth: Schumpeter might be right. The Quarterly Journal of Economics, 108(3), 717-737.

La Porta, R., Lopez-de-Silanes, F., &Shleifer, A. (1997). Legal determinants of external finance. Journal of Finance, 52, 113-150.

Larrain, B. (2010). Stock market development and cross-country differences in relative prices. Review of Economics & Statistics, 92(4), 784-797.

Levin A., &Lin CF. (1993a). Unit Root Tests in Panel Data: Asymptotic and Finite Sample Properties. Working Paper, University of California at San Diego.

Levin A., &Lin CF. (1993b). Unit Root Tests in Panel Data; New Results. Working Paper 93-56, University of California at San Diego.

Levin, A., C.-F. Lin, & C.-S. J. Chu. 2002. Unit root tests in panel data: Asymptotic and finite-sample properties. Journal of Econometrics, 108, 1-24.

Maddala, G.S. &S.Wu, 1999, A comparative study of unit root tests with panel data and a new simple test. Oxford Bulletin of Economics and Statistics, 61, 631–652.

McCarthy, J., Najand, M., & Seifert, B. (1990). Empirical tests of the proxy hypothesis. The Financial Review, 35, 59-78.

Mishkin, F. (2001). Financial policies and the prevention of financial crises in emerging market countries. NBER Working Paper, No. 8087. Cambridge: NBER.

Mohtadi, H., & Agarwal, S. (2004). Stock market development and economic growth: Evidence from developing countries. New York: Oxford University Press.

Naceur, S. B., Ghazouani, S., &Omran, M. (2007). The determinants of stock market development in the Middle-Eastern and North African Region. Managerial Finance, 33(7), 477–489.

Nickell, S. (1981). Biases in dynamic models with fixed effects. Econometrica, 49, 1417–1426.

Pagano, M. (1993). Financial markets and growth: an overview. European Economic Review, 37, 613-622.

Pradhan, R. P., Arvin, M. B., Samadhan, B., &Tanejha, S. (2013). The impact of stock market development on inflation and economic growth of 16 Asian countries:

A panel var approach. Applied Econometrics and International Development, 13(1), 203–220.

Sahu, N. C., &Dhiman, D. H. (2011). Correlation and causality between stock market and macro economic variables in India: An empirical study. International Proceedings of Economics Development and Research,3, 281–284.

Sevestre, P., &Trognon, A. (1985). A note on autoregressive error component models. Journal of Econometrics, 28, 231–245.

Wongbangpo, P., & Sharma, S. C. (2002). Stock market and macroeconomic fundamental dynamic interactions: ASEAN-5 countries. Journal of Asian Economics, 13, 27-51.

Van Agtmael, A. W., & Errunza, V. R. (1982). Foreign portfolio investment in emerging securities markets. Columbia Journal of World Business, Summer82, 17(2), 58-63.

Yartey, C. A. (2007). Macroeconomic and institutional determinants of stock market development in Africa. In John Okpara (Ed.), Management and economic development in sub-Saharan Africa: Theoretical and applied perspectives. London: Adonis and Abbey Publishers.

CORPORATE GOVERNANCE IN TURKEY: LEGAL ENVIRONMENT

Seval Kardeş SELİMOĞLU*

ABSTRACT

Today's global financial market place sets the scene for outstanding and swift developments. In light of such developments and latest novelties, the competitive power of the markets is more important than ever. The global trends need to be clearly identified to ensure efficient functioning of capital markets for the purpose of the country's development. It is widely accepted that bad management practices have triggered the financial crises and company scandals that broke out in the recent years. This has clarified the importance of the concept of sound corporate management practices. The importance of the issue has been growing at an international level and the quality of corporate governance practices, which is deemed to be as important as financial performance in investment decisions, has become a subject of more serious consideration. Many studies indicate that international investors now better realize the significance of corporate governance practices on the financial performance of companies than ever before and while adopting investment decisions, international investors believe that this issue bears more importance for countries that are in need of reforms, and that they are more ready to pay higher premiums for companies having sound corporate governance practices. On the other hand , corporate governance practices bring out advantages for companies and countries. With respect to companies, high quality status of corporate governance means low capital cost, increase in financial capabilities and liquidity, ability of overcoming crises more easily and prevention of the exclusion of soundly managed companies from the capital markets. In another word, with respect to the country, sound corporate governance means improvement of a country's image, prevention of outflow of domestic funds, increase in foreign capital investments, increase in the competitive power of the economy and capital markets, overcoming crises with less damage, more efficient allocation of resources attainment and maintenance of a higher level of prosperity. Efforts to establish framework for corporate governance around the globe continue rapidly. The World Bank, Organization of Economic Cooperation and Development (OECD) and the Global Corporate Governance Forum (GCGF), which has been established in cooperation with the representatives of these two organizations and private sector, lead the way in handling the issue. Many countries, including those with developed economies, have reviewed their own legislation or are in the process of reviewing current legislation. Many countries have been re-structuring and publishing their current legislation within the framework of the best

* Prof. Dr. Seval Kardeş- SELİMOĞLU, Anadolu University, Business Administration Faculty, Eskişehir/TURKEY, Phone: +90 222 3350580 ext 3348, e-mail: sselimoglu@anadolu.edu.tr

corporate governance Principles. In parallel with, Turkish CMB has established the corporate governance Principles. These Principles have been established as a product of contributions of all high-level bodies. This paper aims in general with the concept of corporate governance and underlines importance of corporate governance in terms of Turkish companies.

The legal and institutional framework for corporate governance in Turkey has improved, especially in the past few years, in parallel with the structural reforms carried out in cooperation with the IMF. The improvement initially began with the passage of the Capital Markets Law (CML) and establishment of the Capital Markets Board (CMB) in 1981, and more recently with the CMB's issuance of legally binding Communiqués on accounting and auditing standards and its issuance of the Corporate Governance Principles, which should be adopted on a comply or explain basis. New CMB requirements also have been established to strengthen the oversight function of company boards. Amendments to the new Turkish trade law are addressed several crucial weaknesses in Turkey's corporate governance framework. In this context, it includes various suggestions regarding existing legal environment situation in Turkey.

Keywords: *Corporate Governance, Turkey, Legal legislations*

Jel Classification: *G3*

1. INTRODUCTION

The reason behind the emergence of corporate governance is primarily the financial crises taking place in 1990s and company scandals in particular. Corporate governance is a compulsory topic as a solution to emerging financial crises and company scandals rather than being an automatic realization of the principles upheld by the science of modern governance. It first came up with company scandals and still maintains its place and significance as a topical issue. The concept of corporate governance is closely related with the legal structure of companies. The phenomenon of corporate governance first emerged within the framework of problems unique to “multi partnered (public) joint stock companies” and then started to be examined and implemented in non-public companies and public institutions.

Good governance of big and public joint stock companies that are the basic elements of globalization and that steer the economy is very important for companies and for the country. Therefore, the principles of participation, transparency, accountability, legitimacy, equitable treatment and responsibility are the essence of good governance (Tuzcu, 2004:15).

Today, corporate governance underlies the good governance in business life. This gives extra importance to general director, or in other words, to top manager, providing a contribution to leaders to play their roles more effectively.

Many problems in the business life arise from the lack of good governance and lack of complete or proper implementation of the principles of corporate governance. Implementation of corporate governance principles contributes first to companies and company partners, then employees, suppliers, customers, state and therefore the whole society. The biggest problem of businesses is related to governance not to resources. The only way to overcome this problem is institutionalization and complete fulfillment of corporate governance principles.

2. CONCEPTUAL DIMENSION AND PRINCIPLES OF CORPORATE GOVERNANCE

The concept of corporate governance is, with the narrowest meaning, the body of rules that regulate the relations between the company management and the shareholders and beneficiaries.

The widely recognized broad definition of corporate governance is made by the Organization for Economic Cooperation and Development (OECD) as follows:

“Corporate governance can be defined as a system steering and controlling companies. It involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Corporate governance is only part of the larger economic context in which firms operate that includes macroeconomic policies and the degree of competition in product and factor markets. The corporate governance framework also depends on the legal, regulatory, and institutional factors.” (OECD, 2004).

<u>Corporate governance includes the proper and correct functioning of the following elements (OECD, 2004, 2):</u>

1) Observance of ethical companies by companies;

2) Operation with respect to work ethics;

3) Accountability of company managers and Board of Management against stakeholders for their operations;

4) Ensuring transparency

5) Obligation to act responsibly;

6) Equal participation of shareholders in decision making mechanisms;

7) Giving importance to participating democracy in companies;

8) Equal approach of managers to shareholders;

9) Ensuring rule of law in relations with shareholders and beneficiaries during company operations

10) Effective management of companies

<u>The six Chapters of the OECD Principles address the following aspects ofcorporate governance:</u>

1. Chapter I: ensuring the basis for effective corporate governance;
2. Chapter II: the rights of shareholders and key ownership functions;
3. Chapter III: the equitable treatment of shareholders;
4. Chapter IV: the role of stakeholders;
5. Chapter V: disclosure and transparency; and
6. Chapter VI: the responsibilities of the board.

The IFC's definition is: "Corporate governance refers to the structures and processes for the direction and control of companies."

<u>Corporate governance covers:</u>

1. Financial Stakeholders (Shareholders);
2. Boards of Directors (Checks and Balances);
3. Control Environment (Accounting, Controls, Internal and External Audit); and
4. Transparency and Disclosure.

<u>At the same time, it does not include, although it may reinforce, the following:</u>

1. Corporate Social Responsibility / Corporate Citizenship;
2. Socially Responsible Investing;
3. Other Elements of Sustainability;
4. Political Governance;
5. Business Ethics;

6. Anti-Corruption / Anti-Money Laundering.

Corporate governance is defined by the World Bank as "all kinds of laws, regulations, code and practices allowing an organization to attract human and financial capital, to function effectively and thus to respect the values of the society which it belongs to and to create values to partners in the long term (Wold Bank, 1999, p.8).

Corporate governance states that companies have two main objectives namely to increase economic performance and to adapt by minimizing the conflict of interests among the interest groups. The first objective is to maximize in line the company objectives the performance of companies which substantially are responsible for the economic welfare and growth in society by establishing and supervising a work environment motivating the managers and entrepreneurs in order to have a long term maximization of revenue and productivity of investments and operation effectiveness of the company (Gürbüz ve Ergincan, 2004,8).

The advantages of companies to gain from the corporate governance practice can be listed as follows: (SPK, 2004, p.2 and Aktan, 2006 p.18-19)

- It allows the company to find easier funding from finance markets; the better a company is managed the lower is the capital cost.

- Thus it allows companies to benefit from capital markets.

- It increases funding possibilities and provides cash entrance to the company which is in shortage of liquidity.

- It allows easier overcome of financial crises.

- It increases the value of assets by boosting the performance of the company. The better a company is managed the more the revenue of the company assets will be. Therefore, corporate governance increases the value of the company.

- It increases transparency and accountability responsibility of company management therefore reducing corruptions.

- It prevents abuse of power and authority in company and removes arbitrary management.

- It contributes to the increase of relations and dialogue between the company and beneficiaries as it will serve to the benefits of all beneficiaries.

- It provides long term stability in company operations.

- It increases the competitive power of the company and provides increase in profitability.

The basic point in corporate governance is to separate ownership and management.

OECD based corporate management is based on four principles:

1. EQUITABLE TREATMENT

2. TRANSPARENCY

3. RESPONSIBILITY

4. ACCOUNTABILITY

FAIRNESS

OECD principles for corporate governance deals extensively with the principle of equitable treatment under two clauses:

“Clause 1: framework should protect and facilitate the exercise of shareholders’ rights.” This clause recognizes shareholders as the holder of ownership.

“Clause 2: The corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights.” According to this clause, legal framework should include laws that protect minority shareholders from wrong use of company assets or against the transactions of majority shareholders, managers or members of the board (Deloitte, 2006).

RESPONSIBILITY

The principle of responsibility refers to the responsibility of the company before all shareholders.

“Clause 3: The corporate governance framework should recognise the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises.”

This article refers to the operation of companies in conformance to laws and regulations reflecting social values while creating value for shareholders. However, the corporate governance principles emphasis the fact the laws in general create minimum standards for responsibility while the real responsible company behaviour can be performed by exceeding legal requirements.

TRANSPARENCY

“Clause 4: The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company.”

The clause on transparency requires the company to share correct, open and comparable information. Investors will only have chance to effectively steer their sources only if they have satisfactorily quality information. Therefore, the good corporate governance requires announcement to investors about past performance of the company and future goals and important possible risks. The principle of transparency encourages regulations on the development of opportunities to provide feedback not only after operation but also during and before the execution of activity.

ACCOUNTABILITY

“Clause 5: The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board’s accountability to the company and the shareholders.”

Contrary the principle of transparency which involves provision of feedback before, during and after operation, the principle of accountability covers post-operation period. This principle requires the board of management to monitor top management performance independently and to ensure accountability of top managers towards shareholders. An effective division of labor between the board of management and top management is an indispensable condition of the principle of accountability in corporate governance. Therefore, regulations on the structure and functioning of boards of management take an important part in the reports and codes related to corporate governance.

3. HISTORICAL ASPECT OF CORPORATE GOVERNANCE

The concept of corporate governance first emerged in the United States of America in 1930s. The economic crises in 1930s, petroleum crises and corruptions in 1970s and bankruptcies in the end of 1980s in England laid the ground to start works for corporate governance throughout the world.

The globally recognized works on corporate governance are chromatically listed as follows:

- Publication of Cadbury Committee Report in 1991
- Publication of Greenbury Committee Report in 1995
- Publication of Hampel Report in 1998
- Publication of OECD Corporate Governance Principles in 1999
- Issuance of Sarbanes-Oxley Law in 2002
- Development of OECD Corporate Governance Principles in 2004

Corporate governance works started in 1970s in developed countries and also appeared in the beginning of the 21st centuries with the important works listed below:

- Translation of International Financial Reporting Standards (IFRS) to Turkish and publication as Turkey Accountancy Standards in 2006
- Separation of independent audit and consultancy activities
- Rotation of Audit Company
- Announcement of special cases to public
- Establishment of Public Disclosure Platform
- Accumulative vote management
- Publication of Corporate Governance Principles
- Obligation of Corporate Governance Adaptation Report
- Recommendation to companies to disclose investor relation information
- Establishment of Turkey Corporate Management Association

The interest to and interest in corporate governance in Turkey gained importance in time and Corporate Governance Principles were published in July 2003 by the Capital Market Board (SPK)

These principles consist of 4 main topics:

1st Section : Shareholders

2nd Section : Public Disclosure and Transparency

3rd Section : Beneficiaries

4th Section : Board of Management

All these developments were followed in our country too, and a study group was set up and the guide for “Corporate Governance: Code of Best Practice”. Following this work, SPK published “Capital Market Board Corporate Governance Principles” in 2003. This work was updated in 2005 and 2010. In addition, two notifications were issued in 2011 to harmonize with the new Turkish Code of Commerce.

Various works were done by the Turkey Corporate Governance Association and Istanbul Chamber of Commerce on Corporate Governance and Family Companies.

Finally, Turkish Code of Commerce (TTK) including radical changes to ensure good governance of capital companies in our country took effect in 01 July 2012.

4. LEGAL REGULATIONS ON CORPORATE GOVERNANCE

This heading will deal with and explain nationally and internationally published legal regulations on corporate governance. First legal regulations on corporate governance are found internationally as it can be seen it the historical listing.

4.1 International Legal Aspect

As it can be seen in Table 1, there are countries that have different practices of corporate governance. These differences are collected under two headings: Anglo-Saxon system and Continental European System.

Anglo-Saxon System is a system shaped in America and England where capital markets were developed. This system explains corporate governance as rules and bodies determining the control and will of the company and explaining the relations between the prior participants of the company (Tuzcu,2004, 36).

Continental Europe System was mainly formed in Europe, Latin America and Japan which are dominated by giant investors and banks. In this system, corporate governance is expressed as an understanding aiming at the protection of the rights of all interest groups including shareholders and managers and at the regulations of relations between the said interest groups within this framework in addition to traditional approach which aims at gaining profits in the management and operations of companies and distributing them to shareholders (Doğan,2007, p.87).

Table 1: Countries Implementing Corporate Governance System

ANGLO-SAXON SYSTEM	USA, England, Canada, Australia
CONTINENTAL EUROPEAN SYSTEM	Germany, Netherlands, Sweden, Switzerland, Austria, Denmark, Norway, Finland, France, Spain, Italy, Belgium, Japan, Latin Countries

In some countries, the system is carried out by committees appointed by government bodies including popular names of the business world, investor representatives, academicians and professional organization representatives. In other countries, stock markets or regulatory authorities were responsible for the system.

Observance of principles and codes of corporate governance is optionally free in some countries while it is subject to the principle of apply and explain in some countries. In other words, companies are free to observe these principles but have to explain their reason if they don’t. In some countries, it is obligatory to formulate the codes and principles of corporate governance as laws.

The concept of corporate governance in present meaning was dealt with as a principle in the 1992 report which was called as the “Cadbury Report”. Following the publication of this report, discussions and works on corporate governance got accelerated. The number of corporate governance regulations is 45 in the European Union and around 100 throughout the world. Millstein Report drafted by the Organization for Economic Cooperation and Development (OECD) and following Corporate Governance Principles of OECD were the most important developments in this field.

As there are too many works in the field of corporate governance and too many guidance, laws, rules and regulations drafted by various countries, an explanation was given below for Cadbury Committee Report, Grenbury Committee Report, Hampel Committee Report, Sarbanes-Oxley Committee Report and OECD Corporate Governance Principle

OECD Corporate Governance Principles

According to the article 1 of the Convention signed in Paris in 14 December 1960 and took effect in 30 September 1961, OECD supports policies in line with the following objectives (OECD, 2005, p.2)

- To achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;

- To contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and

- To contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

Draft texts on corporate governance principles reached broad audience through various communication channels including the internet and their comments were received. OECD principles were adopted in the OECD Council meeting in May 1999 and published. In 2002, OECD governments were invited to review the principles taking the developments in the corporate sector into consideration and the amendment text was drafted after consulting with both OECD member governments and non-OECD governments as well as with professional organizations, commercial unions, non-governmental organizations and international standard setting bodies. Based on the view to re-build the public trust against companies and capital markets, in April 2004, 20 OECD countries approved the amended text of OECD Principles which included new recommendations on proper practice of corporate behaviour.

OECD Corporate Governance Principles are a reference to facilitate operations and processes for member countries and not binding. The "comply or explain" principle is valid.

OECD Corporate Governance Principles are divided into five main topics:

- The Rights of Shareholders and Key Ownership Functions
- The Equitable Treatment of Shareholders
- The Role of Stakeholders in Corporate Governance
- Disclosure and Transparency
- The Responsibilities of the Board

The recommendations of OECD for the establishment of the ground for an effective corporate governance framework is as follows (OECD, 2005, p.17):

A) The corporate governance framework should be developed with a view to its impact on overall economic performance, market integrity and the incentives it creates for market participants and the promotion of transparent and efficient markets.

B) The legal and regulatory requirements that affect corporate governance practices in a jurisdiction should be consistent with the rule of law, transparent and enforceable.

C) The division of responsibilities among different authorities in a jurisdiction should be clearly articulated and ensure that the public interest is served.

D) Supervisory, regulatory and enforcement authorities should have the authority, integrity and resources to fulfill their duties in a professional and objective manner. Moreover, their rulings should be timely, transparent and fully explained.

4.2 Legal Aspect In Turkey

Some public and non-governmental organizations in our country like SPK, IMKB, TUSIAD, CGFT, YASED and KYD work on the subject matter. It is intended to make amendments in our legislation to force and encourage compliance to the principles of corporate governance.

In Turkey, Corporate Governance Study Group was set up under the roof of TUSIAD following the international developments in this field and it drafted the "Corporate Governance Best Practice Code" in 2002. The members of the Study Group laid in 2003 the grounds of Turkey Corporate Governance Association and intended to unite relevant circles to lead in this field.

In the field of corporate governance, OECD Corporate Governance Principles were translated to Turkish in June 2000 by TUSIAD and the public attention was drawn with the text of rules published in December 2002 which was called "Best Practice Code of Corporate Governance: Structure and Functioning of the Board of Management".

SPK basically studied under the conditions of our country the OECD corporate governance principles published in 1999 and the general principles adopted and recommended in the world and published the recommendatory Corporate Governance principles in 2003. Looking from the viewpoint of capital markets, SPK adapted OECD corporate governance principles to the conditions of our country and published in 2003 some recommendatory principles under the topic "Good Corporate Governance" in order to mainstream the corporate governance principles among public joint stock companies (Kayacan,2006, 89-90).

Regulations on corporate governance are included in both Turkish Code of Commerce and Regulations of the Capital Market Board. However, corporate governance was dealt with in one clause in the Turkish Code of Commerce, while the regulations of Capital Market Board includes a comprehensive notification.

Corporate governance is regulated in the Turkish Code of Commerce in one clause, i.e. Clause 1529. According to the concerned regulation, Capital Market Board is authorized to determine the corporate governance principles in public joint stock companies, the essence of the remarks by the board on corporate governance and the rating rules and results of companies with respect to corporate governance (clause 1529/I). In addition, the regulations of other public organizations related to corporate governance principles which are only valid for their own areas can only be carried out if they are related to detail and approved by the Capital Marked Board (m 1529/II).

The regulations of the Turkish Code of Commerce on corporate governance can be summarized as follows:

a) Corporate governance regulations of the Turkish Code of Commerce only covers public joint stock companies.

b) Capital Market Board was chosen as the authorized body with respect to corporate governance principles. This would avoid possible confusion on authority.

c) Capital Market Board is authorized to determine the following matters in public joint stock companies:

- Corporate governance principles
- Essence of the remarks of the board of management on corporate governance,
- Rating rules and results of companies with respect to corporate governance,

d) Other public organizations are also authorized to determine corporate governance principles provided that they are related to their own field.

For this purpose:

- Approval of the Capital Market Board must be obtained

- Principles set by the board should be related to details.

Corporate governance regulations were included in the scope of the Capital Market Law by the Decree no 654 while in the past covered as “Board Principle Decision” which was not binding. Following the inclusion of the corporate governance in the Capital Market Law, the notifications Serial:IV No:54 and Serial:IV No:56 were issued respectively. The said developments were finally followed by the Law no 6362 on Capital Market which took effect. By the Decree no 654, an addition was made to the Article 22.1.z of the Capital Market law no 2499. Law no 6102 provided that corporate governance principles of public joint stock companies, essence of the remarks of the board on this matter and rating rules and results of companies for this matter can be determined by the Capital Market Board; while the adoption of Article 22.1.z of the Capital Market law no 2499 was a step further authorizing the Capital Market Board to determine and announce the corporate governance principles in the capital market and to obligate the public joint stock companies in its specified groups to comply partially or fully to the corporate governance principles. Thus, the corporate governance principles are no more a board principle decision and entered to the annex of notification.

The said notification determines the corporate governance principles which will be taken as basis by the public joint stock companies. No matter how the relevant regulation includes the phrase “Public Joint Stock Companies”, the regulations of the notification are intended for stock exchange companies and the notification doesn’t include a provision about the obligation of comply or explain for the public joint stock companies other than the stock exchange companies with respect to concerned principles. The notification provided an obligation to comply with certain principles selected to public joint stock companies included in the IMKB 30 index among the companies that are traded in the İstanbul Securities Exchange (BIST) but not operating in the banking sector. “Comply or explain” principle was adopted for other companies.

5. CONCLUSION

In an environment of largely family/owner-controlled companies with low free float, an absence of independent domestic institutional investors, and a judicial system not well prepared to handle corporate law cases, the supervision and enforcement of corporate governance standards falls largely upon the securities regulator, the Capital Markets Board of Turkey (CMB).

While plans for an Istanbul International Financial Centre foresee the creation of specialized courts, up to now private supervision and enforcement has only played a minor role in Turkey. Due to the reliance on public supervision and enforcement, the governance and effectiveness of the relevant public authorities, notably the CMB, is of high importance. The CMB has been strengthened over the years, and is now regarded as one of the most professional and competent authorities in Turkey.

The CMB believes that its future independence will not be affected by the recent replacement of its board (as part of an amendment to the new Capital Market Law agreed by the parliament). The CMB has paid increasing attention to the supervision and enforcement of related-party transactions (RPTs) and the appointment of independent directors, the two most common problem areas in the Turkish context. The powers of the CMB were significantly strengthened in the context of the recent modernization of the Turkish Company Code (TCC) and the Capital Markets Law (CML).

The new framework incorporates distinctive features, such as

a. The CMB's involvement in the appointment of independent directors,

b. The introduction of the company group concept and independent directors' duties in the RPT regulation; and

c. Mandatory electronic general shareholder meetings.

These are designed to address the specific features of the Turkish capital markets environment. However, since these reforms are very recent, it will be some time before the overall impact of the reform package can be assessed.

REFERENCES

AKSOY M. A. ,Türk Kurumsal Yönetim Düzenlemeleri Kapsamında Anonim Şirket Yönetim Kurulu http://webftp.gazi.edu.tr/hukuk/dergi/17_1-2_3.pdf (2.08.2014)

AKTAN, C. C. (2006). "Kurumsal Yönetim", Kurumsal Şirket Yönetimi, Ed: C. C. AKTAN, Ankara: SPK Yayını, Yayın No: 196.

AYSAN, M. A. (2007). Kurumsal Yönetim (Corporate Governance) ve Risk, İstanbul: Elif Ofset Matbaacılık.

Deloitte (2007), Anonim ortaklıklarda Yönetim Organı nın Yapılanması ve İşlevleri, Mart 2007, http://www.deloitte.com

Deloitte (2007), Kurumsal Yönetimin Anonim Ortaklıklarda Yansımalar, Mart 2007, http://www.deloitte.com

Deloitte (2007), Nedir Bu Kurumsal Yönetim? Aralık 2006, http://www.deloitte.com

DOGAN, M. (2007). Kurumsal Yönetim, Ankara: Siyasal Kitabevi

Gürbüz, A. O., ve Ergincan, Y. (2004). Kurumsal Yönetim: Türkiye'deki Durumu ve Geliştirilmesine Yönelik Öneriler, İstanbul: Literatür Yayıncılık.

DOGU, Murat, Kurumsal Yönetim İlkelerinin Belirlenmesine ve Uygulanmasına İlişkin Tebliğ (SERİ: IV No: 57 ile Değişik Seri: IV, NO:56), İstanbul 2012, (http://www.tkyd.org/files/kurumsal_yonetim_tebligi_sunumu_dr.%20murat_dogu.pdf , erişim, 22 Aralık 2012).

GÜRBÜZ, A. Osman ve ERGİNCAN, Yakup, Kurumsal Yönetim, Türkiye'deki Durumu ve Geliştirilmesine Yönelik Öneriler, İstanbul 2004.

GÜÇLÜ Hakan, Kurumsal Yönetim İlkelerinin Kısa Tarihi, http://www.hakanguclu.com/kurumsal-yonetim/kurumsal-yonetim-ilkelerinin-kisa-tarihi/ (12.07.2014)

KAYACAN, M. (2006). "Küresel Mali Piyasalarda Kurumsal Yönetim Kavramının Gelişimi ve Ülkemize Yansımaları", Kurumsal şirket Yönetimi, Ed: C. Can Aktan, Ankara: SPK Yayını, Yayın No: 196.

KULA, Veysel, Kurumsal yönetim: hissedarların korunması uygulamaları ve Türkiye Örneği, İstanbul 2006.

ÖZALP, İ. ve Tonus H.Z. (2004), Paydaş Teorisi, Afyon: Ulusal Yönetim Organizasyon Kongresi Bildiri Kitabı.

TUZCU, A. (2004). Halka Açık şirketlerde Kurumsal Yönetim Anlayışı: İMKB-100 Örneği, Yayınlanmış Doktora Tezi, Ankara Üniversitesi S.B.F.İşletme Bölümü.

http://www.icdenetimmerkezi.com/bilgibankasi_det.php?p=1831 (10.7.2014)

Capital Market Board of Turkey (2005) Corporate Governance Principles of Turkey, available on-line at www.cmb.gov.tr/regulations/files/corporate_governance.pdf, (15.7.2014)

Capital Market Board of Turkey (2007) Communiqué on Principles Regarding Ratings and Agencies, Serial: VIII, No: 51, available on-line at http://www.spk.gov.tr/apps/teblig/displayteblig.aspx?id=313&ct=f&action=displayfile&ext=.pdf (15.7.2014)

Kurumsal Yönetim İlkeleri Değişiklik Taslağı, Ekleme Tarihi: 04.11.2012, www.spk.gov.tr/printerfriendly.aspx?tyoe=duyuru&aid=20111104&su

bid=s... , erişim 22.7.2014).

Kurumsal Yönetim İlkelerinin Belirlenmesine ve Uygulanmasına İlişkin Tebliğde Değişiklik Yapılmasına Dair Tebliğ (Seri:IV, No:57) Hakkında Basın Duyurusu, http://www.tuyid.org/files/duyurular/Teblig_Seri_IV_57_Basin_Duyurusu. pdf, erişim, 22.7.2014).

Kurumsal Yönetim İlkelerinin Uygulanmasına Yönelik Tereddüt Oluşturan Hususlar Hakkında Basın Duyurusu, : (http://www.spk.gov.tr/duyurugoster.aspx?aid=20120211&subid=1&ct=c, erişim 22 Aralık 2012).

Seri:IV No:56 sayılı Kurumsal Yönetim İlkelerinin Belirlenmesine ve Uygulanmasına İlişkin Tebliğ Hakkında Basın Duyurusu, (http://www.spk.gov.tr/duyurugoster.aspx?aid=20111230&subid=0&ct=c, erişim22.7.2014).

http://www.yenittk.com/tr/kurumsal-yonetim-kurumsallasma-kurumsal-yonetim-genel-bilgiler-dunyada-ve-turkiyede-kurumsal-yonetimin-gelisimi.html

http://earsiv.kmu.edu.tr:8080/xmlui/bitstream/handle/11492/968/Kurumsal%20Y%C3%B6netim%20Anlay%C4%B1%C5%9F%C4%B1%20Temelinde%20Kamuyu%20Ayd%C4%B1nlatma%20ve%20%C5%9Eeffaş%C4%B1k%20%C4%B0lkelerinin%20Muhasebe%20Bilgi%20Sistemine%20Yans%C4%B1malar%C4%B1.pdf?sequence=1&isAllowed=y (22.7.2014)

http://www.cgscenter.org/doc/DOGRUVEIYIYONETIM.pdf (22.7.2014)

IFF Equity Advisory Group, "Corporate Governance in Turkey- An Investor Perspective", Nisan 2005, s.1-2

Öztürk M. B. ve Demirgüneş K., Kurumsal Yönetim Bakış Açısıyla Entelektüel Sermaye

http://www.malidestek.marka.org.tr/files/articles/24..ENT..SERM..5_2011127185554585.pdf (25.7.2014

World Bank (1999), Ukrainian Corporate Governance Manual www.tsrsb.org.tr

http://www.spk.gov.tr/displayfile.aspx?action=displayfile&pageid=66&fn=66.pdf&submenuheader=null (15.07.2014)

http://www.denetimnet.net/UserFiles/Documents/Nedir%20bu%20kurumsal%20yonetim.pdf (12.08.2014)

11.10.2011 Tarih ve 28081 Sayılı 2. Mükerrer Resmi Gazetede yayımlanan 654 Sayılı Gümrük ve Ticaret Bakanlığının Teşkilat ve Görevleri Hakkında Kanun Hükmünde Kararname ile Bazı Kanunlarda Değişiklik Yapılmasına Dair Kanun Hükmünde Kararname

THE AMENDMENTS PLANNED TO BE MADE IN THE CONCEPTUAL FRAMEWORK

Yıldız Özerhan*
Burcu Nazlıoğlu**

ABSTRACT

Conceptual Framework organizes the basic concepts that are taken into consideration at presentation and disclosure of financial statements. Conceptual framework is not an accounting standard, but has an important effect on improvement of new standards and revising existing standards. Conceptual Framework was issued by International Accounting Standards Board (IASB) in 1989 and for a long time no amendment was done upon it.

International Accounting Standards Board (IASB), started a convergence project with American Financial Accounting Standards Board (FASB), and signed an agreement with this aim in 2002. The aim of the project is to converge the standards that are issued by the mentioned Boards one another. In 2004, IASB and FASB decided to overlook and revise the Conceptual Framework. At the first stage of the project, the Conceptual Framework for Financial Reporting was issued in 2010 with the amendments "The Objective of General Purpose Financial Reporting" and "Qualitative Characteristics of Useful Financial Information" (first and third parts).

The second stage of the project could not be completed and the mentioned project was suspended in 2010. On the other hand, International Accounting Standards Board, in accordance with the demands of related sections, in order to conclude the project regarding Conceptual Framework, put on the agenda again in 2012, but decided to announce two important amendment to related bodies about the previous project. These amendments are;

The new project is not anymore a project conducted with FASB, it is a project conducted by only IASB.

The objective of the new project is to clarify the subjects that are not handled on the Conceptual Framework, or to explicate the subjects that are thought to be missing.

IASB issued the discussion paper regarding the Conceptual Framework in 2013 and cited the related sections to make comments until 14 January 2014. After receiving the comments, it is aimed to issue the Exposure Draft within 2014. The subjects handled in the discussion paper are as follows:

Elements of financial statements (Revision of definitions of assets and liabilities, definition of income and expense)

Recognition and derecognition of asset and liabilities

Definition of equity and distinction between liabilities and equity instruments

Measurement

Presentations and disclosure

* Professor, Gazi University, Ankara-Turkey, yildizozerhan@gmail.com, +90 532 5518220
** Research Assistant, Gazi University, Ankara-Turkey, bnazlioglu@gmail.com

Presentation in the statement of comprehensive income – profit or loss and other comprehensive income

Other issues

Within this study, especially the amendments in the definitions of financial statement elements and sections related to measurement will be annotated by handling in detail.

Keywords: *Conceptual Framework, IFRS, IAS*

Jel Classification: *M480*

1. INTRODUCTION

First and third parts of the conceptual framework which was issued in 1989, were changed in 2010 within the concept of the convergence project that is jointly executed with FASB. The parts that are changed are the Objective of Financial Reporting and the Qualitative Characteristics of Useful Financial Information. The objective of financial reporting is defined as “providing financial information about the reporting entity that is useful to users of financial statements (existing and potential investors, lenders and other creditors) in making decisions about providing resources to the entity”. While the objective is defining, existing and potential investors and lenders as users are emphasized particularly. The Qualitative Characteristics of Useful Financial Information, on the other hand, is divided into two groups. These are fundamental qualitative characteristics of useful financial information and enhancing qualitative characteristics of useful financial information. Relevance and faithful representation are the fundamental qualitative characteristics of useful financial information. Financial information that can be used in projections and have confirming attribution, is the information which have the effect of forming the decisions of the users. Correspondingly, is the relevance information. Additionally, materiality is regarded as an attribution of relevance information. Meant by faithful representation is representing the economic events which are aimed to be released by financial information faithfully. For providing a strictly faithful representation, it must have three attributions. Accordingly, he representation must be whole, unconditional and correct. Enhancing qualitative characteristics of useful financial information are, on the other hand, classified as; comparability, verifiability, timeliness and understandability. Referring to the changed parts of the conceptual framework, it can be seen that, IASB is converging to FASB.

The second part of the Project that is jointly executed with FASB is withheld. In this situation, stakeholders of IASB inculcated IASB in the direction of fulfillment of the project, thereby with the aim of fulfilling the incomplete parts of the project, IASB issued the discussion paper in 2013. Only two of the subjects handled in the mentioned discussion paper are explicated below. These are *elements of financial statements* and *measurement* issues.

2. ELEMENTS OF FINANCIAL STATEMENTS

Financial statements give information about; an entity's financial position (The entity's resources and the claims against the entity), reported in a statement of financial position and changes in an entity's resources and claims against the entity. Information about an entity's resources, obligations and other claims against the entity, and about changes in those items, helps users of financial statements to assess how effectively the entity's management have discharged their responsibilities.

Information concerning financial position are represented in a statement of financial position (balance sheet). Elements that caused changes in financial position are reported in seperate statements. These are (DP, 2.2):

i. Income and expense, reported in statement(s) of profit or loss and other comprehensive income
ii. Changes in the entity's equity, reported in a statement of changes in equity
iii. Cash flows, reported in a statement of cash flows, and
iv. Other changes in resources and obligations, reported if necessary in the notes to the financial statements.

The elements of a statement of financial position are assets, liabilities and equity. For representing assets and liabilities in financial statements, they must meet the definition of asset and liability and must be relevant to accounting criteria. It is suggested to change the definitions of assets and liabilities at discussion paper issued by IASB. However, no change is suggested at the definiton of equity at the dissussion paper.

2.1. DEFİNİTİONS OF ASSETS AND LİABİLİTİES

IASB sustains that, the existing asset and liability definitions have been a useful tool at solution of many problems in standard-setting for long years. Notwithstanding, the IASB believes that the definitions can be improved in two ways (DP, 2.10);

- An asset is a resource (rather than the inflow of economic benefits that the resource may generate).
- A liability is an obligation (rather than the outflow of economic benefits that the obligation may generate).
- An asset must be capable of generating inflows of economic benefits. The probability of inflow of future economic benefit from assets should not be handled as inception at asset definiton. Correspondingly, at the new asset definition that is suggested in discussion paper, the future inflow of economic benefit inception part is removed.
- A liability must be capable of generating outflows of economic benefits. Those outflows need not be certain. Their probability need not reach any minimum threshold before the underlying obligation meets the definiton of a liability.

In the discussion paper, it is stated that definitions of assets and liabilites raise some problems because they depend on expected economic benefit inflow or outflow. Because the existing definitons refer to expected flows of economic benefits, some readers have sometimes confused the resource (asset) or obligation (liability) with the resulting inflow or outflow of economic benefits. With the aim of avoiding the mentioned confusion, a new economic resource definiton is stated instead of economic benefit reference. Together with this change, the parallelism between the definitions of assets and liabilities are betrayed more clearly. For instance;

- For a free-standing put option on an asset, the resource of the option holder is the contractual right to compel the option writer to buy the underlying asset, not the sale proceeds that the option holder will receive if it exercises its option.
- For a call option on an underlying asset, the resource is the contractual right to buy the underlying asset, not the underlying asset itself.
- For pharmaceutical research that is in progress, the resource is the know-how, not the economic benefits that will arise if the research is successful.
- For a lottery ticket, the resource is the right to participate in the lottery, not the cash prize.

Existing definitions of assets and liabilities refer to expected economic benefit inflow or outflow. But, definition of asset or liability should not be based on the “expected (forecast) inflow or outflow. Asset must be capable of producing economic benefit. A liability must be capable of resulting in a transfer of economic resources. Due to all the mentioned reasons, IASB suggest to change the definitions as below:

- An asset is a present economic resource controlled by the entity as a result of past events.
- A liability is a present obligation of the entity to transfer an economic resource as a result of past events.
- An economic resource is a right, or other source of value, that is capable of producing economic benefits.

	Existing Definition	**Proposed Definition**
Asset (of an entity)	a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.	a present economic resource controlled by the entity as a result of past events.
Liability (of an entity)	a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity	a present obligation of the entity to transfer an economic resource as a result of past events.

	of resources embodying economic benefits.	
Economic Resource	[no existing definition]	a right, or other source of value, that is capable of producing economic benefits.

In the existing definition, asset is denoted as an economic resource and liability is denoted as a present obligation. the proposed definition of an economic resource clarifies that it need not be certain that an economic resource will generate economic benefits, but the economic resource must be capable of producing economic benefits.

Economic resources may take various forms:

- Enforceable rights established by contract, law or similar means, such as enforceable rights arising from a financial instrument, such as an investment in a debt security or an equity investment.
- Enforceable rights over physical objects, such as property, plant and equipment or inventories.
- Enforceable intellectual property rights (for example, registered patents).
- Other sources of value if they are capable of generating economic benefits, such as customer lists, know-how, customer and supplier relationships.
- Goodwill.

The existing Conceptual Framework does not define the term ‘control’ seperately. However, the IASB has defined control in some individual Standards. The IASB proposes to build on these definitions to define the meaning of control in the context of the definition of an asset. The concept of control is used in the IASB’s Exposure Draft Revenue from Contracts with Customers (the ‘draft Revenue Standard’), Revenue Standard defines control of an asset in this context as “… the ability to direct the use of and obtain substantially all of the remaining benefits from the asset.” IFRS 10, on the other hand, defines “control” as an investor controls an investee when the investor is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

When the two definitions both taken into consideration, it can be seen that, one of it defines the power of controlling the asset, and the the other one defines the power of controlling an entity. But two definitions are absed on similar basis. This basis is, entity’s power of executing the usage of asset with the aim of providing benefit. Control notion is defined similar to the above definition in conceptual framework.

2.2. MEASUREMENT

Measurement, is the process of determining the amounts to be included in the financial statements. The term ‘measures’ refers to the amounts presented or disclosed. There are various measures on measurement of assets and liabilities. This measures are generally handled in the related standard concerning asset or liability, and very precious little part is given to measurement in existing conceptual framework. In order to overcome the mentioned lack, IASB handled the issue widely by releasing a ‘measurement’ title in the draft, and opened to discussion. Explanations concerning measurement took place at 6.6-6.35 paragraphs of Discussion Paper.

Objective of measurement is explicated by starting from the objective of financial reporting. As is known, the objective of financial reporting in existing conceptual framework is stated as ‘providing financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to entity’. Financial information that is useful in making those decisions includes information about the resources of the entity, claims claims against the entity, and how efficiently the entity’s management and governing board have discharged their responsibilities to use the entity’s resources. Useful financial information must be relevant and must faithfully represent what it purports to represent. Those two characteristics are the fundamental qualitative charcteristics of useful financial information.

Applying the objective of financial reporting to measurement, the IASB’s preliminary view is that the objective of measurement is;

- to contribute to the faithful representation of relevant information about the resources of the entity, claims against the entity and changes in resources and claims,
- and how efficiently and effectively the entity’s management and governing board have discharged their responsibilities to use the entity’s resources.

In the Discussion Paper, three measurement basis took place and opened to discussion. These are;

- Cost-based meaurement
- Measurement based on current market prices embracing fair value
- Other cash flow based measurement

As it is denoted above, the objective of measurement is to contribute to the faithful representation of relevant information about the resources of the entity, claims against the entity and changes in resources and claims. Using a particuler measurement basis in measurement of all asset and liabilities do not provide relevant financial information to financial statement users. It must be taken into consideration that, measurement affects both the statement of financial position and the statement(s) of profit or loss and other comprehensive income. Selecting measurements by considering either the statement of financial position alone or the statement(s) of profit or loss and other comprehensive income alone will not usually produce the most relevant information for users of financial statements. As few as possible, different from each other measurement basis should be used. A change should not be done as long as there is no need (DP, 6.16).

It is proposed to take into consideration the following situations at selection of tthe measurement basis:

- How assets contribute to future cash flows
- How liabilities are settled or fullfilled

IASB discussed the advantages and disadvantages of using only one measurement basis – cost-based measurement or current market prices including fair value – in measurement basis determination of asset and liabilities, in detail. Measuring all assets and liabilities on the same basis would result in all amounts in the financial statements having the same meaning, which would make totals and subtotals more understandable than those in financial statements prepared under existing requirements. For example, under existing requirements, the amount presented as total net assets has little meaning because it is an aggregation of items measured using various different measurements. Disadvantages of using a single basis is explained as follows:

- measuring all assets and liabilities on a cost basis may not provide relevant information to users of financial statements. For example, a cost-based measurement is unlikely to provide relevant information about a financial asset that is a derivative.
- for some assets and liabilities, some users of financial statements may consider information about current market prices to be less relevant than information about margins generated by past transactions. For example, some users find cost-based information about property, plant and equipment that is used in operations to be more relevant than information about its current market price. In addition, estimating current market prices when they cannot be obtained directly can be costly and subjective. Consequently, measuring all assets and liabilities at a current market price may not provide users of financial statements with sufficient benefits to justify the costs of determining (or estimating) those prices.

Because of these disadvantages, the IASB's preliminary view is that the Conceptual Framework should not recommend measuring all assets and liabilities on the same basis. Although the Board determined a single measurement basis would not be appropriate for all asset and liabilities, it also suggests to adopt as few as possible measurement basis.

As a result, the selection of measurement should be used appropriate to the following questions;

- for a particular asset should depend on how it contributes to future cash flows,
- for a particular liability should depend on how the entity will settle or fulfil that liability.

It is presented in the following table that which measurement will be taken into consideration at measurement of asset and liabilities:

Assets

How a particular asset contribute to future cash flows	Measurement
Use	Cost
Sale	Current market price
Held for collection	Cost (except for derivatives)
Held for right to use	Cost or current market price

Liabilities

How liabilities are settled or fullfilled	Measurement
To be fulfilled in accordance with regulations	Cost (except for derivatives)
To be fulfilled without regulations	Based on cash flow
By performance (service)	Cost
If will be transferred	Current market price

3. EVALUATION OF THOUGHTS/OPINIONS AND CONCLUSION

It is expected to change the definitions of asset and liabilities and to remove the expression of uncertainity about the economic benefit that takes place in the mentioned definitions is expected in conceptual framework. Comments of some important individuals and establishments concerning the change is presented in the following table (http://www.ifrs.org/Current-Projects/IASB-Projects/Conceptual-Framework/Discussion-Paper-July-2013/Pages/Comment-letters.aspx):

COMMENTATORS	**New definitions of assets, liabilities and economic resources**	**Uncertainty about economic benefits**
ACCA	"The new definitions seem clear and more consistent between assets and liabilities"	"We agree there should be no probability threshold in the definition of assets or liabilities".
The New Zealand Accounting Standards Board (NZASB)i	"We agree with the proposed definitions of an asset and a liability We consider that 'past event' is not necessary in the definitions".	"We agree with the proposal to remove 'expected' from the definitions. We consider that the removal of 'expected' from the definitions appropriately focuses the definitions on the

	"We agree that 'control' should continue to be part of the definition of an asset"	resources and resource capacity (rather than future expectations)".
Certified General Accountants Association of Canada (CGA)	Hence, in our opinion, the proposed definitions do not enhance clarity or add new insights. We also believe that the phrase "as a result of past events" in both the definitions is conceivably redundant because it is always implied and need not be explicit.	We agree with the preliminary views of the IASB on uncertainty without prejudice to our views on the definitions of asset or liability expressed in our previous response. We believe that incorporating considerations of uncertainty and probability threshold will further complicate the definitions of asset and liability without corresponding enhancement in their clarity or understanding.
AFRAC	We support the IASB's aim of establishing robust definitions of assets and liabilities, as they are the basic elements of financial accounting, and the revised definitions will be easier to understand than the ones currently in place.	We approve of the elimination of references to uncertainty in the definitions, but we think that by introducing the term 'capable' the Board has only replaced one judgemental approach with another, and one that is, arguably, even more susceptible to individual interpretation. We agree with the proposals in parts (a) and (b) of Q 3 to eliminate the term 'expected' for the inflow and outflow of economic benefits and the probability criterion for recognition
European Association of Cooperative Banks (EACB)	All in all, we agree with the definitions laid down in the Discussion Paper.	In our opinion, the elimination of the probability threshold currently included in the definitions must not lead to the need for a mandatory book entry for those transactions having a carrying amount of zero due to the low probability of the respective cash flows.

Canadian Accounting Standards Board	We support these definitions and think they represent a significant improvement that will address the primary problems experienced in practice with the existing definitions. We suggest no further changes.	We agree that removing the word “expected” from the definitions and replacing it with the notion of “capable” represents an improvement. A
Members of Japanese Companies	We generally agree with the definitions of an asset and a liability proposed in the DP.	This could expand the scope of assets and liabilities to include those items not permitted to be recognised in traditional accounting. Therefore, we believe that the recognition criteria should retain the reference to probability.
World Bank	We generally agrre with the definitions proposed by the IASB for assets and liabilities	We generally agree
Malaysian Accounting Standards Board	We agree	We agree
ICAEW	We agree with the definition of ‘asset’ proposed in the DP, and we note that it is very broad (as is the existing definition). This means that a lot of weight will be placed on the recognition criteria, as many assets that meet the definition are unlikely to be recognised in financial reporting. In the case of liabilities, we believe that the definition proposed in the DP may be too narrow. If the proposed definition is strictly interpreted, items that would generally now be regarded as liabilities would not be recognised as such.	

As it can be monitored from the table, the comments concerning the amendments at the definitions of assets and liabilities are mainly positive. Related bodies expressed positive sight towards removing the notion expected inflow and outflows that took place at the previous definition from new definiton. The comments of related bodies about measurement and other issues are also occured at the web site of IASB. Future researchers who aimed to make a more detailed study can apply to the web site for further information.

It is planning to issue the final draft by the first quarter of 2015. The incoming positive comments to the discussion paper increases the expectation that the final draft will be issued in parallel with the exposure draft.

With finalization of conceptual framework, the sections that is nor took place or very few mentioned parts will be discussed in detail. Consequently, presentation of more useful information to financial statement users will be provided.

REFERENCES

Discussion Paper, 2013/1. A Review of the Conceptual Framework for Financial Reporting, IASB.

http://www.ifrs.org/Current-Projects/IASB-Projects/Conceptual-Framework/Discussion-Paper-July-2013/Pages/Comment-letters.aspx (Access Date: 24. 06. 2014)

HOW TO INNOVATE THE CURRENT ACCOUNTING SYSTEM IN VIETNAM?

Phi Thi Diem Hong*

ABSTRACTS

Vietnam is coming as a major country in the East Asia economics with drastically integration into the global economy recently (Jenkins, 2006; SECO, 2013) wherein the reformation of economic structure has been emerged as the urgent topic including national or international levels (Vietnam Assembly's Economic Commission, 2013). Following this tendency, the changes of accounting system is also mentioned as significant point to improve economic transaction, especially in legal framework. Almost of views supported Vietnamese Accounting system should be set up following the international standards as a condition of integration international economy (DAP, 2001, Phan T. H. D. et al, 2013). The fact that, existing Vietnamese accounting standards (VASs) were issued that mainly based on international accounting standards (IASs). It is partly, however, the Vietnamese accounting system has only became the fairly consistency since 2003 after accounting law was issued. While the VASs have been applied since 2001 the IASs have been changed significant contents with appearance of IFRS (IASB, 2004; Willey, 2011). After being a member of the WTO in 2007, moreover, Vietnam government engaged to improve the accounting system following the normal regulations of international standards (Dao X. T, 2010). This means the renovation of accounting regulations that becomes as an indispensable for international integration of Vietnam. However, the question how innovate it is not easy to answer at least in this situation of Vietnam. A significant number of researchers gave the opinions that the full IASs should be applied while many others argued that VASs are changed gradually following the IASs in Vietnam (Vo V. N. et al, 2011; Lisa Nguyen et al, 2012). From the authors' view, both of these opinions are still difficult to apply while the economic market at present is still not full meaning in Vietnam. With the most of small and medium enterprises (GOS, 2013) and lacking of professional practitioners (VACPA, 2012), it is difficult to apply directly all the IASs. Otherwise the international integration becomes long stage for Vietnam. In order to expend the above considerations and collect the relevant solutions, the article focus on description the map of accounting system development as well as the inner matter of accounting practitioners in Vietnam. Using the top to bottom approach of legal system and literature review as major methodologies, the development of accounting regulations is described detail as well as the state problems of accounting market are reflected as documents of transaction.

Keywords: *The map of Vietnam accounting; Vietnam accounting system; Innovation*

Jel Classification: *M40, M41, M48*

* Accounting lecturer Phi Thi Diem Hong, Vietnam National University of Agriculture, Department of Financial Accounting, ptdhong@hua.edu.vn / phihong7579@gmail.com

1. INTRODUCTION

Increasingly integration into the global economy and becoming a potential nation for international investors are the advantages mentions by not only national but also international organization when they recommend about Vietnam recently (UNIDO, 2011; SCEO, 2013; Ian Coxhead, 2007; Rhys Jenkins, 2006; Uwe Schmidt, 2004). In fact that, Vietnamese economy has been one of the fastest growing economies over last 20 years when moves from a centrally planned to a market-led economy (MoIT and UNIDO, 2011). From the incidence of poverty in 1980s, Vietnam became the top country of exported rice in 2000s. The Gross Domestic product (GDP) increased about 25.5% (in 2006) to 33.5% (in 2012) (Vietnam Assembly's Economic Commission, 2013), the manufacturing value added (MVA) raised from 5.8 (in 2000) to 15.4 (in 2009) billion US dollars (UNIDO, 2011, World development indicators) and the MVA to GDP from 2000 to 2009 are 18.6% and 26.1%, respectively (MoIT and UNIDO, 2011). The contributions of these success have been the renovation in 1986 with namely *Doimoi* and integration into Asian (1995), WTO (2007). These achievements brought significantly the reputation of Vietnam to the world as a developing country in Asian rather than the nation won American colonization in the war. Undoubtedly the global trend creates the benefits for Vietnam such as increased FID, internationalization of value chain and regional dynamism (UNIDO, 2013). But how Vietnam economy harmonizes to international market and what advantage and disadvantages for Vietnam gets after joining the global market are not simple to look for suitable answers. These seem more difficult when the movement of globalization as well as the industrialization occur are changing continuously while many performances of Vietnamese economy are insecurity such as the rate of poverty, the ratio of public debt (MOF, 2013).

To reduce these deficiencies, Vietnamese government's efforts are applied for improving the market and institution, especially the reformation the legal frameworks (KPMG, 2012) in the last decade such as the Law on enterprises (2005), Law on Foreign Investment (2006). However, while many markets in developing countries (including Vietnam) are inefficient and the necessary institutions are absent (UNIDO, 2013), these revolutions are not enough to discover the appropriate solutions. This is also the reasons that how Vietnamese economy converges on international standards becomes the booming topic in the different symposiums in the recent time (Vietnam Assembly's Commission, 2013; VACPA, 2012). Following this pattern, while almost of researches showed that the renovation of Vietnamese accounting system is still limited to meet the requirements of investors and international integration (Tran Q.T, 2013, Phan et al, 2013, Nguyen T. A. et al, 2012; Nguyen C. P. et al, 2012; Lisa Nguyen et al, 2012; Vo V. N. et al, 2011), the question is which context Vietnam accounting system should converge on IASs fits into essential characteristic of Vietnam is more increasing.

Although the most of existing Vietnamese accounting standards (VASs) have been set following the international accounting standards (IASs), they were issued in 2001-2005 before being a membership of the WTO (2007). Additionally, VASs have been not yet same all contents of IASs and up to now still without renewable pieces while the IASs have been changed drastically, specially upgrading to IFRSs in last several years, the unsymmetrical convergences of Vietnamese accounting system are indispensable. This implies the innovation need to be applied for existing Vietnamese accounting system. Unfortunately it is obviously that any transitions from national to international level must to pass the respective requirements to get the success. This success is only call "success" when the oriented developing is set up appropriate for both domestic and international markets. As the absolutely agreement, the MOF declared government intention of renovation the current system of the VASs and Accounting law (Chu T., 2004; MOF, 2014). But the question how innovate is again debated with still not finding suitable answer for Vietnamese accounting sector. Finding the answer for this, there are the researches that are conducted during last time. However, these studies mainly focused on finding suggestions for short -term (Vo V.N et al, 2011; Dao X. T., 2010) or special aspect of accounting such as financial statement (Tran, Q. T., 2013, Phan T. H. D. et al, 2012), accounting standards (Pham H. T., 2010; Nguyen T. A et al, 2012).

In order to expand the above considerations and collect the better solutions as well as concept options for innovation of Vietnamese accounting system for both long and short -term, the article focus on description the map of accounting system development as well as the characteristics of accounting market in Vietnam. The remainders of paper are structured as follow: The main methodologies are explained in next section; Section 3 will briefly review historical development of accounting system in Vietnam based on the previous studies and documents of legal regulation; Section 4 will investigate the characteristic of accounting regulation through practice boxes as evidence of drawback or optimal points of the accounting market; Section 5 will examine and appreciate the existing viewpoints of government and others for finding appropriate solutions; The conclusion is organized in the last section.

2. METHODOLOGY

Following the increasing globalism, the term "”innovation" is mentioned more popular in many sectors of sociological science, economic or technology such as culture, education, marketing, life-cycle, intellectual, communication and so on recently. But the innovation of accounting sector is still limited. While this paper uses "innovation" as key word to get the research objectives, the term "innovation" needs to be clear as the theoretical framework of study.

Let's start with a brief history of innovation to break thinking why the innovation is mentioned in accounting (or at least in this paper)? Following the study of Manfred Moldaschl (2010), the first concept of innovation alters *invention* rather than *novelty* that was presented by Joseph Schumpeter (1939) who based on the sociological theory of French sociologist namely Gabriel Tarde in 1903 (Moldaschl M., 2010). Wherein, *invention* is defined as "any desired innovation or improvement in any kind of social phenomenon such as language, religion, politics, law, industry or art". (Moldaschl M., 2010, p2; Tarde 1897/2003:26). Notably, Tarde (1903) originated the S- curve of diffusion as opinion leadership which has became important for studying of adoption and innovation (Couros A., 2003) while Schumpeter (1939) did not illuminate the concept of innovation he made a distinction between *invention* and *imitation* that are mentioned as two elements of innovation concept in the later researches such as Ryan and Gross (1943); Brozen (1951), Rogers (1962/1995) (Moldaschl M., 2010).

Besides Joseph Schumpeter (1939), following up by Tarde's theory, the anthropologist-Clark Wissler also mentioned the consequence of innovation when he studied the diffusion of horse among Plains Indians with the book *Man and Culture* in 1923. Although the diffusion controversy was discussed during later decades by American anatomist or anthropologist such as Smith G. E., (1927), Robert Refield and Ralph Linton(1936), main arguments were the controversy of diffusion including only intention or both of intention and diffusion. Particularly, at that time, almost researches focused on explaining technological innovation as a process of management, economic and sociology (Godin, 2013) and the diffusion controversy was continue discourse explicitly.

Until the 1940s - early 1950s, the theory of innovation has been introduced by sociologists and economists, even some of components were still concerned with the origin of invention. The famous account of theory is Bryce Ryan and Neal C. Gross in 1943. They published their seminar study of diffusion of hybrid seed corn among Iowa farmers. They divided the group of farmers into five adopter categories: innovators, early adopters, early majority, late majority and laggards (Couros A., 2003). Several years later, the economist-Yale Brozen (1951) wrote on his study the framework of technological innovation including *invention-innovation-imitation* while the writing of economic historian W. Rupert Maclaurin (1953) presented*: pure science-invention-innovation-finance-acceptance* or *diffusion* (Godin, 2013). Despite this distinction, the invention has been accepted as being at the origin of innovation by almost researchers at that time.

Additionally the linear model of innovation was constructive as the suggestion of innovation starting with science or basic research (Godin, 2013). After that period, the theories of innovation are more explicitly and continuously attract many researchers over the world until now. Typically, the concept of diffusion is explained as a social process through which subjective evaluation of an innovation spread from earlier to late adopters rather than one of rational, economic decision making (Couros A., 2003, Valente, 1995). In this light, E. Rogers (1978) made clearer between *invention* and *innovation*. In his opinion, invention is the process by which or developed while innovation is the process of adopting an existing idea (Godin, 2013; Rogers, 1978:4). On the later writing in 1995, he defied the diffusion as a process by which an innovation and upgraded his considerations as one of logical theories in the decades ago. He also impressed that the diffusion is very much a communication in which the messages pertain to a new idea and process of diffusion is inherently uncertain due to newness of the idea and how it will be accepted as a message (Alec Couros, 2003). Furthermore, he divided the process of diffusion including four elements: the innovation; communication channels; time and a social system. For each step, he described detail the components respectively and introduces the basis form to attribute the diffusion theory including five options: relative advantage; compatibility; complexity; trial-ability and observability. Following this main idea, many others researchers continuously study and develop the partial understanding of innovation process and enlarged to almost of sectors including national and international level, for instance the researches of Grasman, O. and Enkel, E. (2004) relates toward a theory of open innovation while the work of Andreanne L., and Sushmita S., (2007) refers to in national environment or Drew Saunders (2009) in the firms only.

This study, however, does not focus on the concept of innovation or diffusion to analysis or create new element. Combination all previous studies of innovation, the research is designed because the renovation of any existing system is not simply like replace or invention by a new system. Instead this reformation needs to be other system that is appropriate for not only innovators, adopter or majority of market. On the other word, the change of Vietnamese accounting system is the process of diffusion or innovation that not only regulation system but also any players of the accounting market are applied. For this, the meaning of innovation in this study refers to any news which is set up for purpose that Vietnamese accounting system harmonizes international standards over the time. Using the open innovation theory, the innovation paradigm of Vietnamese accounting system may include three options: First, applying the key concepts or idea and transforming into the existing accounting system; Second, exploitation or finding characteristic of current accounting system in Vietnam that can use outside boundaries of nation; Third, exploitation external concepts by using the outside in order to increase innovativeness. Following these options, Vietnam has created or confirmed the first stage of innovation for accounting system that is following market-oriented development. On the other word, following the IASs or IFRSs is the construction of developing accounting system in Vietnam. But the last two stages are still not clear the respective context. Therefore, the study has been set up consistently follows the rest options of this paradigm.

Normally, the main factor makes anything becoming a system is the structure of regulations. This is why the renovation of accounting regulations plays the key step for the innovation of accounting system. It is also a main reason the next paragraphs mention in the accounting regulation system rather than other sides of accounting system in Vietnam. However, applying the process of innovation for accounting sector in Vietnam can vary tremendously it is beneficial to breakdown the application of innovation theory into more easily managed categories. For this, the study uses the “macro-micro” model that was introduced by Bourguignon F. and Pereira in 2003/2005 and expanding in 2006 by Hertel and Winters to explanation the innovation. Generally, macro level approach represents as a top-down process while micro level theories relates to adoption and changes on an individual’s instructional strategies (Alec Couros, 2003). Significantly, the macro simulation often apply for the property, economic policy, income distribution or globalization (Ian Coxhead, 2007) while micro simulation is popular for the levels of firms, households or persons within particular system. Unlikely this usual way, the study observes from the top to bottom of legal framework in accounting sector to draw the whole picture of Vietnam accounting development with the core regulation system for this area. In order to exploit the characteristic of existing accounting regulation system in Vietnam, at each key stage of development, the depth description of reaction by different players of accounting system are supplied with bottom-up approach.

Through the literature review as main methodology, the previous studies that did relate to innovation and approach of macro-micro as well as Vietnamese accounting are major references to contribute the results of research. Besides the collecting of the accounting regulations by Vietnamese administrative office as well as several opinions of Vietnamese accounting practitioners are conducted to make better the main content of study.

3. HISTORICAL DEVELOPMENT OF ACCOUNTING SYSTEM IN VIETNAM

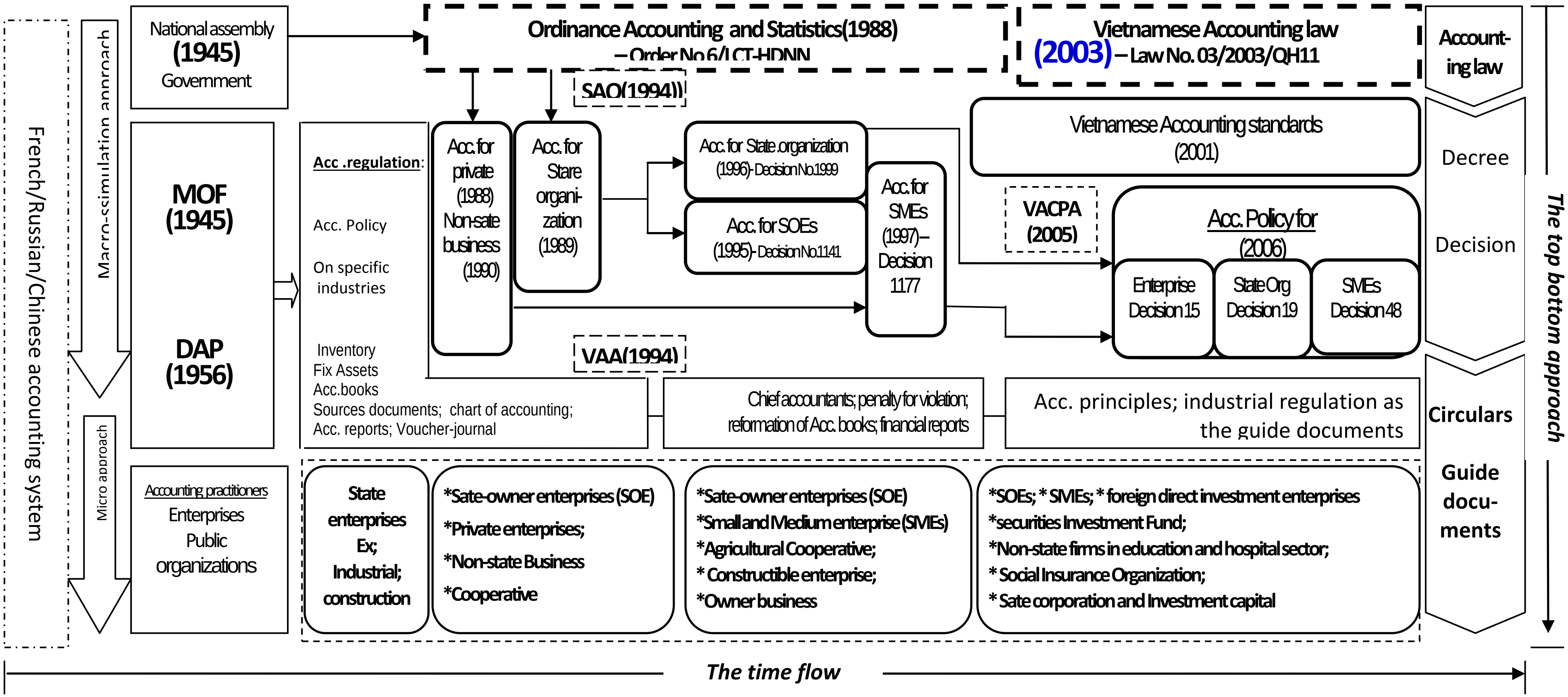
There are a variety of ways in which evaluation of innovation in area or a sector that want to discover such as increasing the amount or valuation of relative indicators, the most important ones are found through the time. The review of historical accounting development seems one suitable observation for finding the innovation in this area. Despite there are significant researches of doctoral students about historical Vietnamese accounting system, even almost in English (Chu, T., 2004; Bui, T. M. V., 2011; Nguyen T. A et al, 2012; Nguyen, T. P. U., 2013), the Vietnamese researches of professor or academic institution has been not popular, even rarely. Until the late of 2013, the first edition of writing was published by Financial Academy in Vietnamese illustrated the whole history of accounting systems in Vietnam (Ngo T. C., et al, 2013). Following these researches, the history of accounting system development in Vietnam includes the different stages that were influenced by culture and condition of legality. Particularly, the most of researchers also agreed the accounting system in Vietnam has started before 1945 when the Vietnam was occupied by foreign aggression and they made explicitly the detail information from 1945 (after Vietnam became independent nation over the world) to present as the valuated documents for any researchers. Unlikely this study, the historical matter in the previous writing wasn’t mentioned in innovation meaning of regulation system but rather concentrate on supplying or explanation the current situation of accounting market as well as professional accounting bodies that impacted on accounting concept in Vietnam. In this paper, the emphasis is the process of diffusion or innovation of Vietnamese accounting system or accounting system by Vietnamese regulations not all system of this area in Vietnam. On other word, the history of Vietnamese accounting system development has been only mentioned since Vietnam was an independent nation in 1945. Furthermore, the study will describe the history following the hierarchy structure of a national regulation system through the top down approach. For this, the Vietnamese accounting history is divided into two main periods: the before and after Vietnamese Accounting law has been appeared.

The Vietnamese accounting system before accounting law (2003)

After the first president of Vietnam declared the independence of Vietnam in 1945 to finish the period under the war 30 years against France and America colonist, Vietnam Ministry of Finance (MOF) was established as the highest government organization for setting accounting regulation in Vietnam until now. Later around 10 years (1956), Department of Accounting Policy (DAP) was formed directly by MOF. This department has represented the MOF for not only setting and issuing uniform of the accounting regulations but also controlling the implementation by the enterprises. The DAP distributed to create the pre-framework of accounting and pushed the Vietnamese accounting system to now from the nothing or zero point in 1945. However, during over 55 years (from 1945 to 2002), the accounting practitioners in Vietnam had worked their jobs without the law instead of significant specific regulations.

During the time of colonist (1945-1975), the both French and American accounting system was introduced in Vietnam, however, the accounting practitioners were main French accountants or American accounting experts (Nguyen, T. P. U.,2013). Comparison with American accounting system, the influence of French accounting system on Vietnamese accounting system was stronger and longer. After 1954 when the Geneva Agreement was published French lost their war, French accounting system had been still continuous applied in Vietnam since 1972 (Chu, T., 2004) while Vietnamese accountants still hadn't yet finished the transformation from French to American accounting system the American lost their war in Vietnam in 1975. Besides the accounting systems of French and American, Vietnam also received the helps from Chinese accounting experts to improve the national system in accounting sector, especially 1950-1960 (DAP, 2001; Chu, T., 2004). After that, Vietnam developed the accounting system base on the financial regulation issued by government as a tool in financial management (Chu, T., 2004). With directly help from Soviet Union experts through education, training and support material in accounting sector (DAP, 2001), the primary accounting regulations were issued.

The figure 1: The map of historical accounting system development in Vietnam



m

The first regulation as the legality document for accounting filed was the regulation on revenues, expenditures and general accounting of Democratic Republic of Vietnam by Decree No. 1535/NP/TQD date 25/9/1948. Then, the government representation-MOF promulgated directly the different accounting policies for specific industries, such as the regulation on the organization of State Accounting by Decree No. 175/CP on 28/10/1961; The provisional Policy for Accounting control in 1962 (by Decision No. 714TC/CDKT, 22/11/1962); The accounting books of the Vouchers-Journal accounting system in 1970 (by Decision No. 426TC/CDKT, 14/10/1970; etc… the most of them focused on controlling the state financial management (Chu T., 2004, Lisa Nguyen, et al, 2012) and the specific regulations for bookkeeping.

During from 1945 to 1987, the figure 1 shows Vietnamese government mainly controlled the accounting market through the policies or regulations for detail aspects of recording financial information in state organization or enterprises. Until the late 1980s, the economic liberalization was began in Vietnam, the private enterprises was admitted as a sector of economy the accounting system was reformed with significant changes. The point for starting this change was the government issued Ordinance on Accounting and Statistics in 1988 (by Order No 06/LCT-HDNN, 10/5/1988), and significant renovation on specific industries, such as regulation on Chief accountants; penalty for violation as well as reform the uniform of Accounting reports. Especially, in that time, the accounting regulation system in Vietnam was renewed to adapt the non-state businesses which model considered as the constraint organization in the first stage of Vietnamese young government.

Moreover, the establishment of Vietnamese Association of Accountants (VAA) in 1994 brought many perspectives for developing of accounting system in Vietnam (DAP, 2001). Contribution for these is the integration of VAA into International Federation Accounting Committee (IFAC) and Accounting Federation of Asian (AFA) in 1998 and the reform of whole accounting policy for not only state organizations but also non-state enterprises through the three separate accounting policies for State- owned enterprises (SOEs), small and medium enterprises (SMEs) and State organizations which were applied the first unification for the whole nation.

There is no direct document (or I have at least not found any) to show that the renovation of accounting regulations created the increasing of foreign investment in Vietnam. But significant number of researchers support that the accounting system of a country reflects its socio-economic and political characteristics (Lisa Nguyen, 2013, p8). In fact that, the Vietnamese accounting system has been got the valuable benefits from Big foreign owned auditing firms (Deloitte & Touche, Ernst & Young (E&Y), KPMG and PricewaterhouseCoopers (PwC) during this time. According to Chu (2004), these companies contributed main role to import directly knowledge of accounting market into Vietnam (Chu T., 2004). Remarkable point for helping is the launch of the first four Vietnamese accounting standards by MOF in 2001 and the next six VASs in 2002. Notably, the contents of VASs are set up to align with international economic integration. It is difficult for the accounting practitioners applying VAS, nevertheless, the lack of uniform accounting regulation occurred in the domestic market (Vu, A. T.,2007). The MOF recommended application VASs for SOEs or SMEs while many of them were still not improved appreciate structure or business size. In order to solve this matter and also meet the requirement of economic integration, re-structure of SOEs and encouragement developmental SMEs, FDI companies were conducted in the early 2000s. But it was not adaption while the most of accounting practitioners are not professional qualified (Lisa Nguyen, et al, 2012) and the highest power of regulation -the law of accounting wasn't still launched until 2003.

The Vietnamese accounting system after 2003

After the accounting law passed to the Vietnamese Assembly on 17/6/2003 and complied on 1/1/2004, the next three series of VASs were issued in the end 2003 and 2005. Following that, the significant number of accounting policies were launched by MOF to adopt VASs and accounting law such as Accounting Policy for Enterprises (Decision No.15/2006/QĐ-BTC, 20/3/2006); Accounting Policy for State Enterprises (Decision No.19/2006/QĐ-BTC, 30/3/2006); Accounting Policy for Small and Medium Enterprises(Decision No.48/2006/QĐ-BTC, 19/6/2006); Accounting Policy for Social Insurance Organization (Decision No.52/2007/QĐ -BTC, 22/06/2007) ; Accounting policy for funds of public telecommunications services (Decision No.74/2007/QĐ-BTC, 21/8/2007), etc… In particularly, the establishment of the Vietnam Association of Certified Public Accountants (VACPA) on 15th April 2005 by the MOF with Decision No. 47/2005/QD-BTC played the significant role for creating the professional practitioners for domestic market. Simultaneously, many circular documents were also promulgated to guide implementation as the detail and direct regulations for specific industries: Fund management; Agricultural Cooperatives; Treasury and Budget Management information system, etc… However, the asymmetric between different levels of regulations still happened. The accounting law has been unified for all Vietnamese companies but the VASs are complied the dependence enterprise on its separate policy.

As likely consideration, some researchers said that the development of VASs as the best way to make greater conformity with international accounting practice (Nguyen, T. A. et al, 2013). It is extreme to saw that Vietnamese accounting system focuses on uniform of accounts, source document, accounting books and form of financial statements while the regulation of identification, methods, presentation of financial reports are not meaning-full (Dao X. T., 2010; Nguyen, T. A. et al, 2013). Besides, the inconsistent content among the VASs or between the VASs and policies or circulars of its guideline is occurred (Mai T. H. M, 2010). In this side, Lisa Nguyen et al, (2012) complained the Vietnamese accounting regulations still focus on providing the accounting information for government authorities: tax and financial adjustment, the accounting practitioners are still doing bookkeeping rather than accounting (Lisa Nguyen, et al, 2012), as well as the situation of making accounting to supply a number of shortcomings as follows: assets are overstated, expenses are capitalized and reported income. They also argued "the accounting field in Vietnam rests on compliance system. Individuals within the field feel comfortable and at peace with such a system which has become embedded" (Lisa Nguyen, et al, 2012, p18). It seems a big problem when Vietnam had been integrated into the WTO in 2007 and the structure sector of economy has been significant change.

4. THE CHARACTERISTIC OF ACCOUNTING MARKET IN VIETNAM

In order to explain why there are the gaps between regulation and implementation in accounting market in Vietnam as well as answer the questions what is the current transition? And what accounting concept should be innovated to get the objects, this section reflects the drawbacks and optimal of Vietnamese system.

A tool of financial management in the SOEs

While the Vietnamese young government had to control the economy follows the centralism mechanism to go through the obstacles of new independent nation as fast as possible, the cooperatives or stated-owned enterprises (SOEs) were set up as the main sector in the domestic market (Phi, T. D. H., 2007). Vietnamese accounting system seems to follow a "centralized" or "rule-based" concept rather than principle-based approach (Phan, T. H. D., et al, 2013). The accounting information supplied by SOEs focused on safeguarding assets and providing information for direct the higher authorities rather than meeting the manager's demand on making business decision (Chu, T., 2004). The typical characteristic of accounting regulation system in Vietnam in this period was not outside the purpose of government that accounting was the tool in financial management. Through the figure 1, as the spontaneous solidarity of Vietnam community, the government plays as an organ of almost of accounting decrees or policies which practitioners are to be followed and supplied as enforcement mechanism.

Following the time flow of figure 1, there are two main accounting systems have been applied for accounting markets: one for general enterprises; other for sate or public organization which operates focusing on social targets such as education or hospital aspects. Wherein the accounting regulation system for enterprises is divided following the two separate systems: the first for SOEs or Big Company and the second for SMEs. Exception the listed companies which register their name on the security market and publish their financial reports as the rule, almost of Vietnam enterprises only submit their financial statements to the local government offices as the compulsory requirements. With this view, significant researchers complained the Vietnamese accounting regulations and policies still focus on the important of supplying information for the government authorities (Chu T., 2004; Vo V. N et al, 2011, Doan N. P. A, 2012), and don't focus on the regulation of supplying the information on financial reports (Mai, T. H. M, 2010; Tran Q. T., 2012). According to Lisa Nguyen et al (2012), accounting system used to be as a subjugated field of government in Vietnam (Lisa Nguyen et al, 2012, p 16), even there were many reformations during from 1980s to 2000s.

Using historical cost as a main accounting principle

While the companies want to follow the accounting principles in a number of different ways the enterprises provide financial information base on their business cost and income which are calculated following their faith situation, the accounting principle in Vietnam is still using the original price as the main method to calculate the valuation of assets. This pushes the Vietnamese bookkeepers focus on more compliance with tax regulation than accounting regulation (Lisa Nguyen et al, 2012). Main users as managers, directors of firms who normally need to use the information by financial reports for making business decision don't usually use them as the major source (Vo V. N. et al, 2011). Unfortunately, this matter has been no rarely in Vietnamese SMEs at the present. This will not become a problem if the firm size is only micro or very small size, otherwise the big company or economic corporations have to meet the significant forces with this matter as a big obstacle for assessing the transparency and health of enterprise participating in the securities market. It seems more urgent when the actions of consolidated finance happen between enterprises. Noteworthy, the investors or shareholders may be received unfair information to make decisions.

> Many SMEs which don't use the state capital often organize accounting system to cope with the taxation office. the directors don't use their accounting information that are recorded in accounting books or displayed on financial reports as the valued information of running business (Vu Xuan Tien, 2007, Economic management journal in Vietnamese. No 16(9+10/2007), p54)

As the mention on above paragraphs, Vietnam has been a member of WTO, not only accounting sector but also other industrial sectors need to adapt the international requirements. If Vietnam continuously apply the historical valuation as a basic principle it is becoming the greatest matter for Vietnam to harmonize on the IASs or IFRSs.

Lacking the consistence among the current law and existing standards or policies.

At the moment, the accounting law (2003) is the highest accounting regulation that was applied for all enterprises. Actually, the content of accounting law (2003) had been relied on Ordinance Accounting and Statistic (1988) with appropriate changes to adapt the economic transition and separated from Law on Enterprise (2005). Besides the significant articles that relate accounting documents resource, bookkeeping, promulgating or publicizing and so on that before 2003 the accounting practitioners weren't supplied, the current accounting law still lacks of many points of professional ethics for accountants, electric vouchers, providing accounting service across borders, accounting training and research or accounting standards (Vu X. T., 2011), even some points of law are still confusing or applying for different ways. For instance, the definition of "accounting unit" term (Accounting Law: article 4, point 5) is "one of these: state organization, state-owned enterprises, public organization; non-state organization; enterprise under Law on Enterprise; subordination, agent office of foreign organization in Vietnam, cooperative or business owner, which prepare the financial statements". On the specific situation, this definition supports spontaneously the situation of one subsidiary company which is subordinated by its superior company need to prepares financial statement but this company can declares that doesn't making financial reports without breaking law to get specific objectives (such as taxation or legal responsibly of business, etc…). The similar situation can also occur that the economic groups or corporations which have subsidiaries companies prefer making general financial report to the consolidate financial statements while the article no 30 of accounting law shows "the superior accounting units must make the general financial statements or the consolidated financial statements on the basis of financial statements of the accounting units in the same superior accounting units".

On the site of bookkeeping regulation by accounting law (2003), the writing of Vu X. T., (2007) reflects the typical consideration that one enterprise can prepare two or more the bookkeeping systems: one for taxation purpose, one for managers or investors/creditors is no rarely in Vietnam (Vu X. T., 2007, MOF, 2013). Moreover, one professional accountant who is granted Vietnamese certified public accountant (CPA) works as the chief accounts of one enterprise while other enterprise is lending her certificate for the purpose of register doing business in accounting service or the enterprise hires the accountants or chief accountant who chose an individual accountancy rather than staffs work at the firm of accounting service because the current regulation by law is "Organizations dealing in accounting services must set up accounting service enterprises according to law provisions… while individual accountancy practitioners must have accountancy certificates granted by competent State bodies…" seems the inappropriate points in regulations (Vu X. T., 2007; MOF, 2013).

> "I am working as chief accounting at a private company in Hanoi and earn over the 10 million VND per month. My certification –CPA is lending by other firm of accounting service, that company pay me about 3 million VND monthly" is said by one professional accounting in Hanoi in 2012 (interview by author).

The government plays the key player to set up and issue regulation system

Let's back again the figure 1, through the time flow, the innovation of Vietnamese accounting system has been happened, but the reform process is highly "monopolized" by the leaders of government and the Party (Stefan Meer and Nils-Sjard Schulz, 2008). In fact that, the function of setting legal framework for accounting aspect still belong the government level. For this, it is not difficult for understand while Vietnam is a developing country with a strong centralized system governed by the Communist Party (Nguyen T. P. U., 2013). Moreover, during the first period of time flow when Vietnam started the work of economic development after going out the war, the government had established the administrative system as a meaning of controlling the activities of SOEs (Nguyen C. P. and Richard, 2011; Nguyen T .P.U., 2013). Like other sectors of economy, the legal system of accounting is created and issued by government. Unlikely, at the present the structure of Vietnamese economy has been reformed with the rising number of SMEs, even reached more 95% total number of enterprises (about 362,540 firms in 2012) and this indicator of FDI companies was 9,385 enterprises while the indicator of SOEs was only 3,807 (GSO, 2012), the contribution of FDI and the private sector to Vietnam's GDP is more and stronger (Christopher W. Runckel, 2011), the demand on fair information of investor, directors will be increase. The monopoly of setting legality system in accounting by government may be unfair for other sectors. Furthermore, with monopoly of government, the opinions of lower level government officials are often ignored (Stefan Meer and Nils-Sjard Schulz, 2008) and enterprises had limited autonomy in making decision or took little responsibility for the effective use of economic resources (Nguyen T. P. U., 2013, p19). From the top to bottom of legal framework, the current accounting regulation system includes one accounting law (2003), 26 Vietnamese accounting standards (were issued by the fifth time from 2001-2005), 37 Vietnamese auditing standards and the significant number of guide documents as direct providing accounting practitioners. Although, before issuing or adjustment one regulation for each industry of accounting area, the MOF often organizes the academic seminar, conferences or workshops to collect opinions or ideas from the side of accounting practitioners including the VAA, enterprises, accounting professors, researchers coming from universities or association, these information or ideas are only as subordinate information to set up the regulation. Because the final decision still depends on the government. Perhaps with this characteristic of accounting system in Vietnam, some researchers considered that the Vietnamese accounting seems to follow a “rule-based” concept rather than “principle-based” approach (Phan T. H. D et al., 2013) while some others argued it is similar a resistance in Vietnamese accounting field (Lisa Nguyen et al., 2012).

Considering all of these above characteristics, the MOF announced the plan of revision the existing VASs toward international Financial Reporting Standards (IFRS) (Phan T. H. D et al, 2013; Lisa Nguyen et al., 2012). However, which model should be Vietnam likely to following is one again raised and has not yet been answered appropriately even one plan for renovation of accounting law has been issued by the MOF (MOF, 2013). Because the changes of accounting system in the draft publish are like the temporary rather than solutions for long time. In order to make clear this mention, the next section focuses on describing detail some points of this government plan as well as the other valuated analytical.

5. GOVERNMENT PLAN FOR INNOVATION AND RESULTS EXPECTATION OF STUDY

As the mention on the methodology section, the determination following the international accounting standards likes the starting of process of Vietnamese accounting system innovation. Before looking through detail plan of government, the study discourses this oriented decision as the examination its advantages or disadvantage for developing accounting system in Vietnam.

Innovate following the international accounting standards gradually

According to Irvine and Lucus (2006), most of developing countries are not voluntarily adopting or adapting to the IFRS (Nguyen T. P. U., 2013, p36). In the fact, Vietnam has some significant reasons for its choice. The first is the pressure of international organization that Vietnam integrated such as the WTO, the World Bank or the International Monetary Funds, etc. As the result of multinational corporations, Vietnam has been forced adoption the IFRS as coercive renovation. The second is confirmed the application the IFRS for accounting system will promotes the Vietnamese economy growth. This point seems more explicit when many researchers proved by academic researches or surveys such as: Zehri C. and Abdelbaki A., (2013), they through their sample made up of 72 developing countries to conclude "the developing countries(of course including Vietnam) most favorable to the adoption of IFRS are those having a high economic rate and a high level of education and a common law based a legal system" (Zehri C. and Abdelbaki A.,(2013), p10); Ramana K. and Sletten E., (2009) with a sample of 102 non-EU countries also discovered the countries conditioning their IFRS adoption can get direct benefits by both the net economic and net political value of IFRS as well as the opportunity and switching cost of domestic governance standards (Ramana K. and Sletten E., (2009). p28); etc. Supporting these conclusions, Vietnam government also conceded the effects of the IASs/IFRS on developing accounting system as the improving importance for considering the effect of market-oriented economy (MOF, 2013). The last but not least is, the current structure of Vietnamese economy with the existing of multinational companies or foreign investors or big companies embedded the accounting system in the IASs/IFRS. This reason likes a consequence of the integration globalism in Vietnam. While the dominant view of IFRS that has been designed for all profit-oriented entities that provide information to external users besides the investors and financial analyst need to be able to understand the financial information for their investment decisions, the harmonization of national accounting system to international system comes as the indispensable institution (Nobes C. and Parker R., 2000).

Government planning for developing accounting system in Vietnam

Following these above reasons, in 2011 the MOF informed its intention for reformation the existing VASs. A project team with 44 members who are professors, experts, researchers or officers come from government offices, different industrial organizations, VAA, academic institutions had been formed (Phan, T. H. D et al, 2013). After collecting opinions and recommendations from the academic workshops, conferences or seminars which are organized by the MOF during 2011-2012, a recapitulative report of reformation of accounting law is conducted by the MOF in the first months of 2014 (MOF, 2014). Wherein accounting is designed as a tool to reflect the fluctuation of assets as well as liability and equity of enterprises or business organization in faithful, completeness, correctly, especially encourage and control the discoursed and explicit information in fair. In particularly, the IASs/IFRS are decided as the official foundation standards for the VASs development with gradually applying at last for the present period. For this, the VASs have been rebuilt in form as the IASs combine special standards for Vietnamese characterizing the nature of system of Vietnamese economy and reject international standards relating to issues unavailable in Vietnam (Chu, T., 2004, p 298).

Setting one law and standards system for separate industries in accounting sector

Mainly the structure of accounting regulation system has not any new between the before and after government planning. Both of them include a law, significant number of standards, policies and variety of lower regulation as guide document for implementation. Following this setting, the National Assembly still issues the accounting law while the government (represented by the MOF) covers all enactments of the regulations under law through Decree or Decision or Circulars respectively. On the other word, the main player of setting regulations for accounting sector still belongs to government while the constructive diffusion is confirmed following the IAS/IFRS.

Appling fair value principle for only some cases setting assets

Basically, not only MOF‘s professors but also other players of accounting market in Vietnam greatly admitted the principle of historical cost as well as the drawback of existing accounting regulation system like the obstructions of development for accounting sector (MOF, 2014), however, the replace by fair value principle is not absolutely supported by them because of the absence efficient and necessary institutions in Vietnamese market (Vo, V. N et al., 2011). As an impending situation rather than an appropriate solution for long time, the government has proposed applying fair value principle for some industrial sectors that are considered with high fluctuation of price such as the security market, banking sectors, immovable property, etc while others continue using the principle of historical cost for assessing. Relatively, it is explicit the harmonization of Vietnam accounting system to the IFRS is still gradualness. Looking forward, the better recommendation will be discovered and come next for this.

VACPA plays the key role to create the Vietnamese accounting standards in next time

Getting the experience from implementation of the existing the VASs, the processing of the launching or publishing the VASs is formed official statement in 2010 by the MOF with Decree No 443/QD-BTC date 10/3/2010. Likely, the VACPA has been delegated to draw up the VASs that base on the MOF’s planning. Besides the VACPA, the DAP, department of legal affair and other officers of the MOF also contribute their task to build the system of the VASs but they are only as the sub-organizations of the process. Comparing with the before period of planning, this delegation is more academic and efficient because of contribution by professor accountants from the VACPA. Nevertheless, it also cannot create more renovation while the VACPA does not operate by self-regulated because of still under the MOF’s controlling. Moreover, the VACPA also has limited the power or its authority in other countries, even though Vietnam has been a member of the International Federation of Accounting (IFAC) since 1998 (Nguyen, T. P. U., 2013, p10). Especially, when the inconsistence in the laws or legal framework to assist companies in the implementation is still continuous, the process of innovation is more slowly.

Looking for the detail recommendations as the expected results of study

The decision of Vietnam government to innovate the IASs following the IFRS seems to be as a decision with more and more supports from both domestic and international professional accountants. But on the side of accounting practitioners still have many controversies between in the implementation. Almost the bookkeepers satisfy the current regulations while professional practitioners support reformation of the VASs following the IFRS (Lisa Nguyen et al., 2012). However, any process depends on the actors of it to get success. Like the players, the accounting practitioners in Vietnamese enterprises contribute the efficiency of innovative process. Relatively, it is so difficult to apply directly all contents of IFRSs while the most enterprises in Vietnam are SMEs, especially the significant number of micro-small size (Tran, T. C et al, 2008; Christopher W. Runckel, 2011). It is no doubt with the small size that the global integration is not coming as the matter or influence limited on this kind of companies. Oppositely, the limited international convergence of accounting system will bring the resistances for the development of international enterprises in Vietnam. In the case of these comprehensive conflictions, which is next step of process for accounting system innovation or what are the contents that Vietnam should or should not apply the IFRS for domestic accounting market to satisfy the different entities of economy, in particular long time. Any detail recommendations for this are expected as the results of this paper.

6. CONCLUSION

Under the pressure of international organizations, Vietnam has adopted the significant international rules. It is obviously that the further reforms will continue to take place, especially in legal framework to create more integration into the world market (KPMG, 2012). Not only accounting sector but also many others, Vietnam continues to improve up the high expectations international investors have of it. It is explicit that the law and standards in Vietnamese accounting system are at an early stage of innovation and make gradually the basis of diffusion in regional area. Wherein the government is ongoing participation and encourage of forums facilitating consultation between investors and regulators in order to address ways in which to improve the business climates (KPMG, 2012). Basis on theory of innovation, this study presents the detail the current situation of accounting system development through the map of whole developing stages as well as mentions the typical points like its optimal or inefficient scenes that are in the process of international transactions. The findings are follows: the Vietnamese accounting regulation system is still inconsistencies among the law and standards. With the accounting system including one law and specific standards by setting of government, mainly via its the MOF still seems not to encourage all entities of market, especially SMEs supplies faithful or realistic financial information; Generally the oriented innovation of Vietnamese accounting system has been designed following the IFRS while the market economy in Vietnam is limited, the strategy for developing accounting in long time is looking for as the urgent situation to adopt the international integration; With the different and typical characteristics of the developing countries, Vietnam continue to innovate the regulatory development as well as more research for next step of accounting system innovation.

REFERENCES

Alec Couros, and For Dr. Cyril Kesten (2003). Innovation, Change Theory and The Acceptance of New Technologies: A literature Review. November, 2003.

Alberto Gabriele, (2005). Strategic Service Polices and International Trade Integration in Vietnam. Journal of Economic Integration. Vol. 20 (2), June 2005; pp 263-293.

Andreanne Léger and Sushmita Swaminathan, (2007). Innovation Theories: Relevance and Implication for Developing countries Innovation. Discussion papers 743. DIW, Berlin. German Institute for Economic Research. November, 2007. ISSN print edition 1433-0210. ISSN electronic edition 1619-4535.

Benoit Godin, (2005). The linear Model of Innovation: The historical Construction of an Analytical Framework. Project on the History and Sociology of S&T Statistics. Working paper No. 30, 2005.

Benoit Godin, (2013). Invention, Diffusion and Linear Models of Innovation. Project on the Intellectual History of Innovation. Working paper No. 15, 2013.

Bryce Ryan and Neal, C. Gross, (1943).Acceptance and Diffusion of Hybrid Corn Seed in Two Iowa Communities. Agricultural Experiment station Iowa state College of Agriculture and Mecanic Arts. Sociology Subsection, Economics and Sociology section, Ames, Iowa. Research Bulletin-v029-b372. January, 1950. Pp 663-705.

Chokri Zehri and Asma Abdelbaki, (2013). Does adoption of international accounting standards promote economic growth in developing countries?. International open journal of Economic. Vol.1 , N1, July 2013. Pp 1-13.

Chu Thanh, (2014). Accounting changes in a transition economy: the case of Vietnam. Doctoral dissertation. University of Wollongong. May, 2004. Research online. Available at http://ro.uow.edu.au/thesis/1903.

Christoper W. Ruchkel, (2011). Small Medium Enterprise (SME) in Vietnam. Business-in- Asia.com. http://www.business-in-asia.com/vietnam/sme_in_vietnam.html. 2011

Christopher Nobes and Robert Parker (2000). Comparative International Accounting. Sixth Edition in Great Britant, 2000.

Dao X. T., (2010). Vietnam Accounting standard system- still necessary improve continuously. Vietnam Auditing Review. Vol. 12/2010.

Department of Accounting Policy (DAP), (2001). Theoretical framework of Vietnam Accounting Standards. Director by Phung Thi Doan, project under the Vietnamese Ministry of Finance. No. 2000-98-027, May, 2001.

Drew Sauders, (2009). A theory of financial Innovation and Monetary Substitution with an Application to a Century of Data on the M1- Income Ratio (Preliminary). Purdue University, March 2009.

Everett Michael Rogers (1995). Duffusion of Innovation. Fith Edition. The Free Press. NewYork. – ISBN 0-02-926671-8. Pp161-251

Everett M. Rogers (2003). Duffusion of Innovation. Fith Edition. The Free Press, New York.

François Bourguigon and Amedeo Spadara, (2005). Microsimulation as a Tool for Evaluating Redistribution Policies. Working paper No 2005-02. Paris –Jourdan Sciences Economiques. Alshs-00590863, version 1-5 May 2011.

John Willey, (2011). IFRS-Practical Implementation Guide and Workbook. Second Edition. ISBN:978.0470-17022-9.

Josep A.Schumpeter, (1939). Business Cycles: A heoretical, Historical, and Statistical Analysis of the Capitalist Process. First Edition. Vol II, McGraw Hill Book Company. Inc.

Ian Coxhead, (2007). Globalization, Poverty anf Environment in Vietnam. A review of empririics, methods and policy issue. Research proposal. Ford Foundation project. Universit of Wisconsin- Madison. July, 2007.

International Accounting Standards Board (IASB), (2004). International Accounting Standards.

KPMG, (2012). Vietnam: Taxation of Cross-Border Mergers and Acquisitions. Available at http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/cross-border-mergers-acquisitions/Documents/vietnam-2012.pdf.

Lisa Nguyen, Keith Hooper and Rowena Sinclair, (2012). Resistance or Change in the Vietnamese Accounting Field? Proceeding s of World Business and Economic research conference, 2012. Corporate Ownership and Control journal. Volume 11, Issue 1, 2013 Available at SSRN Library.

Nguyen Dang Thanh, (2002). Effect of Economic Globalization on Developing countries. Nature, Society and Thought journal. Vol. 5 No. 2 (2002). PP 221-232.

Nguyen, C. P., and Richard J., (2011). Economic Transition and Accounting System Reform in Vietnam. European Accounting Review (ISI). Vol. 20, N.4. Pp: 693-725, 2011.

Nguyen, T. P. U., (2013). Conservation, Change and Resistance: A Bourdieuian study of Vietnamese accounting field. Doctoral dissertation. Auckland University of Technology. 2013.

Nguyen, T. A. and Guangming Gong, (2012). Vietnamese Accounting Reform and International Convergence of Vietnamese Accounting Standards. International Journal of Business and Management. Vol. 7, No. 10; May 2012.

Ministry of Finance, (2010). “Decree No 443/QD-BTC date 10/3/2010: Processing of the building or publishing Accounting Standards” (in Vietnamese)

Ministry of Finance, (2011). “Decision No 1001/QD-BTC date 4 May 2011: Reforming the Vietnamese Accounting standards Board” (in Vietnamese).

Ministry of Finance, (2013). National Debt Statistical Data 2010-2012. Department of Debt Management and External Finance (DMEF). Bulletin Public Debt. Vol. 2, October, 2013.

Mai, T. H. M., (2010). Examine the making Consolidate Financial Statements following VAS. Vietnam review of Accounting (in Vietnamese), available at http://www.tapchiketoan.com.vn, 17th March 2010.

Manfred Moldascl, (2010). Why Innovation Theories Make no Sense. Papers and Preprints of Department of Innovation Research and Sustainable Resource Management (BWL IX), Chemmitz University of Technology. No. 9/2010. pp1-18

MoIT – UNIDO, (2011). Vietnam Industrial Competitiveness Peport 2011. Ministry of Industry and Trade of Vietnam and United Nations Industrial Development Organization, pp88

Ngo, T. C., and Pham, V. D., (2013). Vietnamese Accounting System: The sketch of Establisment and Development. Financial Academic (in Vietnamese). Publishing licence No:16-2013/CXB/322-160/TC and QDXB: 163/QD-NXBTC. 13th August, 2013.

Oliver Gassmann and Ellen Enkel, (2004). Towards a Theory of Open Innovation: Three Core Process Archetypes. R&D Management Conference (RADMA), July, 2004.

Phan, T. H. D, Bruno Mascitelli and Meropy Barut (2010). Reception of Accounting Professionals towards International Financial Reporting Standards (IFRS) in Developing country: Evidence from Vietnam. Proceedings of 3th Global Accounting, Finance and Economics Conference. 5-7 may, 2013, Ryges Melbourne, Austrulia. ISBN: 978-1-922069-23-8.

Phan, T. H. D, Bruno Mascitelli and Meropy Barut (2014). Reception of Accounting Professionals towards International Financial Reporting Standards (IFRS) in Developing country: The case of Vietnam. Global Review of Accounting and Finance. Vol. 5, No 1 March, 2014. Pp 132-152.

Pham, T. H. T., (2010). De-jure convergence between Vietnamese and international accounting standards. Journal of Science and Technology. Da-Nang University, Vol. 5(40).2010, pp 155-164.

Phi, T. D. H., (2008). The current regime of accounting for Agricultural Cooperatives – many inadequate points, Vietnam Review of Accounting, 2008, Vol 70: 33-34. ISSN1859-1914

Ramanna and Ewa Sletten, (2009). Why do countries adopt International Financial Reporting Standards?. Working paper, 09-102. Harvard Business School, 2009.

Rhys Jenkins, (2006). Globalization, FDI and Employment in Vietnam. Transnational Corporations, April 2006. Vol . 15, No .1. p115-142.

State Secretariat for Economic Affair (SECO), (2013), Vietnam Country Strategy 2013-2016. Swiss Economic Cooperation and Development. Publishing licence No: DKKHXB 384-2013/CXB/465-20/KHKT and QDXB: 185/QDXB-NXBKHKT, 11st September, 2013.

Stefan Meyer and Nils – Sjard Schulz, (2008). Ownersip with Adjectives Donor harmonization : between Effectiveness and Democratization Synthesis Report. Working paper. Fride, March, 2008.

Thanh Minh Vo Bui, (2011). A study of the development of Accounting in Vietnam. Doctoral dissertation in English. School of accounting, College of Business, RMIT University. RMIT, Melbourne, August, 2011. pp462

Tran, Q. T., (2013). Constructivist of Vietnamese Financial Statement standard to convert international accounting standards. Doctoral dissertation (in Vietnamese). University of Economics Ho Chi Minh city. May, 2013.

Tran, T. C., Le, X. S., and Nguyen, K. A., (2008). Vietnam's enterprises development: Chracteristics, constraints and policy recommendation. SME in Asia and Globlization, ERIA research project report. 2007.5. pp 323-364.

Uwe Schmidt, (2004). Vietnam's integration into the global economiy: achievement and challenges. Asia Europe journal (2004) 2:63-83. DOI: 10.2007/S10308-004-0075-Y.

VACPA-CAPA conference, (2012). The Vital Role of Professional Accountancy Organizations. Discussion papers on proceeding of The Vietnam Association of Certified Public Accountants Conference. August, 2012. Pp96

Vietnam Assembly, (2003). "Law No 03/2003/QH11: Accounting Law date 17th June 2003".

Vietnam Assembly's Economic Committee, (2013). Vietnamese economy 2013- after one year with the re-structure of economy. Spring 2013 report. Project under UNDP, 2013. Tri Thuc Publishing license, 2013. Pp671.

Vo, V. N and Le, H. P., (2011). Convergence between Vietnamese and International Accounting Standards: The current situation, causes and oriented development. Vietnam Auditing Review (in Vietnamese). Vol 12, 2011.

Vu X. T., (2007). The drawbacks of Accounting practice in Vietnamese enterprises and recommendations. Vietnam journal of Economic Management (in Vietnamese). Vo1. 6 (9+10/2007), pp 54-57,72.

Vu X. T., (2011). Review Accounting law 2003. Working paper under government project for renovation of legal framework, VFAM, 2011.

NONLINEARITY BEHAVIOUR OF EXCHANGE RATES IN TURKEY: EFFECTS OF ECONOMIC AND POLITICAL EVENTS

Recep KARABULUT*
Prof. Ahmet UĞUR**

Abstract

The purpose of the study is to determine the non-linear dependence and events that lead to non-linearity by using daily observations for the US Dollar-Turkish Lira nominal exchange rates since 1990. In order to determine the non-linearity behaviour of US Dollar-Turkish Lira exchange rate, the Hinich(1996)bicorrelation test that uses Hinich and Patterson (1995) non-overlapped windowed approachis applied. According to the results of these tests, mostly the political and economic events have caused the nonlinearity to exchange rates in Turkey.

Keywords: *Nonlinearity, Hinich test, exchanga rates in Turkey*

Jel Classification: *C32, E44*

* Assoc. Prof.Recep KARABULUT, İnönü University, Turkey, recep.karabulut@inonu.edu.tr, Phone: +90 422 3774373
** Assoc. Prof. Ahmet UĞUR, İnönü University, Turkey, ahmet.ugur@inonu.edu.tr, Phone: +90 422 3774292

1. INTRODUCTION

Along with the beginning of the application of the flexible exchange rate system, prediction of exchange rate movements gained importance. Changes in exchange rates havean effect on imports, volume of external trade, balance of payments, inflation and public debt.In this respect, exchange rate is an important factor in an economy as both an importantindicator of total demand and also in the application of financial policies.

Exchange rate fluctuations are difficult to reconcile with linearmodels that focus on commodity prices, productivity, interestrate differentials, and demand and supply shocks, sincemany linear economic time series are contaminated by occasional outliers. Inparticular, given the changes in exchange rate regimes, financial or political crisis and othersharp disturbances, exchange rates are subject to substantial variations. Moreover, the non-linear properties of the series are reflected in a fewobservations. Eliminating outliers sometimes can lead to the omissionof valuable information about the equilibrium (Villavicencio, 2008). Therefore, it is crucial to determine the non-linearity of exchange rates. Testing for non-linear dependence has become an important area of research in financial econometrics. If financial time series have non-linearity, then forecasts may be improved by switching from a linear to a non-linear modelling strategy (Brooks, 1996).

In this study, since Turkey as an emerging country and one of the fastest growing economies during the last decade, we investigate the US Dollar–Turkish Lira nominal exchange rate. The political and financialinstability that arises from time to time in Turkey, have been shown to produceepisodic nonlinearities in the exchange rates.We use Hinich portmanteau bicorrelation non-parametric test (Hinich and Patterson,1995) that Hinich (1996) uses the windowed testing procedure for detecting episodic nonlinearity intime series data, to detect major political and economic eventsthat have affected the US Dollar–Turkish Lira nominal exchangerate. The purpose of this paper is to determine the non-linear dependence and which events that leads to non-linearity in the behavior of Turkish exchange rates.This is the first study that examines non-linearity in the US Dollar-Turkish Lira exchange rates and identifies which positive/negative national and international events cause this non-linearity. In this way, the study provides to the investors and policymakers of Turkey with information about the events/subjects that cause non-linearity in Turkish exchange rates.

The remainder of this paper is organized as follows. The next section briefly explains the historical developments in Turkish exchange rate regimes. Section 3 summarizes existing literature related with the topics in this paper. Section 4 introduces methodology and then describes data. Section 5analyzes the empirical findings. Finally, conclusions are presented in Section 6.

2. A BRIEF HISTORY OF TURKISH EXCHANGE RATE REGIME

Turkey experinced a regime shift with 1980 economic reforms to exit from import substitution based growth strategies to expert-led growth. Also, financial liberalization began with these reforms. The adjustable peg exchange rate regime was left in 1981 and exchange rates are published on a daily basis, which meant a change to crawling-peg exchange rate regime. Those were the years to subsidize exports with competitive exchange rates to prevent another balance of payment crisis. With the help of the IMF stand-by agreements, the main target was to open the economy to international markets. To achieve this target, de jure convertibility was declared in 1984 even it was 1989 that Turkey erased all kind of capital controls. This year, banks were allowed to offer foreign exchange accounts to their customers. As many central banks around the World, the Turkish Central Bank has also tried monetary targeting in the 1990s. With major debt mismanagement strategies by then the government led to a financial crisis in the beginning of the 1994 and Turkey became a rare example of devaluation of 13,6%under crawling peg exchange rate regimes.

In the period of November 1995 until December 1999, the exchange rate policy conducted by the Turkish Central Bank gave emphasis to especially achieving andsustaining stability in the financial markets. The crawling peg regime has adjusted somewhat close to a managed float with increased involvement of the Turkish Central Bank in the foreign exchange markets. Within this framework, the exchange rate policy aimed at minimizing fluctuations in the real exchange rates. According to the stand-by agreement signed with the IMF at the beginning of 1995, the increase in the foreign exchange basket was targeted to increase by as much as the monthly inflation rates that were also projected in this agreement. The exchange rate policy of the period was to devalue the Turkish lira daily in line with the inflation against a currency basket consisting of 1,00 US Dollar and 1,50 Deutsche Mark.

In 2000, along with the execution of a Stand-by-Agreement with IMF, the exchange rate basket for the following twelve months was announced on a daily basis as a precondition of Exchange Rate Based Stabilization (EBRS) Program. The managed float regime was replaced with tablita regime. With the daily announcement of exchange rate basket, provision of an anchor for inflation expectations has been aimed. A gradual shift toward a more flexible exchange rate regime was intended to begin on July 1, 2001, with the introduction of a progressively widening band around a central exchange rate path. The width of the band was expected to gradually expand from 7,5%in July/December 2001 to 15% in January/June 2002and to 22,5%in July-December 2002. The exchange rate was expected to become freely floating beginning from 2003. However, the financial crisis in February 2001 was increased the cost of continuing the pre-announced exchange rate regime and free floating became effective just after the crisis, almost a year earlier than programmed (Gormez et. al., 2007).

The global financial crisis in 2008 led to a considerable depreciation of the Turkish lira and thereby the Turkish Central Bank launched the monetary expansion process in November 2008. After the global financial crisis, even though the Turkish Central Bank continues to implement floating exchange rate regime, changes in the real effective exchange rate indices are closelymonitored and policy measures are taken in order to maintain financial stability (Adıguzel et.al., 2014).

3. LITERATURE REVIEW

Existing literature have widely examined the existence of nonlineardependencies in exchange rate return series. Purchasing power parity (PPP) has occupied the centre stage of these researchs in nonlnear dynamics of exchange rates. Numerous tests have been developed for testing the presence of nonlinear dependence infinancial time series. However, given the underperformance ofthe class of nonlinear models in out-of-sample forecasting, significant new research is needed in thisarea. As it is argued that the nonlinearity in exchange rates could simply be due to structuralbreaks or outliers in the series, and the role of outliers needs tobe examined more carefully.

Some theoretical models with non-linear adjustment of the exchange rate are developed by Dixit (1989); Dumas (1992); Uppal (1993); Coleman (1995); Sercu et al. (1995); Shleifer andVishny (1997); and O'Connell (1998). These models suggest that the exchange rate puzzles may be a result of incorrectly using a linear framework rather than a symptom of deeper problems with PPP and FPMM (Flexible Price Monetary Model)models. A number of empirical studies, including Obstfeld and Taylor (1997), Michael et al. (1997), Taylor and Peel (2000), Taylor, Peel and Sarno (2001) and Baum et al (2001) have found evidence of this. These studies allow for the type of non-linear behaviour predicted by theory by using the threshold autoregressive (TAR) model (Tong, 1990) or the exponential smooth transition autoregressive (ESTAR) model (Granger and Teräsvirta, 1993), in which the behaviour of exchange rates differs between an "inner regime", where exchange rates are close to fundamentals and an "outer regime", wherethe gap between exchange rates and fundamentals is larger. Although they allow exchange rate adjustment to vary with the size of the gap between exchange rates and fundamentals, they do not allow for other forms of non-linearity.

The literature on the behavior of Turkish exchange rates showsthat there is no consensus whether PPP hypothesis holds. On the onehand, some studies find evidence on the validity of PPP hypothesis(Erlat, 2003; Guloglu et al., 2011; Kalyoncu, 2009; Sarno, 2000;Yazgan, 2003). On the other hand, some studies find out the lack ofPPP hypothesis (Doganlar et al., 2009; Erlat and Ozdemir, 2003;Telatar and Kazdağlı, 1998).

Arghyrouet.al. (2006) investigates asymmetric exchange rate adjustment. They use thequadratic logistic Smooth Transition Error Correction Model (QL-STECM) and investigate the nominal exchange rates between the Greek Drachma and theTurkish Lira against the ECU (the Euro since 1999). Their main finding is that exchange rates adjustment is asymmetric. They also find that exchange rates are more responsiveto over-valuations than to under-valuations.

Kadılar et.al. (2009) employ Artificial Neural Network (ANN) method for high volatility Turkish TL/US dollar exchange rate series andthe results show that ANN method has the best forecasting accuracy with respect to time series models, such asseasonal ARIMA and ARCH models.

Erlat (2004) test if Turkish real exchange rates have a linear unitroot or are generated by an Exponential Smooth Transition Autoregressive Modelfor the post-1980 period. Using two real exchange rates, one with the USA and theother with Germany, strong evidence of nonlinear stationarity was found for the USCPI-based series but no such evidence for the DM CPI-based series.

Alptekin (2006)has examined the long memory behavior of realexchange rate of USD/TRL over the period of 2005-2006. Themethod was based on the most recent test of long memory of atime series. The results show that US Dollar against to NewTurkish Lira real exchange rate series exhibit long memory byall of three tests.

This paper tries to extend the nonlinearity behaviour of Turkish exchange rate and contributes to the literature by filling the gap in the literature by using the Hinich portmanteau bicorrelation non-parametric test. This paper is the first study that uses the Hinich portmanteau bicorrelation non-parametric test on the subject in Turkey.

4. METHODOLOGY

In order to determine the non-linearity behaviour of US Dollar-Turkish Lira, the Hinich (1996) bicorrelation test that uses Hinich and Patterson (1995) non-overlapped windowed approach is applied. The Hinich and Patterson (1995) test procedure involves dividing the full sample period into equal-length non-overlapped windows to capture episodic dependencies. Then, Hinich (1996) bicorrelation test is applied. The test procedure employs non-overlapped data window, thus if n is the window length, then the k-th window is {$y(t_k)$, $y(t_k+1)$,….., $y(t_k+n-1)$}. The next non-overlapped window is {$y(t_{k+1})$, $y(t_{k+1}+1)$,….. $y(t_{k+1}+n-1)$}, where $t_{k+1} = t_k+n$.

The C statistic, which is developed for the detection of linear serial dependencies within a window, is defined as:

$$C = \sum_{r=1}^{L}[C_{ZZ}(r)]^2 \; \tilde{} \; X^2(\mathrm{L})$$

Where

$$C_{ZZ(r)=(n-r)^{\frac{1}{2}}\sum_{t=1}^{n-r} Z(t)Z(t+r)}$$

The Z(t) are the standardized observations, obtained by subtracting the sample mean of the window and dividing by its standard deviation. The H statistic, which is developed for the detection of non-linear serial dependencies within a window, is defined as:

$$H = \sum_{s=2}^{L}\sum_{r=1}^{s-1} G^2(r,s) \;\; \sim X^2(L-1)(\frac{L}{2})$$

Where

$$G(r,s) = (n-s)^{\frac{1}{2}}C_{ZZ}(r,s)$$

In both the C and H statistics, the number of lags L is specified as $L = n^b$ with $0 < b < 0.5$, where b is a parameter under the choice of the user. Based on the results of Monte Carlo simulations, Hinich and Patterson (1995) recommended the use of b=0,4.

The null hypothesis for each window is that the transformed data are realizations of a stationary pure white noise process that has zero correlation (C) and bicorrelation (H). Thus, under the null hypothesis, the correlation (C) and bicorrelation (H) are expected to be equal to zero. The alternative hypothesis is that the process in window has some non-zero correlation (second order linear) or bicorrelations (third order non-linear dependence).

5. DATA

In the study, nominal exchange rates of working days are used. The data coverage is from 2_{nd} January 1990 to 7_{th} August 2014. Why the beginning of the data is selected second of January 1990 is that with theDecree no. 32 (on the protection of the value of Turkish currency) all capital controls were eliminated and banks were allowed to offer foreign exchange accounts to their customers in 1989. Therefore, the beginning date of the data is chosen one year later. The data used for analysis were obtained from the Turkish Central Bank. The data is transformed into continuously compounded percentage daily returns using the following formula:

$R_t = 100* \ln(ER_t/ER_{t-1})$

whereER_t is the exchange rate on day t, and ER_{t-1} the exchange rate on the previous day (Lim et.al, 2003:347).

In order to remove serial correlation in the frame, which would invalidate the null hypothesis of independence of the H test, we fit an autoregressive (AR) model of each frame. The portmanteau bicorrelation test is then applied to the residuals of the fitted AR(p) model. It is worth noting that the AR fitting is employed purely as a ‘pre-whitening’ operation and not in order to obtain a model of ‘best fit’. For determining the AR lag length we use Schwarz information criterion and find AR(1) for the exchange rate data.

After determining the lag length, the frame length of each window should be selected. The larger the frame length, the larger the number of lags and hence the greater the power of the test, but at the ‘expense’ of increasing the uncertainty of the event time when the serial dependence ‘episode’ occurs (Wild et.al, 2008). In this article, the return data is split into a set of equal-length non-overlapped moving frames of 30.

6. EMPRICAL RESULTS

After fitting AR(1) model to the exchange rate series, the portmanteau bicorrelation test is then applied to the residuals of the series. Table 1 presents the results for the bicorrelation test for services returns series

As seen in the Table 1, there are 206 windows and 13 of these windows are found significant, in other words the null hypothesis of zero bicorrelation is rejected by H statistic, therefore it can be say that there is nonlinear dependence in these windows. The rejection percentage is given in the parenthesis. Regarding this rate, it is obvious that US Dollar-Turkish Lira exchange rate series exhibits nonlinearity in a few short episodes, but in the remaining time, the series are characterized by pure noise.

In order to provide further insight into issue of non-linearity in exchange rates, we use the approach of Lim and Hinich (2005) and Lim *et al* (2006). They propose that the non-linear dependency is first detected through Hinich (1996) bicorrelation with windowed procedure and identifying major events occurred during the significant window period which exhibited non-linear dependency. Following this framework, we attempt to identify those events which probably induced non-linear dependency in those window periods which are found to be significant by Hinich (1996) test. The period of significant windows of respective

Table 1: Results of The HinichBicorrelation Test

Fitted AR(p)	**Total Numberof Windows**	**Significant H Windows**	**Dates of Significant H Windows**
AR(1)	206	13 (6,3%)	26/07-06/09/1991
			05/02-18/03/1993
			13/12/1995-25/01/1996
			15/03-26/04/2001
			24/12/2002-04/02/2003
			31/07-10/09/2003
			09/03-19/04/2004
			08/08-19/09/2005
			03/07-13/08/2007
			14/08-25/09/2007
			14/07-24/08/2009
			29/07-11/09/2013
			24/01-06/03/2014

indixes are given in the last column of Table 1.

In the first date interval of exchange rate series, in Turkey, there had been widely terrorist attacks and there had been political conflicts so thatTurkish National Assembly taken the decision of early election. In the second interval, there was widespread terroristic events and some major political and military characters were killed. In the third interval, general elections was hold and the islamic party of Refah Party came out the first party in the elections. In the fourth interval, after the political crisis between the Prime Minister and the President of Republic, Kemal Derviş was appointedas the Minister of State for Economic

Affairs. He decleared a new economic program. In the fifth interval, RecepTayyipErdoğan was elected as the president of Adalet and Kalkınma Party (AK Party- Justice and DevelopmentPatry) and he was decleared as the deputy candidate of Siirt elections by the party. In the sixth interval,US said that he was ready to give 8,5 billion US dollar aid to Turkey for the Irak War and due to the extreme volatility in exchange markets Turkish Central Bank interfered in the exchnages. In the seventh interval, consumer price index fallen below the %10 first time in Turkey and Standart&Poors increased Turkish credit note from B to BB. In the eigth interval, FED increased the interest rates and the petrol prices increased from 30 US dollar to 70 US dollar. Political developments and conflicts had dominated the nineth and tenth intervals. In July 2007, general elections was hold and AK Party was the first part again. After general elections in August 2007, Abdullah Gül (AK Party candidate) was elected as the eleventh President of Turkish Republic.

The eleventh interval was the economic and financial crisis year of Turkey due to the global crisis in US and Europe. In this period, GDP decreased approximately 3%, industrial production index decreased about 10%, consumer price index fallen to 5%. In the twelfth interval, due to the FED’sannouncement of tapering of QE and İstanbul-Taksim Gezi Park protests, Turkish Lira had depreciated in June and July 2013. This depreciation had continued in August and September because of uncertainity of new president of FED. In the last interval, due to judiciary conflicts between the government and the office of the public prosecutor, exchange rates had continued to depreciate. Thus, Turkish Central Bank increased the indicator interest rate, namely one-week repo rate from 4,5%to 10%.

7. CONCLUSION

This paper attempts to test nonlinear dependence in the US Dollar-Turkish Lira exchange rates. Although the issue of nonlinear dependence has gained importance recently, it hasn’t discussed sufficiently for Turkish exchange rates, yet. Therefore, this paper contributes to the literature of nonlinearity in Turkish exchange rates.

According to the results of the HinichBicorrelation test, the nonlinear serial dependencies are episodic in nature, that is, the reported nonlinear dependencies are not consistent during the whole period. The return series of indexes follow pure noise process most of the periods. In the study, in addition to finding the episodes of presence of nonlinearity, the key events which cause this nonlinearity are also explained briefly. After analysing these events, it can be said that political conflicts, elections, financial and economic events mostly affect the exchange rates in Turkey.

REFERENCES

Adıguzel, U., Sahbaz, A., Özcan, C. C., &Nazlioğlu, S. (2014). The behavior of Turkish exchange rates: A panel data perspective. *Economic Modelling*, 42, pp.177-185.doi:/10.1016/j.econmod.2014.06.014

Alptekin, N. (2006). Long memory analysis of USD/TRL exchange rate.*International Journal of Human and SocialScience*,1(2), pp.111-116 http://www.academia.edu/1563472/Long_memory_analysis_of_USD_TRL_exchange_rate, 2014.06.014

Arghyrou, M. G., Boinet, V., & Martin, C. (2006). Non-linear and non-symmetric exchange rate adjustment: Evidence from medium and high inflation countries. *Journal of Economics and Finance,* 30, pp.38-56.

Baum, C.F., Barkoulas, J.T., &Caglayan, M. (2001).Non-linear adjustment to purchasing power parity in the post-Bretton Woods era.*Journal of InternationalMoney and Finance* 20, pp. 379-399.

Brooks, C. (1996). Testing for non-linearity in Daily sterling exchange rates. *Applied Financial Economics,* 6, pp.307-317.

Coleman, A.M.G. (1995).Arbitrage, storage and the law of one price: New theory for the time series analysis of an old problem.Discussion Paper, Department of Economics, Princeton University.

Dixit, A.K. (1989).Hysterisis, import penetration and exchange rate pass-through.*Quarterly Journal of Economics*,104, pp.205-228.

Doganlar, M., Bal, H., &Ozmen, M.(2009). Testing long-run validity of purchasing power parity for selected emerging economies.*Applied Economics Letters*.16, pp.1443–1448.

Dumas, B. (1992). Dynamic equilibrium and the real exchange rate in spatially separated World.*Review of Financial Studies*,5, pp.153-180.

Erlat, H. (2004). Unit roots or nonlinear stationarity in Turkish real exchange rates.*Applied Economics Letters*, 11, pp.645-650.doi: 10.1080/1350485042000238870

Erlat, H.(2003). The nature of persistence in Turkish real exchange rates, emerging markets.*Finance Trade*, 39, pp.70–97.

Erlat, H., N. Ozdemir, (2003).A Panel Approach to Investigating the Persistence in Turkish Real Exchange Rates, Topics in Middle Eastern and North African Economies, electronic journal, ed. E. M. Cinar, Volume 5, Middle East Economic Association and Loyola University Chicago, September, http://www.luc.edu/publications/academic/

Gormez, Y., & Yılmaz, G. (2007).The experience of exchange rate regimes in southeastern Europe in a historical and comparative perspective.Second Conference of the South-Eastern European Monetary History Network.

Granger, C.W.J., &Teräsvirta, T. (1993).Modelling Non-linear Economic Relationships, Oxford University Press, Oxford.

Guloglu, B., Ispir, S., &Okat, D.(2011).Testing the validity of quasi PPP hypothesis: evidence from a recent panel unit root test with structural breaks.*Applied Economics Letters*, 18 (18), pp.1817–1822.

Hinich, M.J., &Patterson, D.M. (1995).Detecting epochs of transient dependence in white noise. Mimeo: Univeristy of Texas at Austin.

Hinich, M.J. (1996).Testing for dependence in the input to alinear time series model.*Journal of Nonparametric Statistics*,6, pp.205-221.

Kadılar, C., Simsek, M., &Aladağ, Ç. H. (2009). Forecasting the exchange rate series with ann: The case of Turkey. *Ekonometriveİstatistik*, 9, pp.17-29.

Kalyoncu, H.(2009). New evidence of the validity of purchasing power parity from Turkey.*Applied Economics Letters*, 16, pp.63–67.

Lim, K.P., Hinich, M.J.,&Liew, V.K. (2003). GARCH diagnosis with portmanteau bicorrelationtest: An application on the Malaysia's stock market.EconWPA, http://128.118.178.162/eps/fin/papers/0307/0307013.pdf.2014.06.014

Michael, P., Nobay, A.R.,& Peel, D.A. (1997). Transaction costs for non-linear adjustment in real exchange rates: An empirical investigation.*The Journal ofPolitical Economy* 105, pp.862-879.

O'Connell, P.G.J. (1998).Market frictions and real exchange rates.*Journal of International Money and Finance*,17, pp.71-95.

Obstfeld, M., & Taylor, A. (1997).Non-linear aspects of goods market arbitrage and adjustment: Hecksher's commodity price points revisited.*Journal of Japanese andInternational Economies*,11, pp.441-479.

Sarno, L.(2000). Real exchange rate behavior in high inflation countries: empirical evidence from Turkey, 1980–1997. *Applied Economics Letters,* 7, pp.285–291.

Sercu, P., Uppal, R., & Van Hulle, C. (1995). The exchange rate in the presence of transaction costs: Implications for tests of purchasing power parity.*Journal ofFinance*,50, pp.1309-1319.

Shleifer, A., &Vishny, R.W. (1997).The limits of arbitrage.*Journal of Finance*,52, pp.35-55.

Taylor, M.P., & Peel, D. (2000). Non-linear adjustment, long-run equilibrium and exchange rate Fundamentals.*Journal of International Money and Finance*,19, pp.33-54.

Taylor, M.P., Peel, D.A., &Sarno, L. (2001).Non-linear mean-reversion in real exchange rates: toward a solution to the purchasing power parity puzzles.*InternationalEconomic Review*,42, pp.1015-1042.

Telatar, E., Kazdagli, H.(1998). Re-examine the long-run purchasing power parity hypothesis for a high inflation country: the case of Turkey 1980–93. *Applied Economic Letters*, 5, pp.51–53.

Tong, H. (1990). Non-linear time series: A dynamical system approach. Clarendon Press, Oxford.

Uppal, R. (1993).A general equilibrium model of international portfolio choice.*Journal of Finance*,48, pp.529-553.

Villavicencio, A.L. (2008). Nonlinearities or outliers in real exchange rates?*Economic Modelling*, 25, (4) pp.714-730.doi:/10.1016/j.econmod.2007.11.001.http://www.sciencedirect.com/science/article/pii/S0264999307001216.2014.06.014

Wild, P., Hinich, M.J. &Foster, J. (2008). Are daily and weekly load and spot price dynamics in Australia's national electricity market governed by episodic nonlinearity? School of Economics Discussion Paper No. 368.

Yazgan, M.E.(2003). The purchasing power parity hypothesis for a high inflation country: a re-examination of the case of Turkey. *Applied Economics Letters*, 10, pp.143–147.

FIRM VALUATION USING MARKET MULTIPLIERS: EVIDENCE FROM APPAREL AND LEATHER INDUSTRY IN ISTANBUL STOCK EXCHANGE

Cengiz TORAMAN*
Mehmet KÖRPİ**

ABSTRACT

There are different methods for determining the firm value. Although these methods vary, the main purpose is to determine the true value of the firm. In this study, comparative valuation methods specifically market multipliers is used for determining the value of corporations. We used data set of 20 firms operate in Clothing and Leather Industry in Istanbul Stock Exchange between the years of 2003-2012 to estimate the value of ROYAL HALI Co. which was offered to public in March 2013 and discussed the robustness of model for corporate valuation.

Keywords: *Firm Value, Market Factors, Istanbul Stock Exchange (BIST), Apparel and Leather Industry.*

Jel Classification: *G11, G30, L67*

* Prof. Dr.Cengiz TORAMAN, Gaziantep University, Faculty of Economics and Administrative Science, Department of Business Administration, cengiztoraman@gmail.com
** Lecturer Mehmet KÖRPİ, Gaziantep University. Vocational School Naci Topçuoğlu, mehmetkorpi@hotmail.com

1. INTRODUCTION

Value is a fictitious price determined by buyer and vendor for the commodity and service provided (Chambers, 2009: 5). Valuation is a monetary definition of all activities performed during identification of the value of assets. Valuation of a firm is to assign a value to that firm by considering all types of conditions and features the firm is in (Oymak, 2009:4). The aim of valuation of a firm is to determine the purchase and sale value of the subject asset assessed by buyers and vendors, without any coercion, who have full information related to the market value of assets (Bradford, 1993:7).

Beginning from early 1900s firm's aim has been defined as maximizing firm's profit, today it is defined as to maximize firm's current net value in terms of stakeholders (Üreten and Ercan, 2000:1-2). In line with this, the topic of valuation in literature takes place at top levels and along with a continuous increase in the importance of valuation, both financial academicians and implementers develop new methods to meet the needs.

Anthony (1960) highlighted that maximization was not the main aim of a firm and the points concerned about profitability alone would mean anything. He also stated that a firm's aim is not to maximize profitability but to maximize current value of the firm for its partners (Ercan et al., 2006:1).

Recently, due to a great increase in offers and demands for stock market equities as a result of developments in capital markets, going public and privatization, mergers and takeovers all over the world including Turkey, all types of investors are in need of valuation. Correct estimation of the real value of the firm is highly important for individuals responsible for management of assets in equity market.

2. COMPARATIVE VALUATION METHOD

The basis of comparative valuation is comprised of determining a firm's value by using data of comparative firms with the same characteristics. In a comparative valuation, the value of the firm is identified depending on some variables by taking the value of comparative equities into account (Park and Lee, 2003:332).

This method is based on the assumption that the company value of a firm to be appraised and the values of other firms that take place in the same market mean something to each other. This method attempts to estimate a company value by considering various ratios of other firms operating in the same sector. In this methodology the important point is the true coefficient method and correct selection of comparative firms (Üreten and Ercan, 2000:122).

This method, which is applied very easily and used by stock market analysts frequently, reflects the potential market perceptions of investors. The reasons for widespread use of this method are because it requires relatively small number of assumptions, it can be performed in a short time according to reduced cash flow methodology and it is easily understandable and expressible. In this method the difficulties in finding a comparative company and during comparison of similar international firms, the distinct accounting applications in different countries are the factors that make finding a real market value more difficult (Price Waterhouse Coopers Turkish Counseling Services, 2006:41).

In the comparative method the phases of valuation are determined as follows (Üreten and Ercan, 2000:123-126).

Selection of comparative firms: since other firms' coefficients will be used to find the price of firms being analyzed we should identify those firms similar to the firm to be analyzed and use them in evaluation.

Selection of ratios to be used: in theory there is no enlightening information related to which coefficients should be available in evaluation. Among the ratios called "Market Multipliers" the most often used five multiplies are;Price/Earning (P/E) multiplier, Market Value/Book Value (MV/BV) Price/Cash Flow (P/CF) multiplier, Price/Net Sale (P/S) multiplier, Firm Value / EBIT multiplier.

Finding the average of similar firms in sector: after a group gathered from the firms similar to the firm for which the value to be calculated, an average will be estimated for each ratio to be used.

Estimating the performance of the firm to be appraised: the magnitude of the criterion to be used in evaluation is estimated and this estimation is applied to the mean coefficient of the comparative firms.

Finding the firm's value: at this last phase firm's estimated value is established by applying predetermined average coefficient of the comparative firms to firm's predicted performance.

2.1. Price/Earning (P/E)

The starting point of this method is to find an appropriate multiplier coefficient between net profit per share and equity price. The Price/Earning (P/E) Ratio indicates that in respect to enterprise's net profit per equity of 1 TL, how much investor are willing to pay about the relevant equity (Konuk, 2006:53). In this method firm's value is calculated as follows;

P/E = Market Price of Equity / Net Profit Per Share

Firm's Value = Average P/E Ratio of the Sector Chosen or Market * Firm's Net Profit

2.2. Market Value/Book Value (MV/BV)

MV/BV ratio is found by dividing market value of equity by the value of resources per share. This ratio indicates how much higher the firm's market value than its resources. A company's resource is found deducting its debts from its total assets. In this method, firm's value is determined assuming that the firms' MV/BV ratios are similar to those firms present in the same sector (Oymak, 2009: 35). In this method firm's value is calculated as follows;

MV/BV= Market Value of Equity / Register Value per Share

Firm's Value = Average MV/BVRatio of the Sector Chosen or Market* Firm's Register Value

2.3. Price/Cash Flow Ratio (P/CF)

In P/CF method developed as an alternative to P/E ratio method, a relationship is established between market value and cash flows and similar firms' value is estimated through the help of this relationship (Chambers, 2009:224). Since amortization practices are different between companies, application of cash flow approach instead of profit approach will enable detection of a more realistic firm value (Ivgen, 2003: 124). In calculations sum of net profit and amortization is taken as a cash flow. In this method firm's value is calculated as follows;

Price/Cash Flow = Market Value of Equity / Cash Flow per Equity (Net Profit + Amortization)

Firm's Value = Average P/CFRatio of the Sector Selected and the Market* Cash Flow to Company

2.4. Price/Net Sale Ratio (P/S)

Price/Sale Ratio indicates how much higher the firm's value in market than its turnover rate. P/S coefficient is one of the methods most frequently used in comparison of the firms operating in the same industry. The assumption underlying this ratio is that the gross profit margin in one industry and effectiveness of an enterprise are usually similar (Üreten and Ercan, 2000:133). In this method firm's value is calculated as follows;

Price/Sale Ratio = Current Market Value of Equity / Sales Income per Equity

Firm's Value = Average P/S Ratio of the Sector Selected and the Market* Sales Income per Firm's Share

2.5. Firm Value/ Earnings Before Interest and Tax (FV/EBIT)

These are the values that emerge in case a firm is bought with all the debts and receivables during the current period and are calculated as follows (Ivgen, 2003:132);

FV/EBIT = Market Value of Resources + Market Value of Financial Liabilities (Financial Liabilities - Ready Values)/EBIT

This ratio is a useful method that takes the firm's cash flows as basis but it is criticized because it does not include the need for capital. EBIT indicates a firm's net profitability and capacity to pay debt. Since use of activity profit and net profit numbers when comparing enterprises would be misleading, use of EBIT in analyses is recommended.

3. LITERATURE

The concept of Firm Valuation was first suggested in a study carried out by Berle and Means in 1932. Subsequently, discussions related to this topic continued in studies carried out by Jensen and Meckling in 1976. The vast majority of the studies carried out in the following periods were concentrated on the relationships between firm's value and enterprise's performance. The increase in enterprise's performance will indirectly cause an increase in firm's value.

According to a study by Asquith (1983), valuation with market multiplier or comparative valuation method, also called gradual valuation, is the most often used method in analyses related to firm's valuation.

As a result of a study carried out by Tseng (1988), where he examined equities being processed in NYSE and AMEX between 1975 and 1985, he determined that in case market value is controlled the net effect of P/E ratio alone would not be significant.

In a study by Cheng and McNmara, where they questioned the relationship between USA companies' current market values and Price/Earning (P/E) and Price/Book Value (P/BV) ratios, P/E, P/BV and P/E – P/BV combination was related each other. In the study carried out, it was concluded that P/E ratio had an obvious superiority over P/BV ratio in terms of ability to explain company values and combined use of P/E and P/BV will explain company value better.

Cooke, Omura and Willett (2009) analyzed three accounting variables' relationships with market value through a vector error correction model by accessing 5 Japanese holdings' data related to 1950 -2004 period. The finding of research suggests a long-term relationship between assets' net register value and their market values in 4 of the 5 firms. Subject finding was interpreted as sufficient information in describing the market value of the variable of register value per share in the value relationship analysis.

In a study carried out by Çınabal (2008) on the data of 16 firms that were selected within the Stone and Earth-depended Industry functioning in IMKB, while the Price/Earning ratio made a positive contribution to 50 % of firms within the canonical equation produced, it made a negative contribution to the remaining 50 %. Market Value/Book Valuehave been a variable with both negative and reduced contribution in 94 % of companies.

Birgili and Düzer (2010), empirically investigated the relationship between financial ratios and firm's values by using data (2001 – 2006) of 58 enterprises that take place in IMKB-100. Empirical findings proved the presence of a significant positive relationship between P/E and MV/BV ratios (market multipliers) and firm's value.

Hatipoğlu (2011), in a gradual valuation method applied to 5 firms operating in IMKB energy sector, could not beestimated P/E and P/S ratio correctly for any of the firms. He made correct estimation about MV/BV in 2 firms, about P/CF in 1 firm and about FV/EBITonly in 1 firm. When generally evaluated, the reduced cash flows method yielded healthier results in estimating 2010 stock market performance of all firms than gradual valuation method.

The model developed as a result of a panel data analysis conducted by Savsar (2012) to investigate the relationship between firms' value and Stock Market Performance Ratios of those firms taking place in Food-Liquor-Tobacco, Main Energy and Metal Industrial sectors included in IMKB-100 index, was found statistically insignificant. That is, alteration in stock market performance ratios affect firm's value.

4. APPLICATION

4.1. Data Set

In study, data of 20 firms constantly functioning in Textile, Clothing and Leather Industry sectors in Istanbul Equity Stock Market (BIST) between 2003 and 2012 were used. Those firms that were removed from BIST quotation because of bankruptcy, missing data due to merger or for any reason were excluded from study.

Firms' data related to 2003 – 2008 period and 2009 – 2012 period were obtained from financial tables downloaded from official internet site of Istanbul Stock Market (BIST) and from official internet site of Public Illumination Platform (KAP) respectively.

Table 1: The Firms in BIST Textile, Clothing and Leather Industry Sector

O	ABBREVIATION	FIRM NAME
	ALTIN	ALTIN YILDIZ
	ARSAN	ARSAN TEKSTİL
	ATEKS	AKIN TEKSTİL

	BISAS	BISAŞ TEKSTİL
	BOSSA	BOSSA
	BRMEN	BİRLİK MENSUCAT
	DERIM	DERİMOD
	DESA	DESA DERİ
	ESEMS	ESEM SPOR GİYİM
0	GEDIZ	GEDİZ İPLİK
1	IDAS	İDAŞ
2	KORDS	KORDSA GLOBAL
3	LUKSK	LÜKS KADİFE
4	KRTEK	KARSU TEKSTİL
5	MEMSA	MENSA
6	MNDRS	MENDERES TEKSTİL
7	SKTAS	SÖKTAŞ
8	SNPAM	SÖNMEZ PAMUKLU
9	YATAS	YATAŞ
0	YUNSA	YÜNSA

4.2. The Market Multipliers Used

As market multipliers the most frequently used five multipliers were selected; Price/Earning (P/E) multiplier, Market Value/Book Value (MV/BV) Price/Cash Flow (P/CF) multiplier, Price/Net Sale (P/S) multiplier, Firm Value / EBIT multiplier.

4.3. Findings

The P/E ratios calculated using items of financial table of firms operating in BIST Textile, Clothing and Leather Industry Sectors for 10 years, are as follows;

Table 2: P/ERatios of Firms in Textile, Clothing and Leather Industry Sectors

F			**2**	**2**				**2**	**2**	
IRMS	**003**	**004**	**005**	**006**	**007**	**008**	**009**	**010**	**011**	**012**
A			4					5	3	
LTIN		1,05	,94	-	7,15		,65	,64	0,54	
A									1	
RSAN			-	-				-	1,13	6,26
A			1						2	
TEKS	0,79	,41	154,08	-				-	32,26	2,11
B										
ISAS			-	-		,18		-	-	
B			2	7				5	5	
OSSA	7,02	,62	1,76	,10	,36	,72		4,38	,21	,05
B										
RMEN	7,73	4,29	-	-	6,94			-	-	
D			1	6				1	1	
ERIM	1,01		0,34	,63	,98	9,69		7,48	1,29	2,69
D			1	1				9	3	
ESA		,65	1,42	4,77	,95			3,46	6,20	4,27
E								0	0	
SEMS			-	-	,13			,75	,31	,43
G								5	1	
EDIZ			-	-				,70	469,39	
I				2						
DAS	,05	,83	-	30,96			,19	-	-	
K			1	1				1	7	
ORDS	,81	,52	2,35	3,54	9,86	,12	2,08	6,23	,81	7,71
L			1	2				1	1	
UKSK	7,70	,76	1,64	1,46				98,02	3,73	3,80
K				2				5	1	
RTEK			-	6,72	0,84		5,79	6,83	9,06	
M			-	-				2	-	

EMSA		,12							1,14		
	M			1	7				5	4	
NDRS		7,74	4,75	7,80	,16			,11	,78	,64	
	S			3	1				9	9	
KTAS		,62	,87	1,46	4,91	,95	,34	7,71	,87	,17	
	S			8						4	
NPAM				6,24	-	6,90		5,46	-	9,55	4,85
	Y				1				6	1	
ATAS			5,58	-	1,56	,08		1,11	0,31	0,44	
	Y			9	5				1	7	
UNSA		6,84	,43	,40	,52	8,96			1,62	,68	0,81
	M			1	1				1	1	
edian		7,70	,42	2,35	3,54	,98	,12	3,77	6,85	1,21	5,27
	General Median						**12,52**				

As a result of calculations made, P/E ratios of firms functioning in Textile, Clothing and Leather Industry Sectors for 10 years were obtained. Since there were extreme end values when each year's average and general average are taken, the median method was used. Finally, the average P/E for related sector was found as 12,52.

The profit of the firm to be evaluated (ROYAL CARPET) at the end of 2012 is 41.940.000 TL and its number of equity being processed in stock market is 60.000.000. Firm's profit per share is 0,70 TL.

ROYAL CARPET firm's value per share = Industrial Average P/E * Firm's EPS (Earnings Per Share)

ROYAL CARPET firm's value per share = 12,52 * 0,70

ROYAL CARPET firm's value per share = 8,76 TL

The MV/BV ratios calculated using items of financial table of firms operating in Textile, Clothing and Leather Industry Sectors for 10 years, are as follows;

Table 3: MV/BVRatios of Firms in Textile, Clothing and Leather Industry Sectors

FIRMS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ALTIN	0,58	0,49	0,52	0,91	1,93	0,62	0,80	1,43	2,79	5,75
ARSAN	0,65	0,43	0,53	0,40	0,51	0,29	0,82	2,07	0,71	0,87
ATEKS	0,47	0,50	0,60	0,49	0,52	0,21	0,61	0,37	0,50	0,67
BISAS	0,44	1,25	0,79	3,00	4,75	0,87	-	-	-	4,78
BOSSA	0,46	0,46	0,53	0,78	0,58	0,78	0,89	0,82	0,77	0,41
BRMEN	1,17	1,02	1,05	0,89	0,78	0,25	0,27	0,76	0,83	0,90
DERIM	2,21	2,16	2,10	1,78	1,86	0,85	1,04	1,63	1,39	0,82
DESA	-	0,94	1,04	0,73	0,89	0,32	0,60	0,90	0,79	0,57
ESEMS	1,62	1,93	4,55	-	4,19	1,49	-	32,11	0,31	1,05
GEDIZ	0,69	0,87	0,91	0,89	0,36	0,15	0,52	0,27	0,72	1,77
IDAS	0,77	0,69	0,42	0,81	0,79	0,54	0,73	0,84	0,65	0,72
KORDS	0,91	0,81	1,43	1,14	1,23	0,37	0,58	0,81	0,75	0,83
KRTEK	0,42	0,57	0,49	0,50	0,64	0,16	0,95	0,94	1,13	0,80
LUKSK	1,18	1,05	1,53	1,40	2,21	1,23	1,73	1,00	0,72	0,55
MEMSA	0,46	1,18	1,34	0,21	0,75	0,46	0,82	0,97	0,46	0,51
MNDRS	0,45	0,30	0,45	0,41	0,48	0,16	0,40	0,46	0,83	0,50
SKTAS	0,35	0,42	0,50	0,39	0,69	0,26	0,38	0,72	1,19	0,63

SNPAM	1,10	1,07	1,00	0,81	2,18	0,50	1,69	2,91	2,91	2,42
YATAS	0,77	0,51	0,79	0,66	0,57	0,24	0,66	0,87	0,65	0,69
YUNSA	0,92	0,65	0,91	0,84	0,67	0,35	0,76	1,21	1,70	2,17
Mean	0,82	0,87	1,07	0,90	1,33	0,51	0,79	2,69	1,04	1,37
General Mean						**1,14**				

As a result of calculation made, average MV/BV ratios were obtained according to year. Average MV/BV for Textile, Clothing and Leather Industry Sectors was found as 1,14.

The register value of the firm to be evaluated (ROYAL CARPET) at the end of 2012 is 136.752.000 TL and its number of equity being processed in stock market is 60.000.000. Firm's BV per share is 2,28 TL.

ROYAL CARPET firm's value per share = Industrial Average MV/BV * Firm's BV per share

ROYAL CARPET firm's value per share = 1,14 * 2,28

ROYAL CARPET firm's value per share = 2,59 TL

The P/CF ratios calculated using items of financial table of firms operating in Textile, Clothing and Leather Industry Sectors for 10 years, are as follows;

Table 4: P/CF Ratios of Firms in Textile, Clothing and Leather Industry Sectors

FIRMS	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
ALTIN	4,62	3,54	3,01	14,87	13,94	23,16	4,17	4,89	20,13	-
ARSAN	11,79	16,79	36,48	4,16	11,42	-	-	-	4,38	7,71
ATEKS	6,62	4,40	9,54	7,74	39,05	-	9,60	-	13,22	9,32
BISAS	2,70	-	-	-	2,83	0,73	-	-	-	-

BOSSA	3,21	2,24	3,99	3,65	3,40	4,06	10,06	12,53	3,99	4,58
BRMEN	4,99	3,79	7,83	7,80	4,40	-	12,81	49,34	-	-
DERIM	28,40	5479,37	8,90	6,06	7,83	13,71	32,36	12,93	9,21	10,31
DESA	-	5,24	9,78	10,46	7,07	-	-	11,96	8,21	5,31
ESEMS	-	-	-	-	7,55	-	-	0,68	0,31	8,85
GEDIZ	-	-	-	-	9,46	-	-	2,22	11,12	-
IDAS	3,34	3,96	25,02	20,73	-	-	2,50	-	-	-
KORDS	5,42	6,43	9,65	7,14	10,12	2,95	4,93	6,93	4,81	7,04
KRTEK	2,61	4,63	-	5,48	5,00	16,40	11,32	15,69	10,71	-
LUKSK	14,50	5,95	11,64	8,48	53,55	-	21,89	36,29	10,14	6,80
MEMSA	1,71	-	-	-	-	-	-	15,54	-	-
MNDRS	5,87	3,66	4,87	3,38	8,15	12,41	2,85	3,40	3,73	24,07
SKTAS	1,58	2,12	3,77	2,67	3,30	1,45	2,13	3,28	5,58	-
SNPAM	-	28,63	23,30	-	19,78	-	11,75	209,43	34,88	41,30
YATAS	-	6,26	-	11,37	5,08	-	10,01	10,58	5,63	14,89
YUNSA	15,00	3,30	4,65	3,50	4,98	-	30,51	5,41	5,19	9,09
Median	4,99	4,51	9,22	7,14	7,69	8,24	10,03	11,27	6,92	8,97
General Median						**7,10**				

As a result of calculated made, P/CF ratios for Textile, Clothing and Leather Industry Sectors were obtained. Since there were extreme end values when each year's average and general average are taken, the median method was used. Finally, the average P/CF for related sector was found as 7,10.

The profit of the firm to be evaluated (ROYAL CARPET) at the end of 2012 is 41.940.000 TL and its amount of amortization is 9.395.000 and its number of equity being processed in stock market is 60.000.000. Firm's cash flow per share is 0,86 TL.

ROYAL CARPET firm's value per share = Industrial Average P/CF * Firm's CF per share

ROYAL CARPET firm's value per share = 7,10 * 0,86

ROYAL CARPET firm's value per share = 6,11 TL

The P/S ratios calculated using items of financial table of firms operating in Textile, Clothing and Leather Industry Sectors for 10 years, are as follows;

Table 5: P/SRatios of Firms in Textile, Clothing and Leather Industry Sectors

FIRMS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ALTIN	0,27	0,24	0,42	0,59	1,28	0,50	0,66	1,17	1,40	2,35
ARSAN	0,87	0,74	0,76	0,36	0,49	0,20	0,62	1,05	0,74	0,88
ATEKS	0,35	0,36	0,44	0,36	0,39	0,16	0,42	0,48	0,57	1,11
BISAS	0,15	0,43	0,23	0,14	0,34	0,24	0,85	1,68	1,71	1,85
BOSSA	0,42	0,44	0,64	0,78	0,53	0,84	1,03	0,74	0,75	0,47
BRMEN	0,37	0,34	0,40	0,30	0,31	0,10	0,30	0,67	0,70	1,01
DERIM	0,62	0,59	0,53	0,36	0,40	0,16	0,19	0,25	0,20	0,16
DESA	-	0,64	0,88	0,53	0,56	0,19	0,35	0,40	0,26	0,22
ESEMS	0,57	0,96	1,18	4,69	12,97	1,37	1,06	0,70	0,82	2,87
G	0	0	2	1	1	1	2	5	1	-

EDIZ	,40	,74	,89	,16	,39	,30	,76	,93	5,97	
IDAS	0,23	0,24	0,28	0,44	0,57	0,14	0,58	0,79	0,56	0,68
KORDS	0,74	0,72	1,42	0,75	0,59	0,22	0,42	0,51	0,42	0,47
KRTEK	0,29	0,43	0,39	0,34	0,47	0,12	0,66	0,62	0,67	0,40
LUKSK	0,92	0,99	1,51	1,19	2,06	1,45	1,70	2,89	1,43	1,46
MEMSA	0,22	0,36	0,21	0,25	3,68	0,85	6,96	19,39	1,54	3,18
MNDRS	0,35	0,24	0,40	0,33	0,34	0,13	0,33	0,38	0,60	0,33
SKTAS	0,30	0,39	0,56	0,44	0,65	0,23	0,37	0,62	0,90	0,62
SNPAM	1,11	1,49	1,99	1,37	4,26	0,89	7,57	9,35	9,68	8,52
YATAS	0,30	0,18	0,33	0,25	0,21	0,09	0,24	0,31	0,26	0,27
YUNSA	0,59	0,40	0,56	0,47	0,30	0,10	0,25	0,39	0,51	0,60
Mean	0,48	0,55	0,80	0,75	1,59	0,46	1,37	2,42	1,99	1,44
General Mean						**1,19**				

Through the calculations made, related sector's average P/S ratios according to years were obtained. Average P/S for Textile, Clothing and Leather Industry Sectors was found as 1,19.

Sum of the sales of the firm to be evaluated (ROYAL CARPET) at the end of 2012 is 222.496.000 TL and its number of equity being processed in stock market is 60.000.000. Firm's profit per share is 3,71 TL.

ROYAL CARPET firm's value per share = Industrial Average P/S * Firm's S per share

ROYAL CARPET firm's value per share = 1,19 * 3,71

ROYAL CARPET firm's value per share = 4,41 TL

The FV/EBIT ratios calculated using items of financial table of firms operating in Textile, Clothing and Leather Industry Sectors for 10 years, are as follows;

Table 6: FV/EBITRatios for Firms in Textile, Clothing and Leather Industry Sectors

FIRMS	**2003**	**2004**	**2005**	**006**	**2007**	**2008**	**2009**	**010**	**2011**	**2012**
ALTIN	8,39	5,73	6,87	,25	19,44	42,07	11,91	2,31	22,30	116,17
ARSAN	9,69	7,30	-575,94	,10	244,65	25,80	21,50	21,89	87,93	30,92
ATEKS	30,76	8,34	-18,16	0,48	-22,64	-16,00	16,96	24,21	15,34	-14,95
BISAS	2,38	-36,49	-2,16	3,63	-2,76	7,67	-982,35	1,63	10,75	25,21
BOSSA	18,01	2,51	6,01	,40	4,26	7,21	19,25	8,41	7,81	17,21
BRMEN	8,55	5,23	14,30	,83	51,61	202,34	-83,08	33,29	-66,69	-25,05
DERIM	-13,76	-2895,67	6,96	,77	5,79	3,15	6,61	,19	6,58	6,92
DESA	0,43	2,92	11,25	,09	-7,27	20,50	32,25	9,61	4,77	17,22
ESEMS	-6,58	-10,18	-29,98	17,98	18,60	-4,97	-1,86	9,13	-53,23	-302,21
GEDIZ	4,67	2,38	17,24	8,18	58,03	-46,34	18,46	,34	200,37	444,63
IDAS	3,11	3,32	21,07	1,65	-6,76	-4,86	-17,89	88,64	-6,75	-2,02
KORDS	5,74	5,29	7,35	,56	10,88	3,15	5,17	,54	5,32	8,73
KRTEK	5,01	5,53	-108,44	,65	6,32	6,00	13,81	,89	9,46	-56,28
LUKSK	6,09	3,98	16,56	,17	86,37	13,14	18,70	8,34	12,52	11,70
MEMSA	71,78	-9,36	-22,06	4,41	-22,70	7,44	-21,23	48,48	-13,17	-15,56
M	4	1	3		5	2	3		3	5

NDRS	,06	,54	,98	,41	,46	,99	,10	,04	,31	,80
S KTAS	2 ,86	2 ,44	4 ,87	,96	4 ,06	4 ,49	6 ,92	,86	8 ,38	- 25,39
S NPAM	9 ,77	1 2,99	8 9,34	3,26	4 7,37	- 12,53	7 28,64	8,23	4 4,48	5 4,12
Y ATAS	3 ,42	5 ,02	6 ,79	,82	5 ,34	7 ,88	9 ,02	0,62	- 35,02	1 0,12
Y UNSA	- 252,53	5 ,00	5 ,87	,61	6 ,83	7 ,88	1 0,45	,10	6 ,99	1 1,68
M edian	4 ,84	3 ,65	6 ,40	,63	6 ,05	6 ,61	9 ,73	,65	7 ,40	9 ,42
General Median						**6,00**				

Through the calculations made with median method since there were extreme end values, firm's average FV/EBIT ratios according to years were obtained. Average FV/EBIT for Textile, Clothing and Leather Industry Sectors was found as 6,00.

Sum of FV/EBIT of the firm to be evaluated (ROYAL CARPET) at the end of 2012 is 45.357.000 TL and its number of equity being processed in stock market is 60.000.000. Firm's EBIT per share is 0,76 TL.

ROYAL CARPET firm's value per share = Industrial Average FV/EBIT * Firm's EBIT

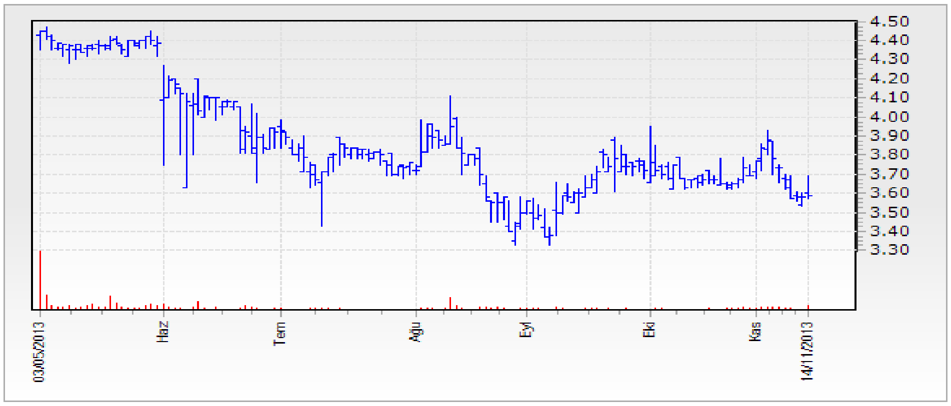
ROYAL CARPET firm's value per share = 6,00 * 0,76

ROYAL CARPET firm's value per share = 4,56 TL

Comparison of Market Multipliers

The 2013 year stock market performance of ROYAL CARPET which has gone public at 03 May 2013 is as follows;

Table 7: Stock Market Performance of Royal Carpet



Source: http://www.finnet.com.tr/f2000/Hisse/hisseanaliz.aspx?HISSENO=674&x=8&y=8

Table 8: Comparison of Market Multipliers

	P/E	**MV /BV**	**P/C F**	**P/S**	**FV/EBI T**
Firm Value	8,76	2,59	6,11	4,40	4,56
IPO Price Range	4,35 -4,75	4,35 -4,75	4,35 -4,75	4,35 -4,75	4,35- 4,75
Stock Market Performance for 2013	3,30 -4,50	3,30 -4,50	3,30 -4,50	3,30 -4,50	3,30- 4,50

ROYAL CARPET's value, Price/Sale and Firm's Value/EBIT ratios calculated by using comparative valuation method, concluded within going public price interval and took a value close to price movements. Other ratios could not enter in going public price interval and firm has made estimation out of stock market performance interval.

5. CONCLUSION

The valuation methods, that take market multipliers, calculated using historical data as basis are among the much more used methods, especially in Turkey. When the valuation reports issued in Turkey are examined, it is noted that market multiplies are analyzed after the reduced cash flows were analyzed. Since, so many factors do not have to be estimated and its easy applicability makes this method attractive.

In this study it was assumed that company value of a firm to be appraised and the company value of other firms taking place in the same market are meaningful for each other. The company value of ROYAL CARPET that has gone public on 03 May 2013 was tried to be estimated with the multipliers calculated using items of financial tables related to firms operating in BIST Textile, Clothing and Leather Industry Sectors for 10 years.

Firms that made loss were not taken into account while P/E ratio was calculated. This situation is the greatest disadvantage of the P/E ratio. Presence of end values is observed among the ratios calculated. ROYAL CARPET's value per share was calculated as 8,76 TL with P/E ratio. This price corresponds to firm's going public price interval and market performance interval for 2013. Firm's value per share calculated with MV/BV ratio is 2,59 TL. This price found is below firm's going public price interval and its stock market performance.

In the calculation made with P/CF method firm's value per share was estimated as 6,11 TL, but this price is above below firm's going public price interval and its stock market performance.

In P/S ratio method, firm's value per share was found as 4,40 TL. P/S ratio has made a correct estimation in terms ROYAL CARPET's going public price interval and its stock market performance, which functions in BIST Textile, Clothing and Leather Industry Sectors.

The FV/EBIT ratio has made an estimation of 4,56 TL in firm's value per share and a close estimation to stock market performance in going public price interval.

While the P/S and FV/EBIT ratios, from market multipliers, have made successful estimations, other ratios have been unsuccessful.

It is seen that reduced cash flows and market multipliers methods are used together during valuation of firms. The market multipliers method requires estimation of many factors. It's the most important disadvantage is inability to answer a number of questions. When it is thought that expectations related to future of firms are important for markets, it can be said that market multiplies calculated using historical data would not be sufficient in value valuation. When it is considered that markets behave according to cash flows, to use firm's value established through market multipliers together with the firm's value to be found through reduced cash flows method will yield healthier results.

REFERENCES

Anthony, R. (1960). *The Trouble With Profit Maximization*. Harward Business Review.

Aydoğan, K. Ve Güney, A. (1997). "Hisse Senedi Fiyatlarının Tahmininde F/Koranı ve Temettü Verimi". *İMKB Dergisi,* Cilt:1, No:1.

Birgili, E. ve Düzer, M. (2010). "Finansal Analizde Kullanılan Oranlar ve Firma Değeri İlişkisi: İMKB'de Bir Uygulama", Muhasebe ve Finansman Dergisi, 46, 74-83

Bradford, C. *"Corporate Valuation"*. John Wiley&Sons Inc, New York 1993, s. 7.

Brealey, A.R. ve Myers,C.S. *Principal Of Corporate Finance*, Fourth Edition, New York, McGraw-Hill Inc., 1993, pp. 830-831.

Chambers, N. (2009). *Firma Değerlemesi.* (2. Baskı). İstanbul: Beta.

Cooke, T., Omura, T., Willett, R. (2009). "Consistency, value relevance and sufficiency of book for market values in five Japanese conglomerates over the period 1950–2004", Journal of Accounting, Finance and Business Studies,Vol.45, No. 1, 88-123.

Çınabal, E. (2008). *Muhasebede Değerleme ve Firma Değeri İle İlişkinin Tespiti.* Yüksek Lisans Tezi, Gazi Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı Muhasebe-Finans Bilim Dalı, Ankara.

Çıtak,L.(2004)."F/K Oranları ile İMKB 100 Endeksi Arasındaki İlişkiler Üzerine Bir Araştırma". *Journal of Faculty of Business.* Vol:5, No:1,s:73–87.

Damodaran, A. (2002). *Investment Valuation.* USA, John Wiley & Sons Inc.

Ercan, M. Öztürk, M. Küçükkaplan, I. Başcı, E. & Demirgüneş, K. (2006). *Firma Değerlemesi ve Banka Uygulaması.* İstanbul:Literatür Yayınları.

Ertuğrul, M. (2008). "Değer-Fiyat Ayrımı ve İşletme Değeri: Kuramsal Bir Bakış". *Eskişehir Osmangazi Üniversitesi İ.İ.B.F Dergisi.* (3): 143-154.

Gürbüz, A.O. ve Ergincan, Y. (2004). *Şirket Değerlemesi, Klasik ve Modern Yaklaşımlar.* İstanbul: Literatür Yayıncılık.

Hatipoğlu, M. (2011). *Firma Değerlemesi ve İMKB'de Enerji Sektöründe Uygulaması.* Yüksek Lisans Tezi, Çankırı Karatekin Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı, Çankırı.

Horasan, M. (2009). http://e-dergi.atauni.edu.tr/index.php/IIBD/article/viewFile/3814/3642 (01.11.2013).

İvgen, H.(2003).*Şirket Değerleme*. İstanbul:Finnet Yayınları Borsa Dizisi.

Karan, M. B.(1996). Hisse Senetlerine Yapılan Yatırımların Performanslarının Fiyat/Kazanç Oranına Göre Değerlendirilmesi: İMKB Üzerine Ampirik Bir Çalışma. *İktisat, İşletme ve Finans Dergisi*, 11, 119. 26-35.

Karan, M.B.(2011). *Yatırım Analizli ve Portföy Yönetimi.* Ankara: Gazi Kitabevi.

Karavardar, A. (2003). *Şirket Değerlemesi ve Bir Uygulama.* Yüksek Lisans Tezi, Marmara Üniversitesi Sosyal Bilimler Enstitüsü Muhasebe Finansman Anabilim Dalı, İstanbul.

Konuk, H. (2006). *Şirket Değerleme Yöntemleri ve Reel Opsiyonlar Yaklaşımı.* Yüksek Lisans Tezi, Marmara Üniversitesi Bankacılık Ve Sigortacılık Enstitüsü Sermaye Piyasası Ve Borsa Anabilim Dalı, İstanbul.

Nargelecekenler, M. (2011). Hisse Senedi Fiyatları ve Fiyat/Kazanç Oranı İlişkisi: Panel Verilerle Sektörel Bir Analiz. *Business and Economics Research Journal* Volume 2 . Number 2 .pp. 165-184.

Oymak, O. (2009). *Firma Değerlemesi ve Bankacılık Uygulaması.* Yüksek Lisans Tezi, İstanbul Üniversitesi Sosyal Bilimler Enstitüsü Para, Sermaye Piyasaları ve Finansal Kurumlar Bilim Dalı, İstanbul.

Park, Y.S. ve Jung-Jin,L. (2003). *An Empirical Study on The Relevance of Applying Relative Valuation Models to Investment Strategiesin The Japanese Stock Market,* Japan and World Economy, 15.

PriceWaterhouseCoopers Türkiye Danışmanlık Hizmetleri; "Şirket Birleşmeleri ve Devralmaları", İstanbul, Mart 2006.

Sarıkamış, C. (2003). *Şirket Birleşmeleri* (1.Baskı). İstanbul: Avcıol Basım Yayın.

Savsar, A. (2012). *Finansal Oranlarla Firma Değeri Arasındaki İlişki ve İstanbul Menkul Kıymetler Borsasında Bir Uygulama.* Gaziosmanpaşa Üniversitesi Sosyal Bilimler Enstitüsü, Tokat.

Suel,H. (1995). Şirket Değerlemesi. *İşletme ve Finans Dergisi*. Sayı: 117, s. 52-56.

Taner, B. ve Akkaya, G. C. (2003). "İşletme Değerini Belirleme Yöntemleri ve Farklı Sektörlerdeki İşletmeler Üzerine Bir Uygulama", http://eab.ege.edu.tr/pdf/3/C1S1-2-M1.pdf (31.10.2013). s.3.

Ünlü, S. (2008). *Firma Değerlemesi ve Alternatif Değerleme Yaklaşımları.* Yüksek Lisans Tezi, Marmara Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Üreten, A. ve Ercan, M.K. (2000). *Firma Değerinin Tespiti ve Yönetimi.* Gazi Kitabevi, Ankara.

Yazıcı, K. (1997). Özelleştirmede Değerleme Yöntemleri ve Değerleme Kriterleri, DPT, Uzmanlık Tezi, Ankara. http://ekutup.dpt.gov.tr/kit/yazıcık/ozelles*.*

http://www.kap.gov.tr/

http://borsaistanbul.com/

THE PROCESS OF FORMATION OF ACCOUNTING STANDARDS AND THE PRESENT SITUATION IN TURKEY

Ümit GÜCENME GENÇOĞLU*
Alp AYTAÇ**

ABSTRACT

Reliable and transparent financial statements prepared in accordance with Accounting Standards inform, decision-making processes in orderminimise risks by providing data that are more accurate to managers. IASs/IFRSs (International Accounting Standards/ International Financial Reporting Standards), have been applied by businesses operating in the capital market in Turkey since 2005. Apart from this, IASs/IFRSs have been used since 2013 by other businesses within the scope determined by the Council of Ministers. When creating financial statements, companies should keep in mind implementation of new elements of the Accounting Standards that have emerged. These innovations in interpretation of a firm's financial condition should provide information that is more spesific to internal and external stakeholders, as well as strengthen corporate governance. This study, of the creation of past and present accounting standards in Turkey, examines standards and financial reporting as well as innovations in the process of summarising and aims to identify the current situation of accounting standards in Turkey.

Keywords: *Accounting standards, Financial reporting*

Jel Classification: *M40, M41, M48*

*Professor,Uludag University Faculty of Economics and Administrative Sciences Department of Business Administration in Bursa-Turkey, umitgucenme@uludag.edu.tr, +905325226569
**Research Assistant,Uludag University Faculty of Economics and Administrative Sciences Department of Business Administration in Bursa-Turkey, alpaytac@uludag.edu.tr, +905367692796

1. INTRODUCTION

For years, tax legislation has been the dominant approach in giving direction to related accounting regulations and accounting for taxes in Turkey. The Turkish Commercial Code, capital market legislation and regulations relating to the Uniform Accounting System, address tax accounting, supplemented by commercial profit accounting concepts and information. The Accounting Profession Law and legal independent audit regulations were important steps towards the formation of the accounting system and preparation of true and fair financial statements. Within the globalisation process, European Union countries and other countries including Turkey have made it a requirement to adapt the International Accounting Standards (IASs) since 2005. The development and application process of the TASs harmonised with the IASs being implemented in Turkey. The purpose of this study is to reveal the current situation in-the process of developing accounting standards in Turkey-, by outlining IAS / International Financial Reporting Standards(IFRS) accounting standards in conjuction with the implementation.

2. CONCEPTUAL FRAMEWORK FOR FINANCIAL REPORTING

The IASB inherited the IASC's Framework for the Preparation and Presentation of Financial Statements (the Framework). As do other current conceptual frameworks among Anglo-Saxon standard setters, this derives from the US conceptual framework, or at least those parts of it completed in the 1970s. The Framework states that "the objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions." The information needs of investors are deemed to be of paramount concern, but if financial statements meet their needs, other users' needs would generally also be satisfied. The Framework holds that users need to evaluate the ability of the entity to generate cash and the timing and certainty of its generation. The financial position is affected by the economic resources controlled by the entity, its financial structure, its liquidity and solvency, and its capacity to adapt to changes in the environment in which it operates. The qualitative characteristics of financial statements are understandability, relevance, reliability and comparability. Reliability comprises representational faithfulness, substance over form, completeness, neutrality and prudence. There is an implication that these are subject to a cost/benefit constraint and that in practice there will often be a trade-off between characteristics.

The Framework does not specifically include a "true and fair" requirement, but says that application of the specified qualitative characteristics should result in statements that present fairly or are true and fair. IAS 1, Presentation of Financial Statements, as revised in 2007, states that financial statements are "a structured representation of the financial position and financial performance of an entity…(whose) objective…is to provide information about the financial position, financial performance and cash flows of an entity that is useful to a wide range of users in making economic decisions." It further states that "fair presentation requires faithful representation of the effects of transactions, other events and conditions in accordance with the definitions and recognition criteria…set out in the Framework….The application of IFRS, with additional disclosure when necessary, is presumed to result in financial statements that achieve a fair presentation.”[1]

3. ACCOUNTING STANDARDS IN TURKEY FOR BUILDING WORKS

Studies concerning the formation of the IASs started in 2000 and this process has carried on to the present day. The International Accounting Standards Committee (IASC) , who have continued their activities since 1973, have published IASs on various subjects in order to abandon different accounting applications in different countries and to form an international accounting language. The IASC have revised the existing standards in certain periods. The committee, who have concentrated their studies on harmonising local accounting standards and developing the IASs, were reconstructed in 2001 with a new name: The International Accounting Standards Board (IASB). The IASB published the IFRSswhich were mandated companies listed on the stock-exchanges in European Union member countries.[2]In Turkey, some regulations have been made to harmonised with the IASs during the process of adapting to the EU regulations. These standards are today used in many countriesoutside the European Union. Turkey is one of those countries.In Turkey major accounting organizations such as the Turkey Accountants Association (TMUD),the Turkey Certified Public Accountants and Certified Public Accountants Association of Chambers (TÜRMOB) are members of the IASB.

3.1. THE STUDIES OF TURMOB AND CAPITAL MARKETS BOARD

The IASs were first translated in Turkish in 1994 by the Turkish Accounting and Auditing Standards Board (TMUDESK), which was founded autonomously by the support of the Union of Chambers of Certified Public Accountants of Turkey (TURMOB). The Boardpublished 20 national accounting standards and presented them to the public[3] as CMB Comminiqués.These standards are not official because they are not stated in any legal regulations. The standards concerning inflation and consolidation have appeared in the CMB Comminiquésas an obligation that must be applied by companies that have followed the Capital Market Law (CML) since 01.01.2003. Therefore, the first regulations were made parallel to IFRSs. The CMB, who have always been a leader in forming the accounting system in Turkey, published in 2003 a comminiqué on “Accounting Standards on the Capital Market”, which involved all the IASs and which was a translation of the IASs. This comminiqué was the most significant step in the adaptation process of conforming to the IASs and to the application of these standards by the companies following the CML. This

[1]EPSTEIN,Barry J., JERMAKOWICZ,Eva K., (2010), Interpretation and Application of International Financial Reporting Standards, John Wıley & Sons, Inc., USA, pp.10-11

[2]AKDOGAN, Nalan, (2005), Muhasebe Standartlarına Genel Bakış: Uluslararası Finansal Raporlama Standartlarının İlk Kez Uygulanmasındaki İlkeler (General Survey on Accounting Standards: The Principles of the First Application of International Financial Reporting Standards) ,IX. Accounting Standards Symposium,Kıbrıs, p.8-11

[3]TMUDESK, (2000)Türkiye Muhasebe Standartları (Turkish Accounting Standards),TÜRMOB Publication No: 95, Ankara,pp.1-231

comminiqué was abolished in 2008; TASs issued by Turkish Accounting Standards Board (TASB) take this comminiqué's place.

3.2. STUDIES OF THE TURKEY ACCOUNTING STANDARDS BOARD

On 18.12.1999, the TASB, which had financial and administrative autonomy and was bound to the Prime Ministry, was formed by adding an article to the CML. The reason for the Board's formation was to prevent the creation of different accounting standards in Turkey from causing problems. This Board, which became active in 2002, was established to form and issue national accounting standards in Turkey.

The Board accepted the TASs published by TMUDESK as a draft in order to evaluate studies done in the past. They reviewed these drafts and then presented them to the public. The TASs have been published in the Official Gazette since January of 2005 by taking into consideration the amendments made in 2004.

In Turkey, enterprisessubject to the CML engaged in stock exchange transactions under IAS / IFRS that were compatible with Capital Markets Board Communiqué Serial: XI, No: 25between 1.1.2005-09.04.2008. Then, their financial reports, prepared as is mandatory in accordance with IAS / IFRS or Turkey Accounting Standards Board (TASB) IAS / IFRS, are translated, prepared and published in the Official Gazette of Turkey Accounting Standards / Turkey Financial Reporting Standards (TAS / TFRS).

TAS / TFRS's public accountability rules must be appliedfor businesses, shares or debt securities to the public in a market, banks, credit unions, stock vehicle / dealer transactions, investment funds and insurance secirities traded by businesses. Turkish Commercial Code No. 6102 IAS / IFRS's extends the required scope of business reporting. TASB and privileges were abolished in 2011 by Decree Law 2011 dated 2 November and have been transferred to the"Public Oversight, Accounting and Auditing Standards Board". The Official Gazetta today published the currently scheduled revision of the Accounting Standards for Turkey, requiring companies to implement ongoing capital transactions.

In line with globalisation, contemporary world countries need to use the same accounting standards requirements, primarily because European Union member countries, as well as many other countries including Turkey, are making the necessary arrangements to come into compliance with international accounting standards.

4. PRESENT STATUS OF ACCOUNTING STANDARDS IN TURKEY

New Turkish Commercial Code No. 6102, in accordance with Turkey Accounting Standards requires reporting. Companies will be subject to audit by independent auditing companies, who are given the authority to inform the Council of Ministers. Validation of work of these companies performed each year by the Council of Ministers. The Council of Ministers' Public Oversight of the preparation process, executed by the Accounting and Auditing Standards Authority is presented to the Council of Ministers. The scope of audit to ensure compliance over time with EU acquis is being extended in a gradual manner. Audits of the Capital Markets operate, except for total assets, net sales revenue and number of employees, operating under the EU directive including these criterias. The companies that provide two of these three statistics are subject to independent audit. The Council of Ministers, published these statictics in the Official Gazette dated 14 March 2014 for the year 2014 in Turkey:total assets of 75 million TL, net sales revenue of 150 TL million and 250 employees.

Most large companies, beginning with approximately 2500 in 2013, began companyaudits in 2014.The new Council of Ministers estimates that approximately 3500 companies will be subject to independent audit. UPS is provided for by law in Turkey and is to be preparedunder the Independent Audit Auditing Standards; they are thus far promulgated in the Official Gazette and include 98 units and approximately 7 thousand independent auditors" allow for an independent auditors authorisation.

4.1. RESULTING CHANGES IN FINANCIAL REPORTING

With the globalisation process, several countries including Turkey wishing to retain pre-eminent position inthe European Union, have made it a requirement to adopt the IASs because of the need to apply similar accounting standards in modern countries.

The application of the TASs caused some changes in the formats and classification of the balance sheet, the income statement, and the cash flow statement; these were determined by the Unified Accounting System (UAS) that became effective in 1994. In these standards, the importance of the information was emphasised and fair presentation of this information was required.

Resulting changes in financial reporting under the new arrangements can be summarised as follows.

4.1.1. Expanding The Scope Of The Preparation of Periodic Financial Statements

According to the new regulations, financial reports financial statements and statements of board responsibilities have been redefined to include activity reports. Previously, for subject to the CML and subject to independent audit, financial statements and statementsof responsibility related to those reports were to explain a business' condition to the public. There were businesses outside the CML; however, in accordance with new regulations issued by the Council of Ministers, businesses that are subject to independent annual audit must prepare interim financial statements in accordance with IAS / IFRS. Businesses with tax returns previously only prepared a balance sheet and income statement; now, however they must prepare a cash flow and statement of changes in equity.

Thus, the widespread use of financial statements is for information purposes. With the adoption of the new accounting standards understanding of tax accounting, which has been pursued for many years, a new era in our country is opened. Above all, these are the objectives of accounting changes.

For many years, the most important goal of accounting was the calculation of taxes payable; however, according to accounting standards, the purpose of financial reporting is to provide reliable information.

4.1.2. Changes In The Measurement Of Assets And Liabilities

The measurement of assets and liabilities in financial statements is to determine a monetary value.

In financial reporting, measurement is key. Accounting theorists and practitioners have traditionally considered measures of historical cost to be reliable, in terms of being easy to implement and inexpensive. These have been implemented for many years.

However, as IAS / IFRSs organise financial statements ‘‘on the basis of the financial statements to make decisions for the future’’ historical cost function is impossible to fulfil because the historical costs of the assets and liabilities of these items are not actual values; they refer to value at date of acquisition. Subsequent periods move further away from the reality of historical cost. In measurements made after the date of initial recognition, it is recommended that fair value be largely based on a measurement. Current values are used in measuring fair value.

All standards in the measurement of fair value are established by strong relationships with market value.[4] Accounting Standards concepts brings new value to existing accounting practices. The presence of low or high appreciation of the results of the period to be calculated differently,causing the financial statements to be true and sincere; Accounting Standards specified in the valuation must be performed correctly.[5]Traditional accounting and tax legislation in Turkey mandates the use of the historical cost method for valuation of assets. Turkey Accounting Standards for the valuation of assets and liabilities indicate the use of thecurrent value approach; prior to issuing financial statements of assets and liabilities, fair value should be determined.

Fair value presentation provides benefits such as the ability to increase the comparability of financial statement items, to provide information about expected return on assets and liabilities arising from obligations and to reflect gains or losses arising from changes in value.

4.1.3. Reporting of Comprehensive Income

The fair value of each valuation approach recognises unrealised gains or losses on certain registered entailments. According to some standards, profit or loss arising from changes in value are recognised directly in the income statement, and some are recognised in the equity component.[6] According to accounting standards, changes in equity and all income-

[4]ANKARATH, Nandakumar; MEHTA Kalpesh J., GHOSH T.P., ALKAFAJİ Yass A., (2010), Understanding IFRS Fundamentals, John Wıley & Sons, Inc., New Jersey,p.10
[5]GÜCENME GENÇOĞLU, Ümit, (2007), Türkiye Muhasebe Standartları ve Uygulamalar (Turkish Accounting Standards and Applications), Türkmen Bookstore, İstanbul,p.7
[6]ÖZERHAN, Yıldız, YANIK, Serap, (2012), IFRS/IAS ile Uyumlu TMS/ TFRS (TAS/TFRS consistent with IFRS/IAS), TÜRMOB Publication 427, Muhasebe Denetim Press Corporation, Ankara,p.49

generating realised-unrealised expenses must be reported in the statement of comprehensive income. Comprehensive income includes all changes in equity arising covers besides capital growth and dividend distributions.[7] In this way, a comprehensive reporting of profit, facilitates forecasting of future operating profit. In tax accounting practices in Turkey, unrealised losses are reported in the income statement, but unrealised gains are not reported. In accordance with accounting standards and comprehensive income, unrealised profit reporting is changing traditional accounting practices.

4.1.4. Changes of Formal Structure and Content of Financial Statements

Used since 1994 in Turkey, the uniform accounting system mandates financial statements to be prepared in accordance with the format in the financial statements of TAS/ TFRS thus requiring the following changes:[8]

- The extraordinary income and expense concept is eliminated in the income statement,

- Profit and loss should be calculatedseparately for continuing and discontinued operations,

-After profit or loss isreported, comprehensive income affecting shareholders'equity must be reported in the income statement,

- Borrowing costs must be reported as expense in the income statement, rather than in the balance sheet as a cost factor,

- Interest income and expense must be shown seperately in the income statement to provide profit before interest and tax reporting,

- Fixed production costs are added to the cost of inventories,depending on the capacity utilisation rate; the amount of coverage changes the cost of sales,

- In the consolidated statements of income, shareholders' equity of subsidiaries valued according to the equity method and increasing the group's share of the amount will be reported as separate items for clarity,

-Net profit should be reported separately for a minority share,

- When calculating the period result, deferred tax income and expense effect must be considered,

- Because of the Accounting Standards, some accounts should be added to balance sheets,

- Deferred tax assets and deferred tax liabilities must be reported in the balance sheets,

[7] ÖRTEN, Remzi; KAVAL, Hasan; KARAPINAR, Aydın; (2007), Türkiye Muhasebe – Finansal Raporlama Standartları (Turkish Accounting and Financial Reporting Standards), Gazi Printing Office, Ankara,pp.22-34

[8] GÜCENME GENÇOĞLU Ümit, ÖZERHAN, Yıldız,KARABINAR Selahattin,(2013), Türkiye Finansal Raporlama Standartları (Turkey Financial Reporting Standards,Sakarya University Continuing Education Center publication, Sakarya,pp.79-80

- All amortisation should be calculated by useful life and a pro_rata method determined by business management,

- For tangible and intangible assets -besides amortization- if impairement exists, it should be calculated and reported,

- The cash flow statement is different in Accounting Standards than in the Uniform Accounting System. The cash flow statement in Accounting Standards should be reported in three sections: cash flows from operating activities, financing and investing, and cash flows provided by operating activities.

Accounting Standards exists for financial statement formats meeting the requirements of the draft work performed by Turkey Accounting Standards Board, but they have not been formalised. Public Oversight Agency No. 6102, Article 660 of the Turkish Commercial Codeclause 88, prepared on the basis of Article 9 of the Financial Statements Samples and User Guide was published in the Official Gazette No. 28652 dated 05.20.2013.

4.2. INTRODUCING A CORPORATE GOVERNANCE APPROACH

Corporate social responsibility (CSR) can be generally defined as the organisation's responsiveness to the needs of its stakeholders. A stakeholder in an organisation is any group or individual who can affect or is affected by the achievement of the organisation's objectives.

In recent years, developments in the world economy have resulted accounting becoming a source of information not only investors but alsofor others. Accounting has become a planning tool for future strategies and a prediction tool for future necessities. Corporate governance has caused significant changes in the management of businesses. Corporate governance takes power from the accounting information system, affecting business practices and relationships with people interested in the businesses. Therefore, the accounting information system and corporate governance are in continuous interaction.

Corporate governance can be defined as regulations and business life practices in the private and public regulation of a market economy by the business managers and business owners on the one hand, on the other hand, investing in the business of regulating the relations between laws.[9]

Therefore, with this management approach, shareholders of the company apply pressure to achieve gains in investment decisions related to operating managers and business owners.[10]

Corporate governance at both national and international levels varies in terms of content. However, although no change in any field of corporate governance is common to all areas, there are two main objectives. They should create harmonybetween improving the performance of businesses and satisfying the goals of business-related corporate interest groups. The first of these objectives is tohelp enterprises to operate effectively and efficiently,

---

[9]ÇITAK, L. , (2006), Kurumsal Yönetim Sistemlerinde Yakınsama (Convergence of Corporate Governance Systems), Istanbul University Faculty of Political Sciences Journal, October, pp.145-172.
[10]SHLEIFER, A. ve VISHNY, W. R. (1997) "A Survey of Corporate Governance", The Journal of Finance, vol.52, no.2, June, pp.737-783

executing in an appropriate and accessible manner by creating an encouraging business environment. The second objective is to prevent the abuse of power or, corruption by ensuringtransparency in management decisions, and preventing business interests outside domestic interest or other business groups fromimposing their investment decisions.

In Public joint stock company in Turkey for the Capital Markets Board (CMB) Corporate Governance Principles published in 2003 and in 2005, changes were made in these principles.

Largely based on the OECD Principles of Corporate Governance prepared the Capital Markets Board (CMB), Corporate Governance Principles were counted and are described in the Company's corporate governance. Accordingly, corporate governance principles are fairness, transparency, accountability and responsibility.

Fairness means that governance should equitably support the shareholders and stakeholders of the company’s management. Transparency (excluding trade secret information) implies thatthe company’s financial and non-financial information should be timely, accurate, complete, and understandable, and can be interpreted in a way that is easily accessible and can be disclosed to the public at low cost.

Accountability indicates that a board member of a joint-stock company is accountable based on legal requirements only, which protects directors from shareholders who refer to a more generalized accountability standard.

Responsibility refer to company management acting to comply with all the activities of the joint-stock company legislation, articles of association, and internal regulations to ensure compliance with social and ethical values, and refers to its supervision.

- CMB’s Corporate Governance Principles address four groups: shareholders, public disclosure and transparency, stakeholders and the board.

Public disclosure principles and tools: The characteristics of the information to be publicly disclosed, and how this information is specified. In addition, principles are determined to judge whether the information is out of date and whether the company’s financial condition has been affected or when information is required to be disclosed to the public regarding future predictions.

- The Company and its shareholders, board members and managers of public disclosure should discloseto the public relationshipsamong shareholders, board members and executives of the company that can effect operations.

- Public disclosure of periodic financial statements and reports: Financial statements and reports documenting the company’s actual situation and reflecting all types of information should be disclosed.

- Independent audit function: The principle of independence of the independent audit and the independent auditors’ professional activities are likely to affect impartiality or require an auditor to remove himself or take precautions to ensure that the function is performed without being affected by the auditor’s professional acitivities. An audit of financial statements and reports is of great importance in being accountable and transparent.

-The concept of trade secrets and insider trading: The Company’s balance between transparency and protecting its interests should be ensured. In addition all necessary measures should be taken to prevent the use of insider information.

Key events and developments need to be explained to the public: This section guides listingof the company’s financial condition and results of operations that might affect important events and developments, and should be disclosed to the public.

5. RESULTS

Turkey Accounting Standards / Turkey Financial Reporting Standards mandates preparation of financial statements in a format that is organised and fair, and in accordance with certain concepts and principles that were presented. Turkey Accounting Standards, Turkey Financial Reporting Standards (TAS / TFRS) in parallel with IAS / IFRS’s have been implemented as mandatory under the law of capital markets businesses. This scope is widened with TCC and related legislation, with the institutionalisation of enterprises and corporate governance decisions being encouraged. Thus, Turkey is moving away from the concept of tax accounting; accounting for information understanding is now the goal. Investors are the main target group of financial reporting. Implementation of corporate governance principles and IFRSs have become more important to all other users to meet the information needs of investors,who are the main sources offunding. The goal of the information provided to investors in their decisionmaking about the future and the past is to help them evaluate their decisions. TAS / TFRS financial statements prepared in accordance with the principles of valuation and equity are expected to contain information and better reflects the value of the business.

REFERENCES

AKDOGAN, N., (2005), Muhasebe Standartlarına Genel Bakış: Uluslararası Finansal Raporlama Standartlarının İlk Kez Uygulanmasındaki İlkeler (General Survey on Accounting Standards: The Principles of the First Application of International Financial Reporting Standards),IX. Accounting Standards Symposium, Kıbrıs

ANKARATH, N., MEHTA, K., GHOSH T.P.; ALKAFAJI, Y, (2010), Understanding IFRS Fundamentals, John Wiley & Sons, Inc., New Jersey

EPSTEIN, B.,JERMAKOWICZ,E., (2010), Interpretation and Application of International Financial Reporting Standards, John Wıley & Sons, Inc., USA

ÇITAK, L. , (2006), Kurumsal Yönetim Sistemlerinde Yakınsama (Convergence of Corporate Governance Systems), Istanbul University Faculty of Political Sciences Journal, October

GÜCENME GENÇOĞLU, Ü., (2007), Türkiye Muhasebe Standartları ve Uygulamalar (Turkish Accounting Standards and Applications), Türkmen Bookstore, İstanbul

GÜCENME GENÇOĞLU, Ü., ÖZERHAN, Y.,KARABINAR S., (2013), Türkiye Finansal Raporlama Standartları (Turkey Financial Reporting Standards, Sakarya University Continuing Education Center publication, Sakarya

ÖRTEN, R., KAVAL, H., KARAPINAR, A., (2013), Türkiye Muhasebe – Finansal Raporlama Standartları (Turkish Accounting and Financial Reporting Standards), Gazi Printing Office, Ankara

ÖZERHAN, Y., YANIK, S., (2012), IFRS/IAS ile Uyumlu TMS/ TFRS (TAS/TFRS consistent with IFRS/IAS), TÜRMOB Publication 427, Muhasebe Denetim Press Corporation, Ankara

SHLEIFER, A.,VISHNY, W. R. (1997) “A Survey of Corporate Governance”, The Journal of Finance, vol.52, no.2, June

TMUDESK, (2000), Türkiye Muhasebe Standartları (Turkish Accounting Standards),TÜRMOB Publication No: 95, Ankara

OPINIONS OF STUDENTS ON TECHNOLOGY USE IN ACCOUNTING COURSES IN THE DIGITAL AGE

Ümmühan Aslan*

Meral Erol Fidan**

Şerife Subaşı***

ABSTRACT

Information technology has made it necessary for accountants to acquire new certain skills such as utilizing and controlling the IT systems. In training standards for accountancy, it is specified that accountants should have key roles in the assessment, design and management of systems.

The objective of this study is to reveal to what extent the students that are the prospective accounting professionals of the future utilize information technologies in their accounting class during their undergraduate education, and their opinions in this respect.

In the study, a survey was applied to students attending the business administration major at state universities in seven geographical regions of Turkey. 1000 questionnaires were randomly submitted to universities by post. 500 students responded. 464 questionnaires were found to be appropriate for analysis.

The survey has revealed that the attending students believe in the strict necessity of employing projectors and accounting software in the accounting classes.

The students suggest that mostly the presentation software and social networks are used in accounting classes as the technological class material.

It was observed that, despite the high rate of ownership, students do not exploit technology to prepare for their accounting classes and exams.

Students argue that lectures delivering accounting lectures should keep up with new educational technologies, and students do not advocate the use of remote educational tools for the accounting classes.

It was observed that students are uncertain about whether the use of technology enhances the success and interest in accounting classes, flourishes the student interest and eases understanding.

Keywords: *Accounting Education, Technology, Digital Age*

Jel Classification: *M41, M49*

* Assoc. Prof. Dr. Ümmühan Aslan, Bilecik Şeyh Edebali University, School of Applied Sciences, ummuhan.aslan@bilecik.edu.tr

** Assist. Prof. Dr. Meral Erol Fidan, Bilecik Şeyh Edebali University, Business Administration Faculty, meral.fidan@bilecik.edu.tr

*** Assist. Prof. Dr. Şerife Subaşı, Bilecik Şeyh Edebali University, Business Administration Faculty, serife.subasi@bilecik.edu.tr

1. INTRODUCTION

New trends in information and communication technologies, particularly the evolution and sprawl of internet has transformed myriad of functions including business structures, production processes and marketing concepts. One of the critical functions influenced by such transformations is accounting that is defined as the language of the business.

While the process of producing and presenting accounting data required much more time and effort before, today, data is highly and instantly accessible just with a single click, smoothly inviting the user to make the final decision at the desired time.

These trends have also made it necessary for the accounting professional to make use of, control and manage the technology well in order to produce the right information at the right time.

In this respect, it is of essence for students who are accountant candidates to improve themselves in technology. Also universities should improve their educational programs and set up educational curriculum capable of meeting the demands of the present time.

In this study, students who are accountant candidates studying at universities in Turkey were asked to present their opinions about the use of technology in accounting classes to figure out the current situation, and accordingly various actions and suggestions were presented.

2. ACCOUNTING PROFESSION AND TECHNOLOGY RELATIONSHIP

Technology is closely related to the profession and education of accountancy. During the accounting education, technology basics that the accountants of future would need during their professional life should be delivered, and accounting professionals should keep up with the technological trends about their profession.

2.1. Technology Employed In Accountancy

Trends in information and communication technologies have transformed key functions of accountancy such as documentation, evolving new concepts. The period prior to technological developments saw the manual entry of a huge stock of invoices in the computer, yet current e-invoice tools have dramatically reshaped the process. A plenitude of new tools including e-reporting, e-filing, online banking and virtual business represents topical issues for accountants. Furthermore, various technological utilities such as safety check, surveillance software are employed in auditing as well (Uyar, 2007).

Today, accounting professionals are expected to meet demands in the fields of tax consultancy, financial planning and analysis, and strategic consultancy as well as generating and auditing financial reports. And it has evolved as a requirement for the accounting professionals to improve themselves for the sake of meeting the foregoing demands.

2.2. Technology In Accounting Education

IFAC has highlighted the significance of educating accountants that are liable to make public disclosures of reliable financial data, and accordingly published its educational standards. One of these standards relates to IT. According to these standards, accountants should be capable of controlling information technologies, designing, compiling and managing information systems besides getting familiar with IT basics.

Before proving their qualification, accountants are expected to already have training on information technologies, in particular the use of e-mail, digital signature, electronic file, USB, spreadsheet software, word processing software, file and folder management, communication software, web search, digitally signed certificates, e-mail, computer networks, mobile tools, hardware, electronic data transfer, software, data organization and input methods, information management system, specialist information systems, decision support systems, input and output devices, risk management in information technologies, installation and system testing. (Uyar,2007)

3. LITERATURE REVIEW

There are myriad of researches on this topic. However, as this research is specific to the Turkey case, rather the researches conducted in Turkey have been examined during the literature review.

In his study, Eraslan (1998) has suggested that, with the involvement of computers in accountancy, the profession underwent major transformations particularly in terms of its place and functions in the business; growing the demand to professionals that have influence in the decision-making process, computer literacy and knowledge of accountancy. Furthermore, in his study, Eraslan highlights the significance of using package software, and argues that students should experience package software during their study.

In his master thesis, Fidan (2006) argues that, an accountant's technological knowledge should not merely be limited to familiarity with accounting software called as computerized accounting, and that an accounting professional should take active role in the design of systems to be yielding financial and operational data, and have good knowledge of ERP (Enterprise Resource Planning) packages. In his research, Fidan suggests that there are many accountants whose capability to use professional accounting package software such as ETA, Logo, etc. vary between medium and poor level. Despite their high awareness in the importance of using Internet and computers, accountants' actual performance was found to be inferior.

Sayın et al. (2005) tested whether there is a significant relationship between the level of utilizing technological tools and level of achievement in the class, and found that only one class reveals a significant difference. The relationship between the contribution of technological presentation instruments to good understanding of the class and student interest in the class was examined, revealing a positive and significant correlation.

In their study, Kalmış and Yılmaz (2004) argue that, undergraduate education on information technologies and building IT skills in the business administration departments of Turkish Universities is not sufficient, and that in an age seeing intense involvement of technology in business administration and other fields, the education is very poor given the actual knowledge of information technologies and demand to associated skills. It is reported that the curriculum of universities offering programs on this subject reveals both limited concentration of the classes and a poor education failing to satisfactorily handle the business life and accounting issues.

In their study where the "Individual Differences Scale" developed by Paivio and Harsman in 1983 was adapted to the accounting course in order to study the relationship between multimedia presentation and learning, Butler and Mautz (1996) found that multimedia tools do not singly enhance memorability, yet students rather prefer them.

In his study, Coşkun (2008) highlights that the significance of traditional methods in accounting education persists, yet teaching methods need to be revised and new methods such as integration of technology in education are required. Coşkun underlines the importance of using overhead projectors or slides in accounting courses or of extended use of package software and migration of class tools, equipment and materials to the digital environment. He further argues that, developing the web site of the class with a view to facilitating to the formal accounting education contributes to learning.

In their study where the effects of information technologies in the education of professionals are examined, Toraman et al. (2008) suggests that, none of the key topics involved in accounting curriculum mention their effect in or relationship with information technologies. They have suggested that this adversely impacts the understanding of information technology or systems. Furthermore, they have highlighted that awareness of accounting students and accounting professionals in the importance of information technology should be raised.

Tekşen et al. (2010) conducted a study where the accounting education of accounting students attending the colleges of the Mehmet Akif Ersoy University was evaluated. 69.5% of the students involved in the study believe that the most important factor effecting the quality of the accounting education is the quality of lectures, 67.7% suggest that board marker is the mostly used tool in accounting education, and 85% suggest that accounting courses are taught in active method (plain description and homework assignment).

In his study titled "Accounting Education in Information Age", Hacırüstemoğlu discusses the need to involve electronic applications in the accounting curriculum of universities. Furthermore, stressing that accounting education should include Powerpoint presentations supported by visual materials, the researcher argues that an interactive environment keeping student's interest alive should be created to set up an educational model where information technologies are employed. He further suggests that consistent learning habits and skills should be created on students by means of Web sites and online libraries, class equipment should be migrated to the digital environment, and accounting institutions and agencies should present latest accounting trends on free digital platforms.

In their study aimed at surveying the effects of accounting courses aided by information technologies on students, Çankaya and Dinç (2009) categorized 600 students attending the general accounting class at the KTU's Faculty of Economics and Administrative Sciences, Department of Economics into two as odd and even numbered groups. While the odd-numbered student group was taught traditionally, the even-numbered group was taught through multimedia tools such as Powerpoint. Authors reported that students taught with Powerpoint presentations demonstrated higher success in terms of academic performance compared to students taught with the traditional method. Furthermore, they have shown that students taught with Powerpoint grow higher interest in the class compared to students taught traditionally, and that students taught with PowerPoint believe that the class is more interesting, enjoyable, relaxing and useful. In the study, it is reported that the arguments of students taught with PowerPoint are more positive than the students taught traditionally.

In his study, Uslu (1999) argues that, with the integration of computer in the class, the class could be more interesting; the deployment of course materials, course design, assignments, exam results and various class content on the web site of the lectures, faculty or the department would create a high availability regardless of the physical location of students; with the use of simulation software, the students could see how their decisions effect the progress of the organization and estimate the potential positive-negative impacts of various variables on the organization during developing solutions against organizational issues to take proper decisions accordingly.

In his thesis study, Babuçoğlu (2006) applied a system, which is containing sample applications on the self-understandable material by including brief online descriptions relating to the year-end procedures of the cash account taught in the class, to the students attending a class in a formal educational institution. Babuşçuoğlu reported an overall student satisfaction out of the study.

In their study, Ömürbek and Bekçi (2006) conducted a survey to assess the students' perception in the "Computerized Accounting Class" and reveal the useful aspects of the accounting package software. In a study on students attending the Computerized Accounting class, the role of information technologies on accounting education was surveyed, and it was concluded that computer-aided applications are essential in accounting classes.

In his study to identify whether students attending the accounting class taught with Powerpoint and the traditional method have different perceptions and arguments as to the intelligibility of the accounting course, Fidan (2012) argues that information technology tools should be used as instruments to remove the deficiencies of the current educational methods and eliminate student bias against the accounting class. He further states that, by employing information technologies in the accounting class, the coarse would be more intelligible accompanied with growing student involvement.

Studies revealing the opinions of university students who are candidate accounting professionals on the use of technology in accounting classes are scarce. This study is aimed at meeting this deficit. Furthermore, the studies examined reveal that level of taking action for utilizing information technologies in accounting education is still poor. Another objective of this study is to reveal this situation.

4. OBJECTIVE OF THE RESEARCH

The objective of our research is to identify, from the student's point of view, to what extent academicians giving accounting lectures in universities in Turkey employ technological hardware and software tools in their classes.

5. IMPORTANCE OF THE RESEARCH

Our research will strive to identify to what extent lectures giving accounting lectures particularly to business administration students employ technology in the flow of their class. One further objective will be to identify what technological hardware and software tools may be involved in accounting classes in order to add to the intelligibility of the education. Previous studies on the subject are limited in scope and are generally university-oriented; therefore this will represent the first and unique study in Turkey in this respect. Also a survey was applied on this subject to academicians giving accounting lectures in universities throughout Turkey. The results of both of these studies will be assessed to develop arguments, from two respects, as to what technological hardware and software tools should be employed in the accounting classes of universities.

6. SCOPE AND LIMITATIONS OF THE RESEARCH

The target population of the study is exclusively composed of senior students studying business administration in state universities of Turkey. Undergraduates studying business administration in randomly selected state universities across 7 geographical regions of the country constitute the bulk sample. The survey was delivered to the lectures by post and hand. Lectures conducted the survey on the business administration students in late May during the spring semester of 2013-2014.

Number of questionnaire forms distributed is 1000 with 500 students voluntarily providing feedback. However, 464 of the forms were found to be eligible for processing. Since timing of the survey falls in a late period of the spring semester, participation in the survey was limited.

7. METHODOLOGY

The questionnaire method was used in the research. Data were obtained through responses to the questionnaire delivered by post and hand through the random sampling method. The questionnaire is made up of 5 questions on demographics, 48 Yes-No questions, 17 questions set up in Licert's scale of 5 (5. Strictly agree, 4. agree, 3. no ideal, 2. disagree, 1. strictly disagree) and 2 open-ended questions. Data yielded by the total of 72 questions were assessed by means of the IBM SPSS Statistics 21 software.

The questionnaire form is composed of the following question groups:

- Identifying the accounting classes attended by students until the final grade,
- Identifying what technological hardware and software materials should be employed in teaching the accounting courses.
- Identifying the opinions on technological class materials employed by the lectures giving accounting course,
- Assessing student opinions about the need to employ technology in accounting classes
- Identifying how the use of technology effects the viewpoint towards the accounting class

8. RELIABILITY OF THE RESEARCH

The reliability analysis of 70 questions within the survey yields a Cronbach'a Alpha value of 0.739 for the survey. Accordingly, the survey is reliable for assessment.

9. TESTS EMPLOYED IN THE RESEARCH

In analysing the responses provided, the frequency, average and standard deviation (SD) evaluations together with Chi-Square (χ^2) and Independent Sample T-Test (Levene test) were applied. In addition, only the statistically significant ($P \leq 0,05$) results were included as it was practically impossible to provide myriad of tables in the study.

The compatibility test is performed by testing whether relationships exist and whether two variables are independent from each other (χ^2). In principle, the χ^2 test is employed not only for identifying the relationships but also identifying the differences between variables (Altunışık et al, 2007: 194-195).

The T-Test only allows making comparisons between two groups. The two groups compared here should randomly be selected from two different universes exhibiting normal distribution, and observations should be independent from each other. The variance of both groups may not necessarily be the same, and different t values are calculated based on whether their variances are the same (Altunışık et al, 2007: 175-176).

10. ANALYTICAL RESULTS OF THE RESEARCH

10.1. Frequency Analysis Results of the Research

Student demographics based on 464 survey results processed are shown in Table 1. 66% of the students attend daytime education whereas 34% attend evening education. Breakdown of students by gender reflects a female population of 60% and a male population of 40%. And breakdown of students by age reveals that student population ranges between the age of 22 and 23. 23 students did not provide any answer to our question about the age. The breakdown of students by average mark during the last semester reveals that students involved in the survey have an average mark range of 2.00 - 2.49. 40 students did not provide any answer to this question.

Table 1: Demographics of Surveyees

Study Type	**N**	**%**		**Gender**	**N**	**%**
Regular Education	306	65.9		Female	280	60.3
Secondary	158	34.1		Male	184	39.7
Total	**464**	**100.0**		**Total**	**464**	**100.0**
Age Range	**N**	**%**		**Grade Average for the Last Semester**	**N**	**%**
<=21 years	37	8.0		<2.00	27	5.8
22 years	131	28.2		2.00-2.49	153	33.0
23 years	161	34.7		2.50-2.99	137	29.5
24 years	65	14.0		>=3.00	107	23.1
>=25 years	47	10.1		No Answer	40	8.6
No Answer	23	5.0		**Total**	**464**	**100.0**
Total	**464**	**100.0**				

Students participating in the survey attend universities located at the cities shown in Table 2.

Table 2: Cities Housing the Universities Attended by the Students

Classes	**Yes**	**%**
Antalya	48	10.3
Balıkesir	32	6.9
Bilecik	90	19.4
Istanbul	34	7.3
Kahramanmaraş	48	10.3
Kars	44	9.5
Muğla	43	9.3
Sakarya	71	15.3
Trabzon	54	11.6
Total	**464**	**100.0**

Table 3 provides the results of the assessment as to whether students intend to make a career in any accounting-related field at the end of their university life. It was found that around 53% of the students intend to work in the accounting field.

Table 3: Student Intents of Working in the Accounting Field

Answer	**Yes**	**%**
Yes	245	52.8
No	216	46.6
No Answer	3	0.6
Total	464	100.0

Table 4 shows the accounting classes attended by students until the last grade. Majority of the students say that they attend the general accounting, inventory, stock and administrative accounting classes while 10% of the students state that they attend accounting classes under the specialized accounting category. Number of students saying that they attend the computerized accounting class is around 22%. The responses of students asked to state the classes they attend other than the accounting classes we have specified reveal the classes of "Accounting Organization, Case Studies in Accounting, Strategic Cost Management Accounting, IFRS, Financial Institutions Accounting, and Valuation" taught at undergraduate students in the business administration departments of some universities.

Table 4: Accounting Classes Attended by Students So Far

Classes	**Yes**	**%**
Accounting (Financial Accounting I, Financial Accounting II, Intermediate Accounting, Advance Accounting, etc.)	452	97.4
Financial Analysis (Analysis of Financial Statements, Analysis of Financial Reports, Reading Financial Statements)	276	59.5
Cost Accounting – Management Accounting, Cost Accounting I-II)	450	97.0
Audit (Audit, Internal Audit)	344	74.1
Computerized Accounting (Using Computer Software in Accounting)	101	21.8
Advance Accounting (Construction Accounting, Accommodation Accounting, Banking, Foreign Trade Procedures Accounting, Insurance Business Accounting, Healthcare Institutions Accounting, State Accounting, Environmental Accounting, Judicial Accounting, Accounting Information System, etc.)	44	9.5
Other (Accounting Organization, Case Studies in Accounting, Strategic Cost	10	0.02

Management Accounting, IFRS, Financial Institutions Accounting, Valuation.)		

The students were asked to state the technological hardware that they believe should strictly be employed in accounting classes. Results of answers provided are shown in Table 5. It is observed that students have ***mostly marked projector, mobile computer and interactive board*** among the hardware tools listed in the survey. The option marked least is the ***television and documentation camera***. The reason underlying the poor score of the documentation camera is thought to be the fact that such equipment is a very recent technological educational tool particularly in accounting classes, and that students have never seen this device before. Also the academicians are not sufficiently familiar with the documentation camera.

Table 5: Technological Hardware Tools That Students Believe Should Be Used in Accounting Classes

Technological Hardware Tools	**Yes**	**%**
Projector	293	63.1
Mobile Computer (Laptop, Tablet)	266	57.3
Interactive Whiteboard	252	54.3
Presenter	206	44.4
Laser marker	136	29.3
Microphone / Speaker	121	26.1
Video conference device	96	20.7
Overhead projector	86	18.5
CD, DVD, Blueray	73	15.7
Electronic measuring and evaluation system (CPS)	69	14.9
Documentation camera	46	9.9
TV	41	8.8

The students were asked to state the technological software that they believe should strictly be employed in accounting classes. Results of answers provided are shown in Table 5. Among the software tools listed in the questionnaire, ***the students have mostly marked the "Internet-Based Accounting Software Applications and Accounting Package Software Applications".*** The option marked least is the "***Cloud Storage Tools***". The students were asked to specify any other technological software that may be employed in the education. Students have responded to this open-ended option by specifying the accounting software shown in Table 6.

Table 6: Technological Software Tools That Students Believe Should Be Used in Accounting Classes

Technological Software Tools	**Yes**	**%**
Internet-Based Accounting Software (LUCA, etc.)	353	76.1
Package Accounting Software (ETA, LKS, LOGO, etc.)	336	72.4
Office Applications (Powerpoint, Excel, Word, etc.)	296	63.8
E-Mail (e-mail)	108	23.3
Personal Web Site	105	22.6
Social Networks (Facebook, Twitter, Linkedln, etc.)	101	21.8
Social Groups (E-Groups)	88	19.0
Cloud Storage Tools (Yandex, Dropbox, etc.)	76	16.4
Other (Netsis, Zenom)	4	0.009

Students were asked to specify whether accounting classes are presented online or not at their universities. Responses received are shown in Table 7. Nearly 20% of the students replied "Yes", ***77% replied "No"*** with 15 students failing to provide any reply.

Table 7: Availability of Accounting E-Classes at Universities Attended by Students

Answer	**Yes**	**%**
Yes	94	20.3
No	355	76.5
No Answer	15	3.2
Total	464	100.0

The students were asked to specify whether the lectures presenting the class employ listed technological software and hardware tools in the accounting classes attended so far. Results of the answers to this question are detailed in Table 8. Nearly 63% of the students answered "Yes", showing that minimum one of the technological tools we have specified was employed in any of the accounting classes.

Table 8: Use by the Lectures of the Class of Any Listed Technological Material in Any Accounting Class Attended by Students So Far

Answer	**Yes**	**%**
Yes	292	62.9
No	172	37.1
Total	464	100.0

Of students replying to our question on whether the lectures of the class has employed any of the listed technological materials in the accounting class attended by students so far, only those replying "Yes" were asked to answer the questions in Table 9. Having examined the answers of the students to our questions in Table 9, ***it is observed that lectures of the class mostly (50.4%) employ presentation software (such as Powerpoint) as the technological tool in their accounting classes.*** It is reported that nearly 35% of the students utilize email in the exchange of assignments and lecture notes delivered by the lectures. 5.2% of the students specify that lectures use smartphones for educational purposes. And nearly 8% of the students specify the use of interactive board in the accounting classes. Since the electronic measurement and assessment system (CPS) is not a common technological tool in universities due to its cost and unfamiliarity, the opinion is that students are not informed enough in providing an answer. 16 students state that this technological tool was used in the classes.

Table 9: Use by the Lectures of the Class of the Technological Class Materials in Any Accounting Class Attended by Students So Far

Technological Materials	**Yes**	**%**
Have you used presentation software (Powerpoint)?	234	50.4
Have you used e-mail to exchange homework and lecture notes?	162	34.9
Have you utilized web sites?	129	27.8
Have you utilized social networks (Facebook, Twitter, ...) to exchange homework and lecture notes?	114	24.6
Has it forwarded you to its own personal web site?	92	19.8
Have you used package accounting software? (ETA, etc.)	76	16.4
Have you used video conference, video camera applications?	68	14.7
Have you used internet-based accounting software? (LUCA, etc.)	49	10.6
Have you used interactive board?	36	7.8
Have you utilized smartphone applications?	24	5.2
Have you used Electronic Measuring and Evaluation System (CPS)?	16	3.4

Questions were asked to students about the technological hardware and software they own in an attempt to determine whether they utilize them for the accounting classes. Table 10 shows the answers to our questions.

88.4% of the students replied "Yes" to the question "Do you have your own computer?" 77.2% of the students have a smartphone. 88.1% of the students state that their universities offer wireless internet service. It is observed that 43.8% of the students utilize the wireless internet service.

40% of the students that were asked to specify whether there is any web site they utilize while studying for their accounting class replied "Yes". Students believing have the capability of using an accounting package software at a sufficient level represents nearly 21% of the survey population. 43% of the students specify that they utilize technology when getting prepared for the accounting classes. And the rate of students reporting to be utilizing technology in getting prepared for their accounting exams is 44%.

Table 10: Students' Technological Ownership and Use Profiles

Questions	**Yes**	**%**
Do you have a personal computer?	410	88.4
Do you have a smartphone?	358	77.2
Does your university offer wireless internet service?	409	88.1
Do you regularly utilize wireless internet service?	203	43.8
Are there any internet sites you utilize to study the accounting topics?	185	39.9
Do you believe you can satisfactorily use an accounting package software?	99	21.3
Do you utilize technology during preparation for your accounting classes?	198	42.7
Do you utilize technology during preparation for your accounting exams?	204	44.0

The Licert's scale of 5 was applied to 12 statements we have prepared on the students' use of technology in their accounting classes to measure student participation. According to the arithmetic average of student answers to 12 statements in Table 11, the highest average (4.24) is around the option "Accounting software should be presented in a separate class (e.g. in the computerized accounting class)". 275 of the students marked "Strictly Agree" for this statement. The least average of student answers (2.43) is around the option "Accounting classes may also be presented via e-education applications". Students do not primarily agree that accounting classes may be presented via the e-education method. Based on student answers, students seem to disagree with the statement "Use of technological tools is not useful in teaching the accounting basics". The students state that they believe use of technology in basic accounting classes would be useful.

Table 11: Student Opinions on Technology Use in Accounting Classes

Statements on Technology Use in Accounting Classes	**Strongly Disagree**	**Disagree**	**No Idea**	**Agree**	**Strongly Agree**	**Average**
Accounting software should be taught in a separate course. (For instance in the computerized accounting class)	40	13	17	118	275	4.24
During the accounting class, once topics have been presented, lecture notes should be shared also on internet (e-mail, web site, web groups).	28	20	33	152	230	4.16
Teaching assistans giving accounting lectures should keep up with new educational technologies.	28	16	31	169	219	4.16
Special classrooms equipped with technological hardware should be used for the accounting classes.	30	28	70	185	150	3.86
Thanks to the use of technology, tough courses such as accounting could be better understood.	20	46	61	210	126	3.81
Accounting information available in online accounting sites is useful for the accounting education.	25	43	105	216	74	3.59
Lectures giving accounting lectures should strictly have their own web sites.	31	47	117	160	108	3.58
Use of social networks such as Facebook, Twitter to communicate with students on classes is efficient.	37	68	91	176	91	3.47
Use of technological tools in classes can contribute to the learning process only in exercising.	28	93	97	191	54	3.32
In accounting classes, presentation software should be preferred over traditional teaching.	66	96	81	126	94	3.19
Use of technological tools has no benefit in teaching accounting basics.	127	137	82	80	37	2.49
Accounting classes may be presented via e-training tools as well.	166	96	86	68	47	2.43

For 292 students answering only "Yes" to the question "Has the lectures leading the class ever employed any technological tool in the class so far?", their answers for 5 statements in Table 12 were processed in the Licert's scale of 5 to obtain the average of the answers, and it may accordingly be concluded that students have positive opinion in these 5 statements.

The option with the highest average is ***"The use of technology has rendered the accounting classes more enjoyable",*** and ***the option with the highest average around the scale "No idea = 3" is the "The use of technology has created a sympathy upon me in favour of accounting".***

Based on the overall assessment of 5 statements in Table 12, it may be argued that the use of technology slightly enhances the student interest, achievement, perception and sympathy in the accounting class.

Table 12: Effect of the Technology Use in Accounting Classes on the Student Perception in the Accounting Classes

Statements for the Effect of the Technology Use on your Perception in the Accounting Class	**Strongly Disagree**	**Disagree**	**No Idea**	**Agree**	**Strongly Agree**	**Average**
Use of technology has rendered the accounting classes more enjoyable.	17	41	55	127	52	3.53
Use of technology has eased the presentation of the accounting classes.	20	36	64	129	43	3.48
Use of technology has enhanced my interest in the accounting classes.	20	41	75	113	43	3.40
Use of technology has enhanced my achievement in the accounting classes.	21	37	92	103	39	3.35
Use of technology has created sympathy upon me in favour of accounting.	27	43	75	107	40	3.31

According to the results obtained by applying the Independent Sample T-Test analysis to the statements measuring the student opinion on the use of technology in accounting classes with regard to the use of any technological tool by the lectures in the accounting classes attended by the students as shown in Table 13, there is an statistically significant difference between the students stating that a technological tool was employed in the class and students stating that no technological tool was employed in the class for the statement "Presentation software should be preferred to the traditional method in teaching accounting".

Students stating that the lectures leading the accounting class has employed a technological tool in the class produced more negative answers to this statement compared to students for whom no technology was employed in their class. Students seeing the use of a technological tool in their accounting class by lectures leading that class do not agree with the statement that presentation software should be preferred to the traditional method of teaching in their accounting classes. Also for the statement "accounting classes may also be presented via e-education applications", a statistically significant difference was found between the students seeing the use of technology by the lectures in their class and students seeing no use of technology in the class, such that students seeing the use of technology in their class agree with the statement that accounting classes may be presented online while students seeing no use of technology in their class tend to produce more negative answers to this statement.

Table 13: The Independent Sample T-Test Analysis for the Statements Measuring Student Opinion on the Use of Technology In Accounting Classes with Regard to the Use of any Technological Tool by the Lectures in the Accounting Classes

Statements	**Use of Technology in the Class**	**Answer**	**Arithmetic Average**	**SD**	**t**	**sd**	**Sig.**	**P**
In accounting classes, presentation software should be preferred over traditional teaching.	Yes	172	2.92	1.335	-3.300	461	.348	**.001***
	No	291	3.34	1.341	-3.304	360.225		.001
Accounting classes may be presented via e-training tools as well.	Yes	172	2.61	1.412	2.249	461	.129	**.025***
	No	291	2.32	1.330	2.214	341.921		.027

Table 14: The Chi-Square Analysis Results on the Use of any Technological Tool by the Lectures in the Accounting Classes and on the Utilization of Technology by Students in Getting Prepared for the Accounting Classes

Does the student principally use technology in getting prepared for the accounting class?	**Has the lectures leading the accounting class attended so far ever employed any technological material in the class?**			
	Yes	**%**	**No**	**%**
Yes	147	42.7	51	11.0
No	145	31.3	121	26.1
Total	292	62.9	172	37.1

Conclusion: *According to* χ^2 *18,943 sd (1),* $P \leq 0,05$ and Fisher's Exact Test result, it is significant with *sig (2-tailed)* $P \leq 0,05$.

Table 15: The Chi-Square Analysis Results on the Use of any Technological Tool by the Lectures in the Accounting Classes and on the Utilization of Technology by Students in Getting Prepared for the Accounting Exams

Does the student principally use technology in getting prepared for the accounting exams?	**Has the lectures leading the accounting class attended so far ever employed any technological material in the class?**			
	Yes	**%**	**No**	**%**
Yes	148	31.9	56	12.1
No	144	31.0	172	25.0
Total	292	62.9	172	37.1

Conclusion: *According to* χ^2 *14,437 sd (1),* $P \leq 0,05$ and Fisher's Exact Test result, it is significant with *sig (2-tailed)* $P \leq 0,05$.

CONCLUSION

In the study, a questionnaire was applied to the undergraduate students at business administration in state universities. With this questionnaire, it was strived to identify the level of employing technological hardware and software in the accounting classes as well as the student belief and perception in the use of technological hardware and software tools in presenting the accounting classes.

Based on the answers of students from nine different universities attending the survey, students believe that mostly projector, computer and interactive board should be used during the class. Students specify that mostly the "Internet-Based Accounting Software and Accounting Package Software" should be employed as software tools in the accounting classes.

The students were asked to specify whether the lectures presenting the class employ listed technological software and hardware tools in the accounting classes attended so far. Students answering "Yes" to this question specify that the lectures presenting the class mostly use the presentation software (e.g. Powerpoint). The students further specify that lectures utilize email in the exchange of assignments and lecture notes they deliver.

Majority of the students was found to have their own computer, smartphone and also wireless internet service at their universities, while their technology use in their accounting study was found to be inferior compared to their ownership of technology.

Based on the arithmetical average of the questions we have asked to identify the student opinion on the use of technology in the accounting classes, the statement "Accounting software should be presented in a separate class like computerized accounting" received the most positive participation. The least average of student answers is around the option "Accounting classes may also be presented via e-education applications". Students do not primarily agree that accounting classes may be presented via the e-education method.

Furthermore, based on student answers, students seem to disagree with the statement "Use of technological tools is not useful in teaching the accounting basics". The students state that they believe use of technology in basic accounting classes would be useful. For students answering only "Yes" to the question "Has the lectures leading the class ever employed any technological tool in the class so far?", the arithmetic average of their answers may conclude that students have positive opinion on such 5 statements. Students state that use of technology slightly enhances the interest, achievement, perception and sympathy in the accounting class.

BIBLIOGRAPHY

BABUÇOGLU,B. (2006). **Measuring Student Satisfaction the in Internet-Aided Accounting Applications Class: An Application at the Private İzil Anadolum Open Education Course,** Anadolu Univ. Social Sciences Institute, Master Thesis, Eskişehir.

BUTLER, J. B. & MAUTZ, R. D. (1996). Multimedia presentations and learning: a laboratory experiment. *Issues in Accounting Education*, 11 (2), 259–280ÇANKAYA F. ve DİNÇ E., (2009), "*Identifying the Differences Between Students Taught with Powerpoint and the Traditional Method: A Research at the Kocaeli Technical University"*, **Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Journal,** V:1, I: 17, (p. 28 – 52)

ÇOŞKUN, A. (2008). "*Using Academic Personal Web Sites as an Auxiliary Source in Accounting Education*", **Muhasebe ve Finansman Journal**, I:40,(p.154-164)

ERASLAN, S.(1998). **Computer Use in Accounting and Analysis of Accounting Software**, K.S.U. Social Sciences University, Social Sciences, Ins., Master Thesis, Kahramanmaraş.

FİDAN, H.(2006). **The New Accountant Profile and Education in the Information Age**, Gazi University,

FİDAN, M.E. (2012), "*Differences Between University Students Studying Accounting with Powerpoint and the Traditional Method: The Bilecik University Case*", Journal of Yaşar University , 25(7), (4281-4306)

HACIRÜSTEMOĞLU, R.(2008). *"Accounting Education in the Information Age*", **Muhasebe Bilim Dünyası Journal**, V:3, (p.1-6)

IFAC (2010), Handbook Of Internatıonal Educatıon Pronouncements, http://www.ifac.org/news-events/2014-01/iaesb-publishes-new-standards-content-professional-accounting-education-program (Erişim: 20 February 2014)

IFAC, http://www.ifac.org/sites/default/files/publications/files/handbook-of-international-e-2.pdf http://www.ifac.org/news-events/2007-10/ifacs-international-accounting-education-standards-board-releases-new-practice-g

KALMIŞ, H. and YILMAZ, B.B. (2004). Current situation of accounting education at license level and necessary actions for improvement. *Istanbul University, Faculty of Business Administration, Accounting Institute, XXIIIth accounting education symposium of Turkey*, http://www.isletme.istanbul.edu.tr/surekli_yayinlar/tmes2004/bildiri2.doc

ÖMÜRBEK, V. and BEKÇİ, İ. (2006). Role of Information Technologies in Accounting Education A Research on Students Attending the Computerized Accounting Class. *Muhasebe ve Denetime Bakış* Journal, 18, 75-93.

SAYIN et al. (2005). Dokuz Eylül University, Faculty of Economics and Administrative Sciences, a research on measuring and assessing the efficiency of accounting and finance education with regard to students and infrastructure. *Muhasebe ve Finansman Journal*, 26, 101-108.

TEKŞEN, Ö. et al. (2010), "*Assessing the Accounting Education: A Research on the Students of Vocational Colleges Governed by the Mehmet Akif Ersoy University*", **Muhasebe ve Finansman Journal**, I:46, (p.100-112)

TORAMAN, C. et al. (2008). "*Information technologies and their effects in the Education of Professionals*", **EKEV Akademi Journal** Y:12, I:37 (p.15-26)

USLU, S. (1999), Accounting Profession and Practices ın the Light of Evolving IT Trends, IVth Accounting Audit Symposium of Turkey, 5-9 May, Antalya.

http://archive.ismmmo.org.tr/docs/Sempozyum/04.SEMPOZYUM/2GUN2OTURUM/03-Selcuk%20Uslu195.doc (Erişim: 20 February 2014)

UYAR,S. AND ÜNLÜSOY, E.(2007), "Relationship between Information Technologies and Accounting and Auditing Standards within the Framework of International Educational Standards (IES) and International Education Programs Specification (IPES) , **İZSMMO, Turkish Accounting Standards Symposium XI,** 26-30 October 2007, Antalya

ÜNAL, O. and DOĞANAY, M. (2009). *"Efficiency of Accounting Education at License Level: An Empirical Study in Court of Accounts Case"*, **Sayıştay Journal,** I:74-75, (p. 117-138)

YILDIZ, F. and DURAK, G., *Surveying the Capacity of Academic Accounting Education to Meet the Expectations of Small and Medium-Scale Enterprises Active in the Kırklareli Region,* **Muhasebe ve Finansman Journal**, January 2011. (p.37-47)

AN EMPRICAL ANALYSIS ON ACCOUNTING CULTURE IN TURKEY

Selahattin KARABINAR*
Varol KIŞLALIOĞLU**

ABSTRACT

There are many factors which effects accounting culture in a society. Culture is an important factor among these factors. Culture deeply effects accounting culture in a society.

In this study, it is aimed to analyze and determine the accounting culture dimensions in Turkey under the Gray's (1988) classification and determinations. For this purpose, a questionnaire applied CPAs in Turkey. The questionnaire data analyzed under these techniques: Reliability Analysis, Factor Analysis and Frequency Analysis.

Reliability rate is middle (Cronbach alfa=0,68). Under factor analysis extracted 6 group, and these analyze explain %46 of total variances. According these analyze, professionalism and uniformity gather in first and second factor groups. As a result, we can say professionalism and uniformity are dominant in accounting culture in Turkey.

Keywords: *Culture, Gray's Theory, Accounting Values, Turkey, Accounting Culture, Enterprises*

Jel Classification: *M48*

* Prof., PhD., Sakarya University, Bussines Administartion Faculty / skbinar@sakarya.edu.tr/+902642956267
** Sakarya University, Social Sciences Institute, Doctorate Student / vkislali@balikesir.edu.tr +90266 552 2903

1. INTRODUCTION

There are so many factors that affect accounting practices in a society. The nature of organization of the profession, regulatory institutions, economical factors, volume of foreign trade, culture of the society, and structure of enterprises management are the factors that form the accounting climate in a society. Culture has the most significant and deepest affect among these factors. Many studies attempted to explore cultural dimensions (Hofstede1983, 1997, 2001, Triandis 1994, Trompenaars, 1993). Gray (1988) identified four sub cultural dimensions in accounting and named them “accounting values”. However Gray’s study was theoretical, not empirical. In a social system, changes in an accounting system affect four major groups: intrusive events, intra-system activity, trans-system activity, and the cultural environment. According to previous studies, changes to the accounting system are the results of both the intrusion of events and the interaction between the accounting system and neighboring social systems within the country. Culture affects the change process by influencing the norms and values of the accounting system and the other social systems with which it interacts, and by influencing the behavior of groups in their interactions within and across systems.

Heidhues and Patel (2010) tested Gray’s framework of accounting values in Germany. This study revealed that they provide evidence showing that the German accounting model is the result of the specific German cultural, economic, social and legal environment. Indeed, Gray and subsequent researchers’ concepts about accounting values fail to capture Germany's distinct socio-economic model and capitalist tradition that has resulted in an accounting model that promotes greater stability and restrictions of financial disclosure. Indeed, the development of secretive tendencies and other concepts such as conservatism in the German accounting model provides evidence that reliance on simplistic cultural dimensions and accounting values neglects the distinctiveness of national accounting models and the factors that shape these models.

In this study, a questionnaire designed by Chanchani and Willet (2004) was used mainly but some items were as modifications. The questionnaire was sent to Turkey’s Top-500 Industrial Enterprises which have big impact on the Turkish Economy. Therefore, companies in this study represent an excellent sample of Turkey’s accounting climate. This study utilized the framework proposed by Gray (1988) to empirically test accounting values in Turkey. This study is the first scientific research in Turkey, which may be considered as a pioneering study in this area in Turkey. Turkish culture (not accounting culture) was examined by Hofstede (1980) where Turkish culture was described as collective, nearly feminine, high power distance and higher secrecy. Hofstede’s study was done thirty years ago. There has been significant changes in Turkey during the last thirty years.

As we look at the Turkish accounting culture, only Askary et al (2008) examined the Turkish accounting culture as a result of analyzing thirty companies listed in Istanbul Securities Exchange Market. The results from this study confirmed Gray’s theory that high uncertainty avoidance and low individualism are positively associated with high conservative accounting measurements. In addition, the study confirms that the highest power distance, uncertainty avoidance, and the lower individualism are positively associated with accounting uniformity. However, large power distance, high uncertainty avoidance, and collectivisms negatively affect professionalism and financial disclosures. In another study issued by Askary (2006), the results show while the Gray's hypothesis of statutory control is positively confirmed for Iran, and moderately for Bangladesh, Jordan, Oman, and Qatar, it is negatively rejected for Pakistan, Turkey, Malaysia, and Indonesia.

2. LITERATURE SURVEY

Scientific studies about accounting culture date back to the 1960s (see, for example, Bedford, 1966; Mueller, 1968; and Seidler, 1969). These early studies did not explain how culture affects accounting (Doupnik, 2004). Harrison and McKinnon (1986) developed a framework that explains how changes in a country's financial reporting system occur. Doupnik and Salter (1995) expanded Harrison and McKinnon’s framework (1986) to develop a general model of an accounting development where cultural norms and values are seen as influencing accounting practices through norms and values held by members of the accounting system and other systems that interact with the accounting system (i.e., the institutional structure). The authors argued that these factors and values differ across countries.

Harrison and McKinnon (1986), Doupnik and Salter (1995), and Nobes (1998) provide theoretical frameworks that attempt to explain the process by which culture in general affects accounting. However, none of these authors’ models can be used to develop specific hypotheses as to how countries' accounting systems or aspects of those systems might differ because of differences in culture (Doupnik, 2004).

Culture is the independent variable in empirical researches that investigate the relationship between culture and accounting. Hofstede’s (1980) framework is one of the most widely used frameworks in accounting research. Hofstede has four components for the formation of and stabilizing of societal culture: outside influences, ecological factors, societal norms, and institutional consequences. Societal values affect the structure and functioning of a society's institutions such as family patterns, social stratification, education, and political structure. These societal values are: Individualism, Power Distance, Uncertainty Avoidance, and research on national cultural differences. These four dimensions are: 1. Individualism Versus Collectivism, 2. Large Power Distance Versus Narrow Power Distance, 3. Uncertainty Avoidance Versus Not-avoidance, and 4. Masculunity Versus Femininity.

These dimensions identify the main values that attempt to explain the general similarities and differences among cultures around the world. On the other hand, while empirical validation of these dimensions is far from complete, the dimensions provide explicit constructs that accountants and others can benefit from when considering the impact of culture on accounting systems and practices.

Hofstede identifies nine distinct cultural areas in which countries have a similar pattern of scores on the four cultural dimensions. These areas are: 1. Anglo Countries, 2. Germanic Countries, 3. Less developed Latin Countries, 4. Near Eastern Countries, 5. Nordic Countries, 6. More developed Latin Countries,7. Asian-Colonial Countries, 8. Japan, 9. African Countries

Hofstede and Bond (1988) added a fifth cultural dimension, Confucian Dynamism, which was later renamed as Long-term Orientation. Hofstede (2001, p. 359) provides a short definition of this dimension as: "Long Term Orientation refers for the fostering of virtue oriented towards future rewards, in particular, perseverance and thrift. Its opposite pole, Short Term Orientation, stands for the fostering of values related to the past and present, in particular, respect for tradition, preservation of 'face' and fulfilling social obligations." This dimension was originally developed through the use of a Chinese Value Survey and may capture differences in value preferences between Western and Eastern cultures.

Gray (1988) identified four accounting values that can be used to define a country's accounting subculture: Professionalism, Uniformity, Conservatism, and secrecy. Gray (1988, p. 8) described these accounting subculture values as “accounting values”: 1. Professionalism versus Statutory Control, 2. Uniformity versus Flexibility , 3. Conservatism versus Optimism, Secrecy versus Transparency

A number of studies empirically tested one or more aspects of the theoretical framework proposed by Gray. Most of these studies attempted testing Gray's hypotheses using countries as the unit of analysis by examining relationships among Hofstede's cultural dimensions. In addition, five studies examined Gray's hypotheses using individual accountants as the unit of analysis. These studies focused on the relationships between cultural dimensions and accountants' attitudes and beliefs. These two different types of studies are reviewed below.

Eddie (1990) provided the first empirical test of Gray's framework, testing all four of Gray's hypotheses. Eddie (1990) used an eclectic approach to construct indices of the accounting subculture values for thirteen countries in the Asia-Pacific region. He selected ten factors to measure each accounting value. He then scored each factor on a six-point scale and summed the scores to develop an index for each value. The accounting value indices were then correlated with Hofstede's cultural dimension indices for the thirteen countries. In all cases, the predicted signs of association were confirmed. Salter and Niswander (1995) used regression analysis to test Gray's hypotheses with measures of accounting system attributes as the dependent variables and Hofstede's cultural dimension indices serving as the independent variables. Similar to Eddie (1990), Salter and Niswander (1995) used an eclectic approach to measure the dependent variables, with more than one measure developed for each value.

Salter and Niswander (1995) also tested the relationship between two institutional consequences, the level of market capitalization and the marginal tax rate, and the various dependent variables. Their method did not allow any conclusions to be drawn about the impact of these institutional consequences on the values shared by members of the accounting subculture.

Sudarwan and Fogarty (1996) employed a longitudinal approach focusing on a single country rather than using Gray's model. They examined the relationships among the cultural characteristics of Indonesian society, reporting practices of Indonesian firms, and accounting standards promulgated by the Association of Indonesian Accountants. They hypothesized that, if culture and accounting are related, then changes in cultural dimensions should be related to changes in accounting values over time. Sudarwan and Fogarty (1996) developed their own measures of five cultural values between 1981 and 1992. This is the only study testing Gray model that measured cultural values independently rather than using Hofstede's model. It is also the only study to incorporate the fifth cultural dimension-Long-term Orientation- in the analysis. Each cultural value is substituted by multiple variables which are lacking an intuitive appeal. Sudarwan and Fogarty (1996) used structural equation modeling (SEM) to analyze the hypothesized relationships. Changes in three of Hofstede's cultural dimensions from 1981 to 1992 have significant relationships with changes in one or more accounting values; there is no significant relationship between the change in Masculinity and any of the accounting values. The results for Individualism are consistent with Gray's expectations for Professionalism only, and the results for Power Distance support the hypothesized relationship for Uniformity only. The results related to Uncertainty Avoidance support Gray's expectations with regard to Uniformity and Conservatism, but not Professionalism and secrecy. The Uncertainty Avoidance results are the only results that support Gray's hypotheses that are common to both Salter and Niswander (1995) and Sudarwan and Fogarty (1996).

A fertile and perhaps more interesting avenue of research opened up when Doupnik (2004) refined the framework to describe how culture might affect the manner in which accountants apply the rules that are a part of financial reporting systems. The use of the experimental method to test the Societal Values, Accounting Values and Accounting Applications linkage will help in assessing the cause and effect relationship between culture and accountants' application of financial reporting rules, which in turn will help in determining the extent to which culture acts as an obstacle to the comparability of financial statements across countries. The increasing trend towards economic globalization makes the important issue of cross-national comparability more important than ever.

3. METHODOLOGY AND FINDINGS

The questionnaire items used in this study were designed by Chanchani and Willett (2004). The items in Chanchani and Willett's questionnaire are applicable all over the World. Thus, they can also be used in Turkey. A copy of the questionnaire instrument is in Appendix A. The questionnaire was sent to respondents registered as CPS in Turkey Accounting Profession Body (TURMOB). We did not attempt to provide additional context to the questionnaire, such as whether the items are related to public or private companies. The questionnaire was designed to give a comprehensive coverage of accounting aspects.

The secrecy construct is represented by questionnaire items 4, 8, 12, and 16. All 4 items were classified as being related to financial statements disclosure. Item 4 was designed to capture the ‘‘external spread of user’’ aspect of secrecy noted in Baydoun and Willett (1995). Item 8 was aimed to capture ‘‘information quantity’’ aspect of secrecy. Item 12 required respondents to indicate their agreements to the statement that information about management and owners should not be included in financial statements. Items 8 and 11 are related to the information quantity and level of detail aspect of secrecy, with agreement to the item indicating higher secrecy. Item 16 was intended to capture the aspects of secrecy relating to managerial intentions. Items 4 and 16 are both related to the transparency aspect of secrecy.

Items 1, 6, 10, and 14 are aimed to capture conservatism. Items 1 and 14 are related to measurement and items 6 and 10 related to disclosure. Items 2,3, 7, 11, and 15 are related to uniformity. Items 2, 3 and 11 are intended for capturing the measurement dimension, and items 7 and 15 are for the disclosure dimension. Item two required respondents to indicate their level of uniformity by providing a specific measurement context. Externally set depreciation rates indicate higher uniformity. Items 5, 9, 13, and 17 are related to professionalism. The classification of all these items also relate to the social dimension of accounting, and are consistent with the theoretical literature and the interpretation given to this value in previous research. In general, this construct refers to the attributes of those who perform the accounting function rather than the characteristics of financial statements. Item 5 is a general and direct regulatory framework question asking if the accounting profession should be self-regulated. This is consistent with Gray’s suggestion that professionalism is correlated with self-regulation and firmly established professional associations. While the organizations of accounting profession in some countries are dominated by government, in some countries they have a self-regulated position. If the organizations are dominated by government, accounting values are shaped as statutory control and uniformity.

3.1. Pilot Study

The questionnaire was initially sent to some accountants and accounting academicians to check the reverse translation of original questionnaire form and to test the items in Turkey as a pilot study. As a result of the feedbacks about the questions, there were some concerns about item 2, and it was separated into two questions. So the items in questionair form reached to 17.

3.2. Sample

The sample in this study consisted of CPAs in Turkey. There are 95.895 CPAs in Turkey. 51.750 of 95.895 are independent CPA, the rests are employee accountant for a employer. This questionnaire was applied on independent accountants in Turkey. This amount

(51.750) is the population of this study. The questionnaire applied to 1.260 independent CPAs in Turkey.

4. RESULTS

The results of this survey were analyzed by means of reliability analysis and factor analysis. Reliability analysis is based on Cronbach-alpha. In Table-1, first column displays the name of accounting values, second column displays the list of items of accounting values. The third column displays the scores.

TABLE-1 RELIABILITY ANALYSIS		
ACCOUNTING VALUES	**ITEMS**	**Cronbach-alpha Scores**
UNIFORMITY	2,6,10,13,17,20, 23,25	0,402
PROFESSIONALISM	1,5,9,12,16,19_R*	0,539
SECRECY	4,8_R*,11_R*,15,22,24,26	0,645
CONSERVATISM	3,7,14,18,21	0,530
*** REVERSED ITEM**		

The factor analysis revealed eight factors, each loading factor containing the items associated with accounting values. Principle component analysis method was used as the extraction method and *varimax* rotation method was applied to all data. K-M-O scores were extracted as 0.737. The eight factors totally explained 54,187 % of the variation. Table-2 displays the factor analysis results.

Tablo 2. ROTATED COMPONENTS MATRIS								
	COMPONENTS							
	1	2	3	4	5	6	7	8
i12	,826							
i1	,758							
i10	,566							
i5	,464					,450		
i21	,369							
i22		,						

		743						
i26		,679						
i4		,668						
i15		,651						
i24		,491					,375	
i25			,610					
i23			,586					
i17			,579					-,430
i20			,547					
i7				,766				
i18				,714				
i3				,609				
i14				,393		-,385		
i2					-,824			
i6					,812			
i8_R						-,607		
i9	,420					,444		,410
i19_R							,649	
i16							,578	
i13						,412	-,464	
i11_R								,722

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Then we forced 6 factors to fit for Gray's Model. Table-3 shows 6 factor loads.

Table-3: Rotated Component Matrix 2

	Components					
	1	2	3	4	5	6
S12_P4	,704					
S19_P6_Rev	,690					
S22_G5	,687					
S1_P1	,670					
S16_P5	,548					
S20_Te6		,685				
S8_G2_Rev		,618				
S23_Te7		,565				
S4_G1		,487				
S18_T4			,768			
S7_T2			,740			
S3_T1			,556			
S2_Te1				-,830		
S6_Te2				,806		
S17_Te5					,688	
S10_Te3					,654	
S24_G6					-,499	

S14_T3						,5 42
S26_G7						,5 23
S21_T5						,4 60

Factor analysis results are below;

Factor Loads-1: In this group, professionality is dominant. Factor Loads-2: In this group, flexibility and transparency are dominant. Factor Loads-3: All items in this group are conservatism. Factor Loads-4: All items in this group are flexibility. Factor Loads-5: uniformity and secrecy classified in this group. Factor Loads-6: conservatism and transparency classified here.

5. CONCLUSIONS

According these analyze, professionalism and uniformity gather in first and second factor groups. As a result, we can say professionalism and uniformity are dominant in accounting culture in Turkey.

The secrecy and uniformity constructs also emerged, although less strongly than in the case of professionalism. Conservatism construct tends to flexibility. The reliability scores were lower than would have been hoped. The factor analysis did not produce four factors, it revealed eight factors. The factor analysis reported in the paper explains about 54,187% of the variation in the data. According to the loadings of Factors 1 and 2; Turkey’s accounting climate can be described as uniformity (factor-1) and described as professionalism. This study, as with most factor analysis, is open to the criticism that others interpreting the factor analysis results might assign different labels to factors or interpret factor loadings differently. The labeling of the factors has been guided by the literature relating to the Hofstede-Gray framework, results from reliability and factor analyses. This study raises a number of new and interesting questions concerning the identity and nature of accounting’s cultural dimensions that would not necessarily be so clearly identified by other more qualitative approaches. Chanchani and Willet’s approach needs to be developed to address the limitations and weaknesses of design noted here and to be applied across different countries and samples of users and preparers. Such studies would contribute to the development of a repository of accounting values data for research and would help to address the current problems of lack of data associated with researching the cultural relevance hypothesis. This study aimed to provide primary data on an issue about which there is little empirical evidence.

Turkey’s accounting climate is very similar to the one in Europe. On the contrast, IFRS’s have Anglo-Saxon approach. This gap may cause some problem when a country shifts to IFRS. The results of the study provide some guidelines to the transition process of IFRS in Turkey.

REFERENCES

Askary S., (2006), "Accounting professionalism - a cultural perspective of developing countries", Managerial Auditing Journal Volume 21 Number 1 2006 pp. 102-111

Askary et al., 2008 S. Askary, H. Yazdifar and D. Askarany, Culture and accounting practices in Turkey, *International Journal of Accounting, Auditing and Performance Evaluation* 5 (1) (2008), pp. 66-88

Baydoun, N. and R. Willett. 1995. Cultural relevance of Western accounting systems to developing countries. ABACUS, Vol. 31: 1: 67-92.

Chanchani, S. and A. MacGregor. 1999. A synthesis of cultural studies in accounting. Journal of Accounting Literature. Vol. 18: 1-30

Chanchani, Shalin and R. Willett (2004), An empirical assessment of Gray's accounting value constructs, The International Journal of Accounting 39, 125- 154

Doupnik, T.S. and S.B. Salter. 1995. External environment, culture, and accounting practice: a preliminary test of a general model of international accounting development. The International Journal of Accounting. Vol. 30: 189-207.

Doupnik, Timothy S, (2004) "a critical review of tests of gray's theory of cultural relevance and suggestions for future research"Journal of Accounting Literature

Eddie, I.A. 1990. Asia Pacific cultural values and accounting systems. Asia Pacific International Management Forum. Vol. 16: 22-30.

Eva Heidhues and Chris Patel, (2010), "A critique of Gray's framework on accounting values using Germany as a case study", Macquarie University, NSW 2109, Australia September 2010.

Gray, S.J. 1988. Towards a theory of cultural influence on the development of accounting systems internationally. Abacus. Vol. 24: 1-15

Harrison, G.L. and J.L. McKinnon, J.L. (1986). Culture and accounting change: anew perspective on corporate reporting regulation and accounting policy formation. Accounting, Organizations and Society. Vol. 11: 233-252

Hofstede, G. 1980. Culture's consequences: International differences in work-related values. London: Sage Publications.

Hofstede, G. 1983. National cultures in four dimensions. International Studies of Management and Organizations. Vol. 13: 46-74.

Hofstede, G. 1986. The cultural context of accounting. Accounting and Culture: Plenary Session Papers and Discussants' Comments from the 1986 Annual Meeting of the American Accounting Association, 1-11.

Hofstede, G. 1991. Culture and organizations: Software of the mind. London: McGraw-Hill.

Hofstede, G. 1994. Values survey module 1994 questionnaire (VSM 94). Tilburg, Netherlands: Institute for Research on Intercultural Cooperation (IRIC).

Hofstede, G. 2001. Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations. Thousand Oaks: Sage Publications.

Nobes, C. 1998. Towards a general model of the reasons for international differences in financial reporting. Abacus. Vol. 34: 162-187.

Salter, S.B. and F. Niswander. 1995. Cultural influence on the development of accounting systems internationally: a test of Gray's (1988) theory. Journal of International Business Studies. Vol. 26: 379-397.

Sudarwan, M. and T.J. Fogarty. 19%. Culture and accounting in Indonesia: an empirical examination. The International Journal of Accounting. Vol. 31: 463-481.

APPENDIX A. THE AVS QUESTIONNAIRE

	1	2	3	4	5	6	7
1. Profits and assets should be valued downwards in case of doubt.							
2 Depreciation rules should be set externally, specifically for separate groups of assets by Turkey’s Capital Market and Financial Ministry							

3 Depreciation rules should be set externally, specifically for separate groups of assets by TURMOB							
4. Financial statements should be available to the general public rather than just to shareholders and managers.							
5. Accounting profession should be self-regulated							
6. Market values are generally less relevant than historic costs							
7. Financial statements of all companies should have standardized formats.							
8. Only a minimum amount of detailed data should be included in financial statements.							
9. Professional accountants are the best judges of how to measure a firm's financial position and performance.							
10. Market values should be generally used instead of historic costs							
11. Accounting policies once chosen should not be changed							
12. Information about management and owners should not be included in financial statements							
13. Professional accountants are the best judges of what to disclose in financial statements							
14. In times of rising prices LIFO instead of FIFO should be used in calculations as estimates							
15. The level of detailed standardization in financial statements should be increased							
16. Management forecasts should be included in financial statements							
17. Professional accountants should maintain high standards of ethical conduct.							

THE JAPANESE CONSUMPTION TAX REFORM AND THE ISSUE OF TAX CREDITS

Takeo Itabashi*

ABSTRACT

Consumption tax was introduced in Japan in 1989 at a rate of 3%, and then rose to 5% in 1997. From last April, this rate has risen to 8%, and a further increase to 10% is currently under consideration. One of the incentives of the reform is to transform the current taxation system based on direct taxes into one based on indirect taxes.

In this paper, I investigated some practical issues related with the reform, focusing on the taxation of small enterprises. A simplified taxation system based on tax exemption limits is currently used in Japan in order to reduce the administrative burden for small businesses. The 2014 tax raise results not only in broadening the scope of tax payers, but also in a greater number of tax credit recipients among small enterprises.

Keyword: *Japanese Added-Value Tax, Policy Tax Profits, Consumptiontax*

Jel Classification: *H26*

*Takeo Itabashi, Tokyo Keizai University, Tokyo, Japan, takeo_it@tku.ac.jp

1. INTRODUCTION

In Japan, as part of the national economic revival policy, and in the context of severe financial reforms in order to reduce the national deficit, the Abe cabinet has decided to raise the consumption tax rate from 5% to 10% in two stages. From April 2014, consumption tax rate has already increased to 8%, and a further increase to 10% will occur in October 2015.The adoption of a reduced tax rate for basic products is also under consideration, which would be a considerable innovation in the current consumption tax system.

These reforms put into question the tax avoidance practices of Japanese companies concerning consumption tax. A recent survey by the Nikkei Shinbun (2012) revealed that about 80% of a sample of small taxpayers used these practices called “tax advantage” (ekizei). Because of some loopholes in the regulatory environment of the consumption tax system, these tax avoidance practices are possible for most small companies, and also for groups of companies. These fraudulent practices are likely to gain more importance after the tax rate increases in 2014 and 2015.

In this paper, after introducing the specific features of the Japanese consumption tax system, several issues related with tax advantages are investigated.

2. OVERVIEW OF THE JAPANESE CONSUMPTION TAX

In Japan, consumption tax was introduced in December 1988 as part of a radical tax reform, and implemented from April 1989. It was designed after the value added tax used in European countries and adapted to the specific domestic context.

The Japanese consumption tax can be defined as a *general* and *multi-step* consumption tax, presenting similar characteristics with value added tax. It is *general* because it does not define certain categories of taxable goods or services individually, but it basically applies to all goods and services.

It is *multi-step* as opposed to *single-step* consumption tax. In a *single-step* consumption tax system, transactions at only one level of the production and distribution channel are taxed. Depending on the stage of taxation, it may be called “manufacturer sales tax”, "wholesaler sales tax"or "retailer sales tax. In a *multi-step* consumption tax system, the tax base is determined at every stage of the production and distribution channel based on added value.

Taxable transactions are domestic sales of assets and services made by companies and transactions involving foreign imports from bonded areas. Tax payers are companies for domestic transactions and importers for import transactions. The tax basis is defined as the counterpart paid for domestic sales of assets and services and as the transaction price for imports.

Tax rate is currently 8%, including national consumption tax for 6.3% and regional consumption tax for 1.7%. As the tax rate is very low compared with other developed countries, it is necessary to secure tax revenues by adopting a large scope of taxation with sufficient tax base. In the current system, all goods and services including essential goods like food are taxable, without any reduced rate. For domestic transactions, payable tax is calculated as follows:

taxable sales amount x tax rate - tax paid on the purchase amount.

A specific feature of the Japanese consumption tax system is that it is based on the conservation of bills, not on invoices or receipts. This method, called "bill conservation system"(Seikyusho-to hozon hoshiki) is based on the presentation of accounting books and bills when justifying the tax base. As there is no obligation for companies to write the amount of consumption tax on bills, it is impossible to trace back the amount of tax paid on purchases.

Export transactions including export of goods, international transport or communications are not taxable. Other transactions exempt of tax include sales and rent of land, banking, insurance, health care, education, welfare, and housing rental transactions.

In addition, some exemptions are also implemented for small taxpayers based on taxable sales amount for the last two accounting periods: if sales were less than 10 million yen per year, the tax payer is exempted from taxation ("tax-free company system") and if sales were less than 50 million yen per year, the tax payer can benefit from a simplified declaration system with deductible consumption tax on purchases calculated based on a flat percentage of sales (“simplified taxation system”).

Simplified taxation system: assumed percentage of purchases compared with sales

First category（Wholesale） --------- 90%

Second category（Retail） --------- 80%

Third category（Manufacturing） ------- 70%

Fourth category（other businesses） --- 60%

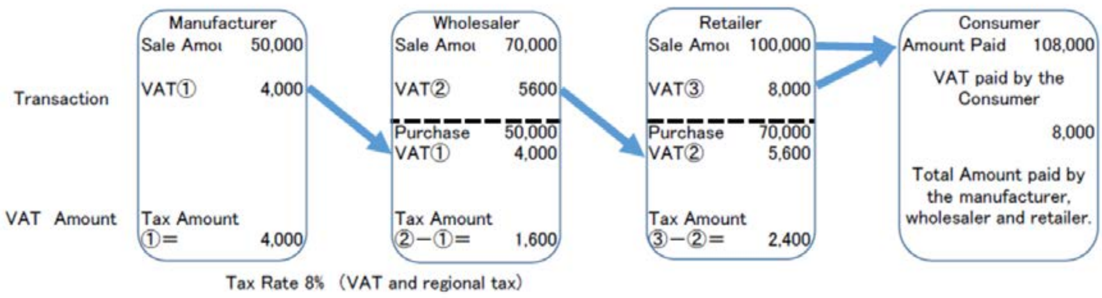
Fifth category（Services） --- 50%

As far as the “tax free company system”is concerned, the scope of taxpayers eligible is especially large, but at the origin it was even larger. In 1989, when consumption tax was first introduced, about 65.7% of businesses were tax free companies, but the maximum amount of sales was reduced from 30 million to 10 million yen in the 2003 tax reform.

Similarly with the value added tax implemented in Europe, taxpayers are allowed to deduce consumption tax paid on purchases in order to avoid double taxation. A simple example of this taxation system is described in the graph below.

A first step of taxation is paid by the manufacturer, and in the second step, the wholesaler can deduce the consumption tax paid by the manufacturer from the amount of tax payable incurred from its own amount of sales. Next, the retailer can also deduce tax paid by the wholesaler from the amount of tax payable incurred in the sales transaction with the consumer.

Graph 1: The Japanese consumption tax system



The deductibility of tax amounts paid at earlier stages is based on the “conservation of bills” system defined supra (unlike in Europe, where deductible tax is justified based on invoices). At first, this system was adopted in order to reduce the administrative burden of taxpayers, but the result is that “not only does it make the repartition of tax burden unclear, but it also makes the correct implementation of consumption tax uneasy. On the contrary, introducing an invoice-based system could provide a better basis for the determination of taxable income of businesses.”(Kaneko, 2014)

One practical consequence of the “conservation of bills” system in Japan is that the deductible tax amount is not traceable. For this reason, tax payable is calculated as follows: (sales-purchases excluding tax) x tax rate = tax payable. This calculation is correct only because there is currently no reduced tax rate in Japan.

3. THE STRAINS OF CONSUMPTION TAX IN JAPAN

Many issues and controversies concerning consumption tax in Japan are similar with other countries, and these concerns have been gradually improved since the introduction of the consumption tax system. The tax reforms of 1991, 1994 and 2003 have considerably improved the original system, but a few fundamental issues remain unsolved.

The main reason for which those issues remain is that intrinsically, reforming the flat 8% rate and the conservation of bills system is not fully supported by constituents. One more important element is that transactions within keiretsu (company groups), very important in the Japanese economy, make a clear determination of the tax base difficult.

3.1 Issues Already Improved By Tax Reforms

As mentioned supra, one major problem of the Japanese consumption tax system is that deductible tax is not traceable in the system called conservation of bills, since bills mention neither consumption tax nor whether the supplier is subjected to consumption tax or not. Although some comparable issues have been raised about the invoice-based system in Europe, the huge scope of tax-free businesses and the flexibility of the conservation of bills system in Japan create the conditions of large scale tax avoidance. These practices are called “ekizei”or undue tax advantage for tax payers who are able to retain consumption tax normally due to the State.

Concretely, tax advantages occur in the following situations. When a company purchases goods from a tax-free supplier, the transaction amount is normally not deductible from the tax base of the customer, since no consumption tax is paid by the supplier. In order to justify the deduction of all purchases from the tax base, companies adopted a format of bills that did not mention whether the supplier was a tax-free company or not.

In addition to the tax-free system, the simplified taxation system described supra also allows some tax advantages. At the time the system was implemented, a maximum of 500 million yen of sales was set for this category, allowing a large number of companies to benefit from favorable deduction rates for purchases. Originally, the assumed percentage of purchases was 90% for retailing and 80% for other businesses.

Because the rate of purchases was unrealistically high and the scope of this system was too large, it produced a substantial tax advantage for companies. Consequently, a five level scale was introduced for the rate of purchases (see supra) and the maximum amount of sales was reduced to 50 million yen.

These issues have been considerably improved since the introduction of the consumption tax, but the “tax advantage”issue remains.

3.2 Remaining Controversies

As mentioned supra, the fraudulent practices called tax advantages are based on the following elements. First, it is impossible to trace the deductible amount of consumption tax, since bills do not provide this information. Secondly, despite a large number of companies are not subjected to the consumption tax, the customer can pretend that all purchases are deductible from the tax base, since it is impossible to determine whether the supplier is tax-free or not. Last, assumed purchase rates in the simplified system are higher than the effective rates.

The bill based-system also allows tax-free suppliers to add undue consumption tax to the amount claimed to the customer. Of course, as tax-free companies pay some consumption tax on purchases, it is not a big issue if they have customers pay for these taxes, but eventually, this practice can also be a way to increase profits for tax-free companies.

If a tax-free company bills the exact amount of consumption tax paid on purchases, or no consumption tax, then no “tax advantage”occurs. The tax advantage occurs only when the company bills higher amounts of consumption tax than the amounts really paid on purchases. As a result, some consumption tax revenues that should be collected by the tax administration are retained within businesses.

In reality, small companies are often in situations that do not allow them to negotiate higher prices with larger businesses, so that the room for tax advantage is reduced. Tateishi (2010) compared the consumption tax revenue with his own assessment derived from gross domestic product and found that the impact of tax advantages (consumption tax due but retained by tax-free businesses) was insignificant compared with the total amount of consumption tax.

One more issue that raised some concerns recently is the simplified taxation system described supra, and especially its five level standard for purchase rates. The Nikkei Shinbun(October 4, 2012) reported the results of a survey based on 4699 small and medium companies subjected to the simplified taxation system for consumption tax. The investigation revealed that 79.4% of companies retained part of the consumption tax due. It also revealed that the effective rates of purchases of all business sectors were lower than the five rates used by the tax administration. It also revealed that some groups of companies misused the simplified system in order to generate tax advantages by creating new subsidiaries.

As a matter of fact, the tax law allows all newly created corporations, regardless of the sales amount, to use the simplified taxation system during two years. In order to benefit from tax advantages under this system, groups create some new subsidiaries in order to run part of their business with lower taxation. In the survey, 11 companies out of 12 companies for which sales were higher than 500 million yen generated in total 35.5 million yen of tax advantage.

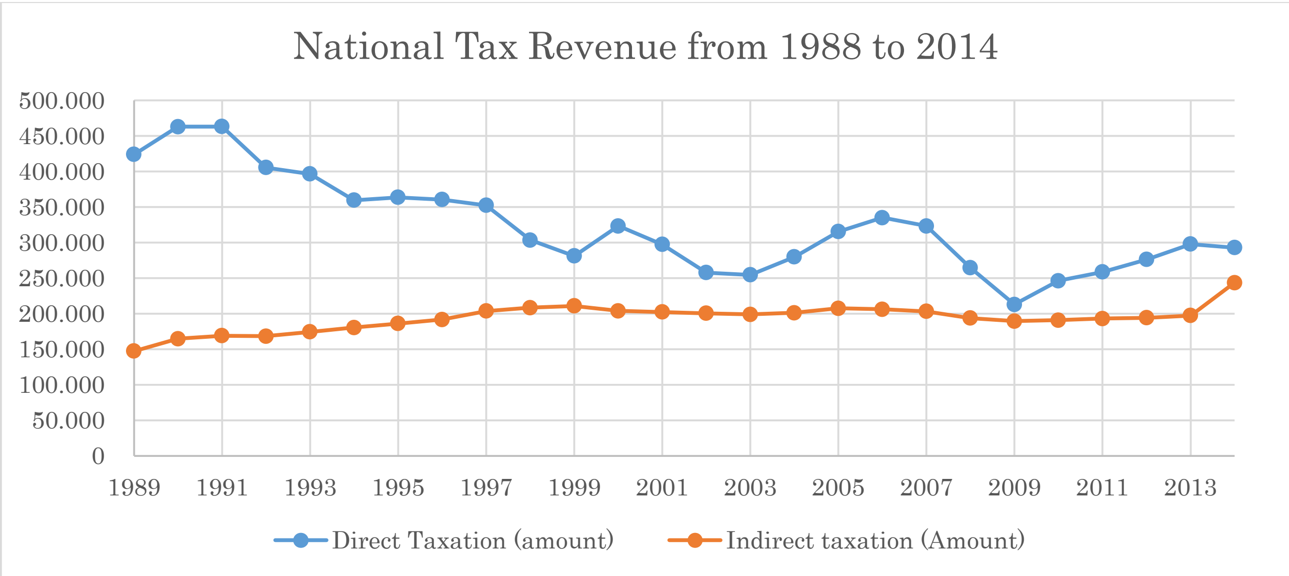
As the Japanese consumption tax system reflects the socio-economic conditions of its creation, it is difficult to reform the whole system in order to suppress tax advantages. In particular, the conservation of bills system, although it was already reformed, is one pillar of tax advantages. Despite introducing an invoice-based system has been constantly discussed in recent years, there is little hope for a substantial reform in the near future.

3.3 The Consumption Tax Rate

Compared with other countries, the current consumption tax rate of 8% is particularly low. For this reason, the cost of introducing an invoice-based system was assumed higher that the increase in tax revenues subsequent to a potential reform.

Yet, in the 1989-2013 period, tax revenues from indirect taxes have raised, while revenues from direct taxes have dropped dramatically (see Graph 1)

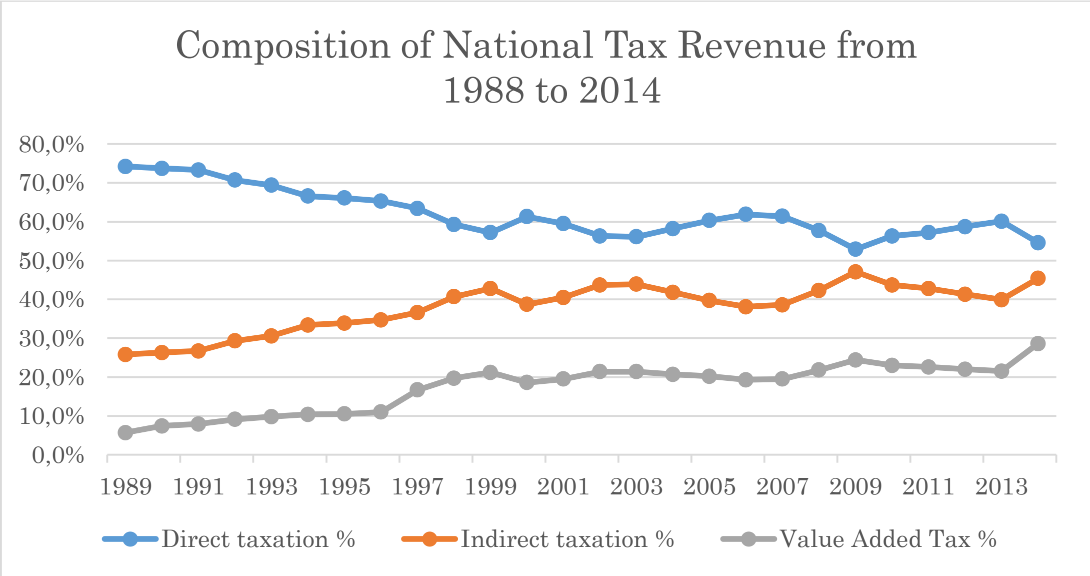
Graph 2: National Tax Revenue from 1988 to 2014



Source: Compiled by the author based on Japan tax association (2014)

According to the data below (Graph 2), consumption tax represents 26% of all national tax revenues. With a further raise in the consumption tax rate, consumption tax is likely to increase in the national tax revenues in the future.

Graph 3: Composition of National Tax Revenue from 1988 to 2014



Source: Compiled by the author based on Japan tax association (2014)

As far as tax advantages are concerned, Takeshi Noda, the Chairman of the tax investigation committee of the liberal democrat party, stated in a 2014 interview that "until now, we have turned a blind eye to small tax advantages, but from now as these advantages will increase along with the tax rate, will we still ignore that?"(Noda, 2014).In this statement, he pointed out the necessity of a consumption tax reform.

4. CONCLUSION

When the consumption tax system was introduced in Japan in 1988, the government provided some exemptions and simplified declaration obligations for a wide scope of small taxpayers. The reasons for these specific measures were that (1) in a highly competitive context, small businesses would be disadvantaged with price increases due to the consumption tax and (2)many owners of small businesses lacked the ability to deal with taxation procedures.

At that time, the tax administration assumed that these consumption tax exemptions would be offset by tax revenues at a different level of the distribution channel (since larger companies would pay the part of tax-free businesses).

In practice, as it was impossible to trace consumption tax amounts paid along the production and distribution processes, the system resulted in fraudulent retention of consumption tax, called “tax advantage”(ekizei).Under current circumstances, it appears necessary for the government to reform the consumption tax system, especially after the tax rate increases of 2014 and 2015.

One major limitation of the current system is the stains incurred by several aspects of simplified taxation systems and tax exemptions. For example, the conservation of bills system is not intrinsically a factor for fraudulent tax practices, but in the context of tax exemptions for small taxpayers, this specific feature of Japanese accounting provided the necessary conditions for wide-scale tax advantages. Until now, as there was only one single tax rate, there was no real incentive to change this system. As a result, the Japanese consumption tax system suffers from several distortions.

After the tax rate increases in 2014 and 2015, the tax rate will be twice as much (10% compared with 5% before) as in 2013, resulting in higher tax revenues, and also higher amounts of tax advantage. For this reason, it appears necessary for the Japanese government to reconsider the tax exemptions for small businesses and other major factors of tax avoidance.

REFERENCES

Japan Tax Association (2014)、*Documents Related with the Tax System, April 2014*, Japan Tax Association.

Kaneko, H. (2014),*Tax Law*, 19ed.,Kobundo.

Noda, T. (2014),“ Various issues regarding the introduction of a reduced tax rate”(interview),*Zeimu Kyoho*, September.

National Tax Agency (2012),*Report on the Investigation of a Sample of Companies*, National Tax Agency.

Tateishi, M. (2010), “Differences between consumption tax calculated based on GDP and tax amounts declared – a special focus on tax advantages”,*Jichisokentsu*, Vol. 382,August.

3rd International Symposium on Accounting and Finance
ISAF 2014 TOKYO

AN ALTERNATIVE VIEW FOR AUDITING: GERMAN 10 POINT PROGRAM

Cemal ELİTAŞ*
Bilge Leyli ELİTAŞ**
Mesut DOĞAN***

ABSTRACT

Company scandals happened after 1980s caused a decrease in the reliance of financial knowledge, revision of the existing adjustments, and alteration in these adjustments. All of these developments made it to understand clearly the important role that accountants and auditors undertake about the interpretation of enterprise's financial status. Especially, creative accounting practices are seen as starting point of scandals that happened in the world. Creative accounting practices are suitable for accounting structure and legal adjustments. This is the most important characteristic of creative accounting. German 10 Point Program aims to prevent cheats and frauds in accounting and auditing. It is an alternative approach to Sarbanes-Oxley-Act in USA. The purpose of this paper is to investigate the effects of German 10 Point Program on auditors and provide suggestions for Turkey. With this purpose, German 10 Point Program will be analyzed.

Keywords: *Auditing, German 10 Point Program, Creative Accounting, Turkey.*

Jel Classification: *M 40, M 41, M 42.*

* Yalova University, International Trade and Finance Department, cemaelitas@gmail.com
** Yalova University, International Trade and Finance Department, bilgeleyli@yalova.edu.tr
*** Afyon Kocatepe University, Bayat Vocational School, mesutdogan@aku.edu.tr

1. INTRODUCTION

The accounting system, in which financial statements and reports are produced, includes alternative adjustments in order to provide applicability to many different circumstances. It is seen that the information, which takes place in financial statements and reports, is manipulated because of the gap and the delay of the provision process of the accounting standards that are appropriate for the improvements of the financial markets or by using many methods including the applications against legal adjustments.

The profit of the period that the management reported can be affected by choices that managers make among the alternative accounting policies. In some cases, in order to get the level to the desired degree, managers change the accounting policy they carried on. In the literature, the ability to arbitrary decrease or increase the profit of the period that is reported by the choices among the alternative accounting policy is defined as 'accounting manipulation' (Copeland, 1968: 101). In fact Enron, recent scandals such as Arthur Andersen, Worldcom, Qwest, Global Crossing, Tyco International, and Adelphia Communications experienced in the USA, whereas Parmalat scandal is experienced in Europe that took place due to the similar reasons and these are fictitious illustrations brought about in the presentation of the financial information.

Companies are in charge of disclosing periodically for explaining the activity results. Concerned parties make variable decisions by evaluating the institution's activity results. The exact results of economic activities and management's performance are seen in financial statements. Therefore, financial statements have an important mission such as displaying the truth and reality accurately, properly, and well timed. In this sense, the importance of the responsibility and transparency of financial statements and disclosures emerge.

2. TRANSPARENCY AND DISCLOSURE

With the effects of globalization, the importance of transparency increases through sustaining the activities of markets and national and international institutions effectively and competitively in the financial system. Together with the increasing market integration, the advance of a country or region can spread to other regions or countries in a little while and swiftly. Especially, international financial institutions those suggest information about developing countries, which want to attract the foreign investments, should demand from companies and public institutions. Along with the importance of the increase of transparency, this matter has not been clarified yet (Türkiye Bankalar Birliği, Bankacılık ve Araştırma Grubu, 2002: 1).

Together with the benefits of common acceptance of necessity and increasing it, transparency is also seen as an ethic imperative. The significance of transparency is getting more and more figured out within the mechanisms related to the ability to sustain prosperity and growing in terms of the public and finance policies. The availability of reliable and up to date information produce a positive effect on the adjustment of resource distribution in the field of finance, efficiency, and growth (Türkiye Bankalar Birliği, Bankacılık ve Araştırma Grubu, 2002: 1).

Transparency and disclosure are integral parts of the corporate governance. For a higher transparency and a better disclosure, it is necessary to decrease the information discordance between the corporate management and the shareowners and the representation problem in the corporate governance (Patel et al, 2002: 326).

If we want to define, it will be seen that the transparency and disclosure that we mentioned theoretically up to now has many and several meanings in literature. However, we will give only an accepted definition.

In general, transparency is described as the use of credits by investors, the credit worthiness of credit users, the presentation of public service by government (for example; like education, health, money and fiscal policies), and providing the flow of information that is timely and dependable economic, social and politic, increasingly about the proceedings of international foundations (Vishwanath and Kaufmann, 1999: 3).

According to Millstein (2000: 46-47), disclosure has been firmly organized in the control of several countries. The members of the EU have chamber of volunteer disclosure cooperation instead of obligation and statutory, many lawyers deal with being able to provide accountability for the activities of disclosure cooperation. The act often confers about declaring the financial performance in annual reports within the disclosure. Generally, the act feels the need for this and determines some legislation. In a similar way, though the regulatory and administrative bodies are often obliged to the legal requirements about the exactness of explaining the certain information about the company's financial performance to the public and responsibility of informing about items on the agenda before the usual stakeholders' annual meeting. Among the member states of the EU, one of the important differences in applying management is the declaration of the rights given to the important people to the public. It is compulsory that members' who have stated terms of regulatory and administrative bodies, personal payments to be explained to the public and the most pleased ones are the group of stakeholders about such a disclosure like that. However, along with a major resistance to explaining to the public in many EU nations, so the act, which has new terms, has been put into effect in the last three years.

For instance, American standards of reporting and openness to the public made a significant progress with the Sarbanes-Oxley Act that came into effect in 2002 (Bailey et al, 2006: 176). The reason of Enron scandal experienced in the USA and just after the collapse of Arthur Andersen and accounting and auditing scandals such as WorldCom emerged that the companies were not sufficient about disclosure. Similarly, they did not explain the information in a complete, accurate, and properly way. The scandals caused the Sarbanes-Oxley to come into effect. This Act makes disclosure compulsory and gives many responsibilities to the auditors and managers in the case of informing the public incorrectly or incompletely.

Companies’ and their competitors’ financial accounting information helps managers and investors to determine and evaluate the investment opportunities (Bushman and Smith, 2003, 67). Whenever a company frauds or accounting scandals emerge, it will be seen that their common traits are the disarrangement of financial reporting. Current state will lead a distrust and uncertainty and will decrease the practicality of company reports on deciding (Low et al, 2008, 227). Nevertheless, lack of trustful and accessible information in an economy will prevent human and financial capital flow devoted to the sectors that is expected to provide high profit (Bushman and Smith, 2003, 67).

In this study, it will be dwelled on the accountant that can constitute a public trust with financial statements, which are the most fundamental elements as accounting outputs. Especially, balance sheets and income statements those present accurate and reliable information to users are accepted as reliable. Getting closer to the matter in terms of transparency and disclosure is one of the essential duties of accounting. As a necessity of social responsibility and full explanation and objectiveness concepts in accounting, German 10 Point Program, which is implemented as a response to scandals such as “Enrongate” in the world, will be inspected and suggestions will be provided for developing countries like Turkey, where such an institutionalization suitable for scandals like Enrongate has not taken place yet.

3. AN OVERVIEW OF LEGAL ADJUSTMENTS AGAINST ACCOUNTING SCANDALS

Together with the recent accounting scandals, search for a more strict reform of accounting standards and government adjustments has been going on in America. In addition, in other areas of the world, in order to avoid ‘Enrongate’ type of crisis, each country goes on to debate with the need of taking measures. Enron and Worldcom events that have emerged recently triggered the legislative activities in America. As a result, some acts like Public Company Accounting Reform & Investor Protection Act of 2002 and Sarbanes-Oxley Act 2002 that brought stricter punishments to the management deceits have emerged and in different countries of the world, some documents about corporate governance and transparency have been published accordingly. For example, so-called ‘Corporate Transparency-Making Markets Work Better’ document is published by the Institute of Chartered Accountants in New Zealand. We also come across similar publications in Australia and England (Low et al, 2008: 223).

At this point, it is necessary to determine concerned parties in accounting or in other words, the users of information. It is possible to separate concerned parties using accounting information. These are internal and external information users. Internal information users use the accountancy information for the purpose of determining the costs, calculating, composing budget and comparing the results. Internal information users are free to reach the accountancy information. Moreover, the external information users benefit from accountancy information for underlying the decisions by inspecting the balance sheet and income statement. External information users can reach the accountancy information in the framework of legal restrictions (Döring and Buchholz, 2005:2).

We can make a list of the key stakeholder groups that need information as follows (UN, 2008: 6):

- Investors and Financial Institutions;
- Business Partners;
- Consumers;
- Employees;
- Surrounding Community;
- Civil Society Organizations and
- Governments and Their Institutions.

This list mainly contains the groups that are defined as the users of financial reports by the International Accounting Standards Board (UN, 2008: 6).

In parallel to existing financial reporting roof, which supplies the principles that composes the usefulness of the reported information about the management, some additional criteria that will meet the needs of a larger fraction should be taken into consideration by using the financial reports, too. These are (UN, 2008: 11):

- Comparability;
- Relevance and Materiality;
- Understandability and
- Reliability.

When the above stated points are taken into consideration, the importance of social responsibility and disclosure and transparency in terms of institutional management and the principles of disclosure and transparency in terms of accounting is comprehended more clearly. As expressed before, while external information users' interference is not in question for forming of accounting information or presenting it, internal information users have the opportunity to both reach to the accounting information and interfere in forming it. At this point, it is necessary for accountants who prepare the accountancy information to behave accordingly to the work ethic, the principles of disclosure and transparency with expressing the conceptions, and social responsibility and it is essential for them to assure the preparations of accountancy information as a goal for the public confidence and objectivism. Because, as expressed above, the probability of the manipulation of accountancy information and its utility by internal information users is high.

At this point, we believe that it is necessary to look into the social responsibility conception in a more detailed way, which is one of the most accepted principles of accounting. According to this, social responsibility expresses that accounting should be moral, equitable, and impartial and it should present real and true information to several groups concerning the management (Kızıl, 1991: 7). As told in the description, accounting should not be partial to any of the groups (e.g., internal information users), it should mention the positive and negative findings as they are, it should aim to reflect the truth and the reality.

Financial statements of an enterprise should contain all the information so that the users can decide accurately. However, it should contain enough information that will help users as well. For example, footnotes added to financial statements are generally demanded to enforce these criteria (ACFE, 2008: 116).

4. GERMAN 10 POINT PROGRAM

We can take a brief look at the German 10 Point Program. However, we have to highlight two important points. Firstly, the German Judicial System has changed its form in the past 10 years with very important adjustments; the Company Law is the leading one. Secondly, German 10 Point Program is the main adjustment that regulates the financial reporting system, which creates the change in this system in Germany. However, we believe that within the adjustment, the Financial Reporting Control Act (Bilanzkontrollgesetz-BilKoG) comes to the forefront with its content. Due to all those reasons stated above, firstly we believe that it will be advantageous to take a brief look at the changes that occurred during past 10 years in the German Judicial System. Then, it is necessary to glance through the BilKoG adjustment and coordinating other adjustments. It should not be forgotten that, the adjustments in the Company Law, especially the ones made with the competitive understanding bring along legal gaps and consequently, enterprise bankruptcy. As a result, it is thought that the analysis of the amendments made by Germany in the Company Law will contribute us to better understand the adjustments made within the audit framework by Germany.

The 1896 Civil Code, which has a past more than 100 years in the German Law (Bürgerliches Gesetzbuch-BGB) regulates the enterprises established as Ordinary Partnership (Gesellschaft bürgerlichen Rechts - GbR) in Germany. However, we think that the main change in the German Company Law took place in 2002 when the Federal High Court (Bundesgerichtshof – BGH) recognized legal personality to Ordinary Partnerships (Hirte, 2005: 718). As a result, the responsibilities of the ordinary partnerships and commercial partnerships became parallel. A possible breakage to happen in the German Company Law is a study on the abrogation of minimum capital adequacy in the Limited Company Act (Geselschaft mit beschränkter Haftung Gesetz– GmbHG). Articles 56 and 43 of the European Union Agreement enabled the free movement of the capitals and enterprises. This situation emerged because of extensive actions by the English Limited Companies in Germany. When the fact that there are no personal responsibilities of the partners against the debts in the Limited Companies is taken into consideration, this situation attracts attention in terms of the protection of those who make investments or give loans (Leyens, 2005: 1409-1410).

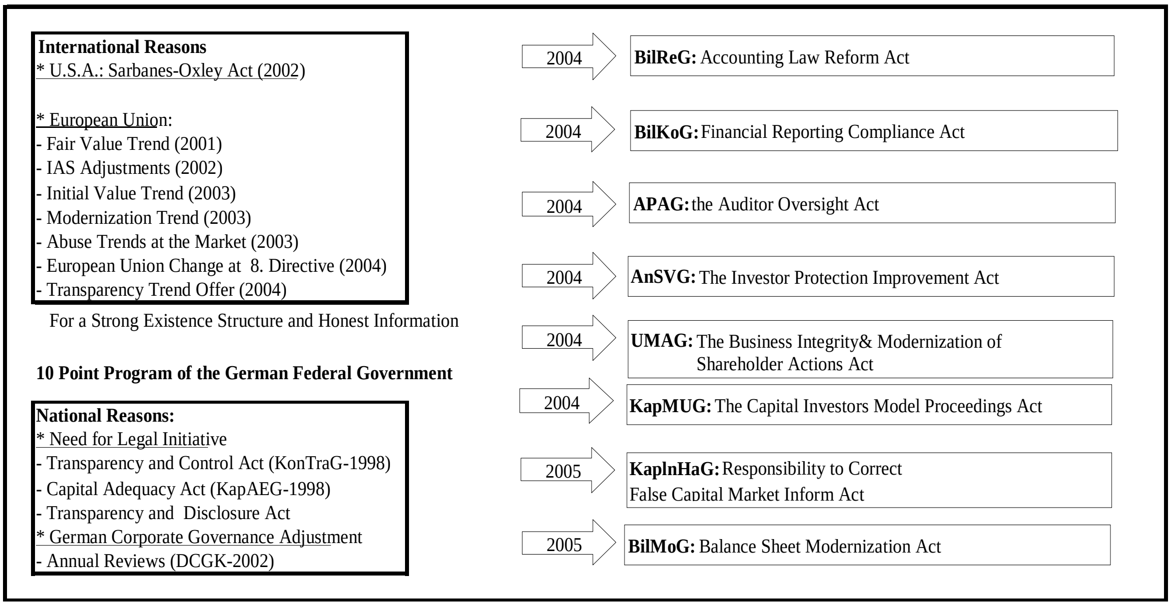
Another important step in the German Company Law is the adjustments made in the Joint Stock Company Act (Aktien Gesetz – AktG). Most important adjustment is the one made in 1998 on the Transparency and Control Act (Gesetz zur Kontrolle und Transparenz im Unternehhmensbereich – KonTraG). This act is based on the establishment of a supervisory committee, which is binding in enterprises. As a result of the debates on Corporate Governance in 2002 in Germany, some adjustments made to the Joint Stock Company Act and then with this adjustment, the Transparency and Disclosure Act entered into force (Transparenz und Publizitätgesetz – TransPuG). This act obliged enterprises to regulate the reports on corporate governance and to declare whether the enterprises that are traded on the exchange comply with the German Corporate Governance Code or not.

With the process explained above, the measures taken by Germany at the end of the past thousand years and the developments in the Company Law in Germany have been highlighted. The aim is to understand the German corporate structure and to better comprehend the reasons of these acts. However, we believe that the most important adjustment in the German financial reporting system is the "10 Point Program" accepted by the German Federal Government in 2003. This program aims to prevent the cheats and frauds in the accounting and auditing. This program will be explained later.

The German Financial Reporting Control Act (Bilanzkontrollgesetz - BilKoG) which entered into force on 15 December 2004 is an adjustment that takes part in the sixth step of the "10 point program" which the German Federal Government tries to carry out for fair and truthful financial statements. With this adjustment, a two-phased control and audit procedure was put in force for the financial reports of the enterprises that are traded on the exchange. According to this, in the first phase, annual action results of the enterprises are evaluated by a new and special experts' board. In the second phase, The Federal Financial Supervisory Authority of Germany (Bundesanstalt für Finanzdienstleitungsaufsicht – BaFin) makes the required audit and control operations with the authorization from its statue.

In Table 1, the reasons for German Financial Reporting Compliance and its chronological order can be seen. It is obvious that, after the international company scandals broke out, Germany without wasting any time, has formed the adjustments with numerous legal adjustments for capital market and financial report servers to take the required measures.

Table 1: General Flow of German Financial Reporting Compliance Act (Pfitzer, Oser and Orth, 2004: 2594 and Elitaş, 2012: 86, 95).



In Table 2, the "10 Point Program" that is prepared by the German Federal Government in 2003 in order to prevent cheats and frauds in accounting and auditing, its steps, and passed laws to apply these steps can be seen.

Table 2: 10 Point Program of the German Federal Government (Zimmermann, Werner and Volmer, 2008: 181-182 and Elitaş, 2012: 88-89, 97-98).

10 Point Program	**Laws enacted according to the Program**
1. Management and supervisory board members shall be personally liable for the corporation, and the shareholders' rights to file an action shall be enhanced.	The Business Integrity and Modernization of Shareholder Actions Act (Gesetz zur Unternehmensintegrität und Modernisierung des Anfechtungsrechts of 2005, UMAG) reformed the law concerning the liability of the statutory organs.
2. Members of the management and supervisory board shall be personally liable for shareholders in case of willful or negligent misinformation of the capital market.	The Capital Investors Model Proceedings Act (Kapitalanleger Musterverfahrengesetz of 2005, KapMuG) improved procedural instruments for investors so that they may assert their claims before the court as a collective.
3. Further development of the German Corporate Governance Code, particularly concerning the transparency of management compensation based on stock options.	- Since the Code is checked every year by the Code Commission, no reforms are needed. - With the Director Remuneration Disclosure Act (Vorstandsvergütungs Offenlegungsgesetz of 2005, VorstOG), it is now mandatory to disclose individualized executive compensation figures.
4. Further development of accounting rules and adjustment to international accounting principles.	Several changes in financial reporting were introduced with the Accounting Law Reform Act (Bilanzrechtsreformgesetz of 2004, BilReG).
5. Enhancement of the role of the auditor.	- Provisions to strengthen the statutory audit are contained in the BilReG. - The quality, integrity and independence of the annual audit were further enhanced with the Auditor Oversight Act (Abschlussprüferaufsichtsgesetz of 2005, APAG), which introduced a new oversight institution called APAK (comparable to the PCAOB and POB).
6. An independent body shall be created that exerts oversight over true and fair presentation in financial reports (Enforcement)	- The Financial Reporting Control Act (Bilanzkontrolgesetz of 2004, BilKoG) forms the legal basis for a new independent and private enforcement institution (Financial Reporting Enforcement Panel, FREP, of Deutsche Prüfstelle für Rechnungslegung, DPR). - The Federal Financial Supervisory Authority of Germany (Bundesanstalt für Finanzdienstleitungsaufsicht, BaFin) can intervene when companies refuse to cooperate with the DPR.
7. The reforms of stock exchanges shall proceed and oversight	First reform are connected to the Securities Prospectus Act (Wertpapierprospektgesetz of 2005, EpPG).

structures shall be enhanced.	
8. Improvement of investor protection in the unorganized market.	The Investor Protection Improvement Act (Anlegerschutzverbesserungsgesetz of 2004, AnSVG) implements the EC Directive 2003/6/EG concerning insider training and market abuse. It enables inter alia a more effective oversight over financial analysts and enhances investor protection in the grey market.
9. Safeguarding the reliability of company valuation by financial analysts and rating agencies.	
10. Tightening of penal legislation in the field of capital markets.	

When Table 2 is considered, it is possible to summarize the adjustments made with the "10 Point Program" as such;

- Members of the Management and supervisory Board [there is a wide range of responsible from workers' representatives to top managers of the company (Ernst, 2004: 936-937 and Hommelhoff and Mattheus, 2004: 94-95)] are personally liable for the corporation.
- Members of the management and supervisory board shall be personally liable for shareholders in case of willful or negligent misinformation of the capital market.
- In accordance with the German Corporate Governance Code Corporations are under the liability to inform the members of the board in a transparent manner about taking up and floating shares.
- In accordance with the international accounting principles, adjustments of accounting rules shall be developed (Claussen, 2007: 1422-1423).
- Role of the auditor shall be enhanced.
- An independent body shall be created which inspects whether the financial reports' presentation are true and fair or not.
- Adjustments shall be made to enhance the stock exchanges and supervision structures.
- Company valuation made by financial analysts and rating agencies shall be inspected in terms of their reliability.
- Penalties in capital market shall be enhanced.

5. SITUATION IN TURKEY AFTER THE CORPORATE SCANDALS

In this context, when the process after corporate scandals in Turkey is considered, it is seen that there is not any concrete adjustment in legal sense. In this process, accounting literature has focused on studies, which gives place to SOA's analysis and the reasons for scandals that broke out. The fact that the results of the scandals did not reflect on Turkey and there is not a connection between Turkish corporations and bankrupted companies may result in the negligence of such an adjustment. However, it is not true to say that there are no adjustments. Capital Markets Board of Turkey (SPK), which is the authority of the enterprises that are traded in the exchange, passed a "Communiqué with respect to the declaration of Special Conditions to the general public" on 20.07.2003 with the Serial: VIII, No: 39 code and " Communiqué on the Accounting Standards in the Capital Markets" on 25.11.2003 with the Serial: XI, No: 25 code. The communiqué coded with the Serial: VIII No: 39 was updated with the Serial VIII No: 42 on 07.07.2004. Another regulating communiqué with the Serial: XI No:25 was updated on 09.04.2008 with the Serial XI No: 29 code, and given the name of "Communiqué with respect to the Financial Reporting in the Capital Market". The aim of these communiqués was giving a partial direction and a form to the accounting audit. However, when the fact that, the competent authority in Turkey is the Ministry of Finance and that the Ministry uses this authorization on Tax Procedure Law and related communiqué is taken into consideration, it is seen that above-mentioned regulations of the Capital Markets Board of Turkey are only limited to the enterprises that are traded in the exchange.

6. CONCLUSION

When the origins and the past of legal adjustments in Turkey are analyzed, it can be said that Turkey is close to Continental Europe in terms of doctrine. This situation will certainly has an effect about the comments which will be made here. In such, accounting adjustments in Turkey are principle based. However, accounting adjustments in the USA (US-GAAP) are order based. When the fact that adjustments in the Continental Europe are principle based as it is in Turkey, it is thought that the most convenient model for Turkey is the German 10 Point Program. Without a doubt, in order to apply such a structure in Turkey, instead of passing numerous laws as in Germany, the issue can be adjusted with a single and a comprehensive Act. Because, when the application in Germany is considered, it is seen that the legal applications are formed by making required adjustments or bringing a new regulation to the existing acts. For example, BilKoG regulation required adjustments in Commercial Code (Handelgesetzbuch – HGB), Securities Trade Act (Wertpapierhandelsgesetz – WpHG), Financial Services Institution Act (Finanzdiensleistungsaufsichtgesetz – FinDAG), Joint Stock Company Act (Aktiengesetz – AktG), Court Costs Act (Gerichtskostengesetz – GKG) and Attorney Remuneration Act (Rechtsanwaltsvergütungsgesetz). Thus, instead of making adjustments in the existing Acts, it would be better for Turkey to pass a special Act or a Communiqué for the required accounting audit by the Ministry of Finance.

REFERENCES

Association Of Certified Fraud Examiners (ACFE), (2008). Fraud Examiners Manual, 2008 Edition, Austin, Texas, www.ACFE.com

Bailey, W., Karolyi, G.A., Salva, C. (2006). The Economic Consequences Of Increased Disclosure: Evidence From International Cross-Listings, Journal Of Financial Economics 81, North-Holland.

Bushman, R. M. and Smith, A. J. (2003). Transparency, Financial Accounting Information, and Corporate Governance, FRBNY Economic Policy Review / April 2003.

Claussen, C. P. (2007). Gedanken zum Enforcement, Der Betrieb, Heft 26, 29.06.2007.

Copeland, R.M. (1968). Income smoothing, Journal of Accounting Research, VVI, Supplement, pp.101-116.

Döring, U. ve Buchholz, R. (2005). Buchhaltung und Jahresabschluss, 9. Baskı, Berlin: Erich Schmidt Verlag.

Elitaş, C. (2012). Muhasebe Hilelerinin Önlenmesinde Sarbanes-Oxley Yasası ve Alman 10 Adım Programının Karşılaştırılması: Türkiye İçin Yol Haritası" / "Vergleich Des Gesetzes Sarbanes-Oxley Mit Dem Deutschen -Zehn Punkte- Programm Zur Vorbeugung Von Buchhaltungsbetrug: Lösungsangebot Für Türkei, Ankara: Gazi Kitabevi.

Ernst, C. (2004). Gesetzgebungsreport: Regierungsentwurf des BilKoG, Betriebs-Berater, Heft 17, 26 April 2004.

Hirte, H. (2005). Die Entwicklung des Personengesellschaftsrechts in Deutschland in den Jahren 2003 bis 2004, Neue Juristiche Wochenschrift (NJW), 718-720.

Hommelhoff, P. and Mathesu, D. (2004). Gesetzgebungsreport: Verlässliche Rechnungslegung – Enforcement nach dem geplanten Bilanzkontrollgesetz, Betriebs-Berater, Heft 2, 12 Januar 2004.

Kızıl, A. (1991). Muhasebe Prensipler ve Uygulama, Genişletilmiş 3. Basım, İstanbul: Der Yayınları.

Leyens, P. C. (2005). German Company Law: Recent Developments and Future Challanges, German Law Journal, Vol. 6, No. 10.

Low, M., Davey, H., and Hooper, K. (2008). Accounting scandals, ethical dilemmas and educational challenges, Critical Perspectives on Accounting 19, 222–254.

Millstein, I., (2000). Corporate Governance: The Role of Market Forces, OECD Observer, Summer, (221/222).

Patel, S. A., Balic, A., Bwakira, L. (2002). Measuring Transparency and Disclosure at Firm-Level in Emerging Markets, Emerging Markets Review 3, Standard&Poor's, New York, USA.

Pfitzer, N., Oser, P. and Orth, C. (2004). Offene Fragen und Systemwidrigkeiten des Bilanzrechtsreformgesetzes (BilReG), Der Bertieb, Heft 49, 03.12.2004.

Türkiye Bankalar Birliği, Bankacılık ve Araştırma Grubu, Ocak 2002, Şeffaflığın Önemi Üzerine Bir Değerlendirme, Türkiye Bankalar Birliği.

United Nations (UN) (2008). Guidance on Corporate Responsibility Indicators in Annual Reports, United Nations Conference on Trade and Development, New York and Geneva.

Vishwanath, T., Kaufmann, D. (1999). Towards Transparency in Finance and Governance, World Bank Policy Research Working Paper, The World Bank Draft, September 6th, (http://www.worldbank.org/wbi/governance/pdf/tarawish.pdf).

Zimmermann, J., Werner, J. R. and Volmer, P. B. (2008). Global Governance in Accounting.

THE COMPARATIVE PERFORMANCE ANALYSIS OF BORSA İSTANBUL AND TOKYO STOCK EXCHANGE WITH EVA AND MVA

Süleyman YÜKÇÜ*
Emre KAPLANOĞLU**

ABSTRACT

Performance evaluation methods that calculate the created value are used beside traditional performance evaluation methods because of today's competitive conditions which affect operations of firms' results more than ever. The most two popular performance evaluation methods are Economic Value Added (EVA) and Market Value Added (MVA). EVA evaluates a firm's financial performance with calculating the firm's earning whether it is more or less than its cost of capital. On the other hand, MVA consists of firm's net value of past projects and future profitable opportunities and indicates how successfully the firm employs its capital to achieve them.

The aim of this study is to compare the financial performance of Borsa İstanbul (BIST) and Tokyo Stock Exchange (TOPIX) with performance evaluation methods in terms of EVA and MVA. Firms that are listed in BIST-30 and TOPIX Core30 indexes for the 2008-2013 periods are examined and the comparative performance analysis results of firms' (service sector excluded) presented in this study. Statistical analyses are also performed to measure explanatory power of EVA to MVA in the related indexes.

Keywords: *EVA, MVA, BIST-30, TOPIX Core30*

Jel Classification: *G32, M21, M41*

* Prof. Dr. Süleyman YÜKÇÜ, Dokuz Eylül University, suleyman.yukcu@deu.edu.tr, Telephone: +90 532 346 95 91
** Dr. Emre KAPLANOĞLU, Ege University, Bergama Vocational School, emre.kaplanoglu@ege.edu.tr, Telephone: +90 532 548 27 46

1. INTRODUCTION

In recent decades, there have been several developments to evaluating the economic and financial performance of firms. However, many of these approaches focus on accounting profit. Although accounting profit is one of the most used references in performance measurement, it includes some points that may adversely affect its relevance as a value indicator. As a way to measure a firm's economic value, accounting profit tends to fail because of the alternative accounting methods which are used by firms, cash flows in detriment of the bookkeeping of expenses and incomes that excluded by operating profit and growth of accounting profit does not mean an increase of economic value for shareholders (Rappaport, 1998; Chari, 2009; Holian and Reza, 2011).

Therefore, the concept of shareholder value has been one of the driving forces in the modern value-based performance measures. Since introduction of shareholder value (Rappaport, 1981), it has spread rapidly with globalization of business. Firms have developed different tools of management and financial analysis based on traditional accounting to measure shareholder value. These tools attempt to simulate the parts of the shareholder value measurement. As a financial measure, shareholder value means the present value of all forecasted future cash flows (Bartov et al., 2001, 104). Future cash flows and a discount rate are two fundamental components of shareholder value measurement. Such management decisions like investing, financing and operating affect shareholder value through their impact on value growth duration, operating profit margin or the cost of capital. So performance measures should be useful for evaluation of past managerial performance of current firm's value. Because of this reason, the usefulness of each measure is considered both backward-looking measure of managerial evaluation and a forward looking measure of firm value. Modern value-based performance measures, such as Shareholder Value Added (SVA), Economic Value Added (EVA), Market Value Added (MVA), Economic Profit (EP), Cash Flow Return on Investment (CFROI) and Cash Value Added (CVA) have attempted to divert management focus away from earnings and towards cash flows. Modern measures gained increasing attention and popularity worldwide since the late 1980s (Stewart, 1991; Stern, Stewart and Chew, 1995; Copeland, Koller and Murrin, 1996; Black, Wright and Bachman, 1998; Madden, 1999). These measures recognize that invested capital of a firm has a cost for the use in its operations (O'Hanlon and Peasnell, 1998).

From this point of view, Economic Value Added (EVA) suggests that decisions concerning financial performance should aim to maximize EVA and not just the accounting net profit. The main assumption behind EVA that distinguishes these two measures is cost of capital. While the net profit reflects the financial costs of liabilities, the EVA also takes into account the cost of capital invested by shareholders. Creation of value emerges when a firm has a positive EVA which means firm acquire a return above the cost of capital. Otherwise, if firm has a negative EVA, it cannot use its resources effectively and thus ruins value. There are many studies that inspired from the simplicity of EVA which demonstrate existence of a link between EVA and Market Value Added (MVA) which is measure of creation of value.

The section two presents a literature review on EVA and MVA. Section three describes the data and the methodology employed. Section four gives the results of empirical and statistical analysis. Section five provides a conclusion.

In this paper, we aimed to compare performance analysis of selected companies (service sector excluded) from BIST-30 index in Borsa İstanbul and companies that are listed in TOPIX Core30 index in Tokyo Stock Exchange between 2008-2013 with EVA and MVA. This paper also presents the comparison of a developing country with a developed country in the context of EVA and MVA. Furthermore, we statistically examine explanatory power of EVA to MVA in the same period for the selected companies that listed in related indexes.

2. LITERATURE REVIEW OF EVA AND MVA

Residual income as an accounting measure is defined as operating profit subtracted with capital charge and thus EVA is one variation of residual income with adjustments that calculate income and capital. Alfred Marshall was one of the earliest to mention the residual income in 1890 (Wallace, 1997, 1). Marshall defined economic profit as total net gains less the interest on invested capital at the current rate. The residual income concept appeared first in accounting theory literature in 1917 by Church and by Scovell in 1924 and management accounting literature in the 1960s (Dodd and Chen, 1996, 27).

Although residual income has an earlier entrance to the accounting literature, EVA has wide publicity in the recent years. One of possible reasons is that EVA introduced with a sound link to MVA. While most of first professional literature aimed at presenting, promoting or discussing EVA in relation with consulting work, following numerous studies were anecdotal, critical views and empirical research such as Milunovich and Tsuei (1996), Anctil, Jordan and Mukherji (1998), Mouritsen (1998), Damodaran (1999), Bowen and Wallace (1999) and Dodd and Johns (1999). In addition to this literature, there is much internet based material such as Mäkeläinen (1998) and Stern Stewart & Co. (2000). Some literature considers EVA as an accounting measurement tool for management like in O'Hanlon and Peasnell (1998) study as a value-based performance indicator or Stern Stewart & Co.'s EVA benchmarks/Eva-based bonuses. The empirical researches about relation between EVA and MVA are given in the following paragraph for assure consistency of this paper's purpose.

Stern Stewart & Co trademarks EVA in 1990 and Stewart (1990) has first studied EVA and MVA relationship with market data of 618 U.S. companies which presented a strong correlation between EVA and MVA. Grant (1996) studied the relationship between EVA divided by capital and MVA divided by capital for 983 companies selected from the Stern Stewart Performance 1000 for 1993 and 1994. Grant concluded that empirical results indicate that EVA has a significant impact on a company's MVA. Milunovich and Tsuei (1996) compared the correlation between MVA and several traditional performance measures in the computer industry. They examined EVA to correlate better with MVA from the other measures. Uyemura, Kantor and Pettit (1996) present the relationship between EVA and MVA with 100 bank companies. They calculate regressions to five performance measures including Net Income, EPS, ROA, ROE and EVA. The correlations between these performance measures and MVA are: Net Income 8%, EPS 6%, ROA 13%, ROE 10%, and EVA 40%. Also O'Byrne (1996) arrives at similar conclusions and he concludes, "EVA, unlike NOPAT (net operating profit after taxes) or other earnings measures like net income or earnings per share, is systematically linked to market value. It should provide a better predictor of market value than other measures of operating performance (O'Byrne, 1996, 125)." Kramer and Pushner (1997) tested correlation level of EVA with MVA. They concluded that there is no clear evidence about EVA is the best measure of a firm's success in adding value to shareholder. Biddle, Bowen and Wallace (1997) found little evidence to support EVA is superior to earnings in its relation with firm value or stock return. Hall (2001) investigated the relationship between MVA and EVA, as well as other financial ratios such as ROA, ROE and EPS for listed South African companies. The study was done on the top 200 companies listed on the JSE for the period from 1987 to 1996 and found that the highest correlation was that between MVA and EVA found relatively low correlation coefficients on the whole. DeWet (2005) research on EVA-MVA relationship of 89 Industrial firms of South Africa and found that there is not a strong correlation between EVA with MVA.

In this paragraph, related studies about Turkey and Japan are given for purpose of the study. Yılgör (2005) examined Borsa İstanbul how performance measures can be used and if the new performance measures EVA and MVA explain share returns better than the traditional performance measures EPS, ROE and ROA. This study found that market inefficiencies and some defects in calculations of weighted average cost of capital by capital assets pricing model restricts the use of the Economic Value Added as a method to evaluate firm's performance. It is also found that the EVA and MVA have better explanation power of share returns than the traditional performance measures, but the variation in the share returns can be explained very little with these variables. Gücenme and Arsoy (2006) research EVA as a financial measure for new structured cash flow statement according to accounting standards. They concluded that new structured cash flow statement eases calculation of EVA. Bayrakdaroğlu and Ünlü (2009) analyzed Borsa İstanbul and New York Stock Exchange with EVA and MVA performance measures. According to their results of the analysis, Borsa İstanbul couldn't perform in a positive way considering the indicators. Furthermore, it was determined that Borsa İstanbul is not successful for considering shareholder value. Yılmaz and Bastı (2013) analyzed financial performances of 144 listed manufacturing companies in Borsa İstanbul with EVA and MVA and applied statistical analyses to measure at what degree EVA explains MVA from 2006 to 2010. They found that large companies have highest mean EVA values and small-sized companies have highest MVA values. Other results obtained from their study are low correlation between EVA and MVA values and low explanatory power of EVA to MVA. In Goldman Sachs research (Stewart, 2002, 9) it is found that EVA explains 76% of the movements in MVA for a large sample of Japanese companies.

3. DATA AND METHODOLOGY

3.1. Data

Sample firms for the study are selected from listed firms in Borsa İstanbul, BIST-30 index and Tokyo Stock Exchange, TOPIX Core30 index from 2008 - 2013. Initially 30 firms are listed from BIST-30 index and TOPIX Core30 index as the population. Further from BIST-30 index 9 firms and from TOPIX Core30 index 17 firms are identified based on permanency of firms and non-service sector firms that are listed in indexes from 2008 to 2013. Finally the study considered 9 firms from each of the selected indexes which average EVA measured up to 1,500 million USD for 6 years period. The following table presents the selected firms according to the identified average EVA range.

Table 1: Average EVA of listed firms in BIST-30 and TOPIX Core30 from 2008-2013

NO	BIST-30	AVERAGE EVA (Million USD)	NO	TOPIX Core30	AVERAGE EVA (MillionUSD)
			1	JAPAN TOBACCO	2,476
			2	HONDA	2,380
			3	CANON	2,167
			4	NISSAN MOTOR	1,814
			5	HITACHI	1,707
			6	EAST JAPAN RAILWAY	1,690
			7	SEVEN&I HOLDING	1,625
			8	TAKEDA	1,594
1	KOÇ HOLDİNG	1,435	9	MITSUI & CO	1,348
2	SABANCI HOLDİNG	858	10	KOMATSU	1,137
3	TÜPRAŞ	221	11	ASTELLAS	1,039
4	EREĞLİ DEMİR CELİK	256	12	SHIN-ETSU	1,029
5	ARÇELİK	226	13	MITSUBISHI CORP.	931
6	ŞİŞE CAM	126	14	TOYOTA	662
7	DOĞAN HOLDİNG	-200	15	MITSUBISHI ESTATE	649
8	PETKİM	-11	16	NIPPON	629
9	KARDEMİR (D)	54	17	SONY	-1,243

Several sources are used to obtain data for the study. These sources are presented in the following table.

Table 2: Sources For The Data

Item	Data	Source
NOPAT	EBIT-Income Statement Tax Rate	Annual Reports-Companies' Web Sites Annual Reports-Companies' Web Sites
INVESTED CAPITAL	Balance Sheet	Annual Reports-Companies' Web Sites
WACC	Short and Long Term Liabilities Short and Long Term Interest Rate Index and Stock Price Risk-Free Rate Foreign Exchange	Annual Reports-Companies' Web Sites Annual Reports-Companies' Web Sites SEC-EDGAR Database Matriks Data Provider Company WJS Historical Prices Turkish Bonds Japanese Discount Bonds (T-Bills) Matriks Data Provider Company

3.1. Methodology

3.1.1. Calculation of EVA and MVA

Accounting figures of balance sheets and income statements of the firms used to calculate EVA. EVA is calculated as;

	Net Sales
-	Operating Expenses
=	Operating Profit (EBIT, Earnings Before Interest and Tax)
-	Taxes
=	Net Operating Profit After Tax (NOPAT)
-	Capital Charges (Invested Capital * Cost of Capital)
=	EVA

EVA is a measure that goes beyond the rate of return earned and considers the overall cost of capital. It measures profit after the cost of capital and defined as net operating profit after tax (NOPAT) in excess of the charges for shareholders' invested capital. Algebraically, EVA can be stated also as follows (Stewart, 1990, 137):

$$EVA = NOPAT - \text{Invested Capital} * WACC \quad (1)$$

Where,

$$NOPAT = \text{Earnings Before Interest and Tax (EBIT)} * (1-T) \quad (2)$$

T = Tax Rate

Invested Capital = Net Working Capital + Non-Current Capital (3)

Invested capital generating firm's profit does not refer to the capital in terms of absolute balance sheet items, but to the opportunity cost associated with using those assets. Therefore the cost of capital or the firm's weighted average cost of capital (WACC):

$$WACC = w_e * r_e + [(w_s\ (1-T) * r_{ds}) + (w_l\ (1-T) * r_{dl})] \quad (4)$$

w_s = Weight of Short Term Debt (Short Term Debt/Total Debt + Equity)

r_{ds} = Weighted Average of Short Term Interest Rate

w_l = Weight of Long Term Debt (Long Term Debt/Total Debt + Equity)

r_{dl} = Weighted Average of Long Term Interest Rate

w_e = Weight of Equity (Equity/Total Debt + Equity)

r_e = Required Return on Equity

In determining the WACC, cost of debt is taken as after tax cost and cost of equity is measured on the basis of capital asset pricing model (CAPM). Under CAPM, cost of equity (r_e) is given by the following (Copeland et al., 1996):

$$r_e = r_f + \beta\ (r_m - r_f) \quad (5)$$

r_f = Risk-Free Rate

β = Equity Beta

r_m = Market Return

$(r_m – r_f)$ = Market Risk Premium

In spite of the EVA's ability to identify firms that create or destroy value in a given period, this measure inform nothing about the firm's future. Therefore, this limitation of the EVA can be overcome with the use of the MVA. It should be noted that the link between EVA and MVA is not always verified, because share prices do not reflect the performance of past or present listed firms but the investors' future expectations. This is most noticeable in the case of firms providing negative EVA (Stern et al., 2001). MVA can be equated as follows (Stewart, 1990, 153):

MVA = Present Value of All Future Expected EVA (6)

MVA = Market Value – Invested Capital

Where,

Market Value = Total Shares * Price per Share (7)

Invested Capital = Net Working Capital + Non-Current Capital

MVA may referred by meaning with the market-to-book ratio. However the distinction is only that market-to-book ratio is a relative measure and MVA is an absolute measure. If MVA is positive that means that market-to-book ratio is more than one. On the other hand, negative MVA means market-to-book ratio less than one. If a firm's rate of return exceeds its cost of capital, the firm will sell on the stock markets with premium compared to the original capital in related with its positive MVA. Firms that have smaller rate of return than their cost of capital sell with discount compared to the initial capital invested in firm. Whether a company has positive or negative MVA depends on the level of rate of return compared to the cost of capital. All this can be applied to EVA also. Thus positive EVA means also positive MVA and negative EVA means negative MVA. But, MVA is not a performance metric like EVA, rather it is a wealth metric, measuring the level of value a firm has accumulated over time.

3.1.2. Econometric Analysis of Explanatory Power of EVA to MVA

In this study, after calculating EVA and MVA of related companies, we analyzed the explanatory power of EVA to MVA with the stated hypotheses:

1st Hypothesis = H_0 = There is not a significant relationship between EVA and MVA from 2008 to 2013.

2st Hypothesis = H_1 = There is a significant relationship between EVA and MVA from 2008 to 2013.

To study these two hypotheses regression and correlation analysis are used to identify the relationship between the dependent variable (MVA) and the independent variable (EVA). To test the hypotheses, concerning the explanatory power of EVA, the following model used:

$$Y = \beta_0 + \beta_1 X + E \qquad (8)$$

Where,

β_0 = Intercept

Y = MVA (Dependent Variable)

X = EVA (Independent Variable)

E = Residual

β_1 = Regression Coefficient

4. RESULTS

In this section, results of the analysis presented. Initially NOPAT, invested capital, WACC, EVA and MVA of selected firms listed in BIST-30 and TOPIX Core30 are given in the following tables.

Table 3: NOPAT of listed firms in BIST-30 from 2008-2013

BIST-30		NOPAT (Million USD)						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
KCHOL	KOÇ HOLDİNG	2,669	1,839	2,117	2,299	1,713	1,400	2,006
SAHOL	SABANCI HOLDİNG	1,270	1,837	2,196	1,842	2,134	1,825	1,851
TUPRS	TÜPRAŞ	680	538	531	831	508	15	517
EREGL	EREĞLİ DEMİR	274	27	579	723	339	586	421

	CELİK							
ARCLK	ARÇELİK	233	397	329	271	325	427	330
SISE	ŞİŞE CAM	239	130	292	326	202	196	231
DOHOL	DOĞAN HOLDİNG	182	-24	-95	-457	110	113	-28
PETKM	PETKİM	-70	22	66	68	3	27	19
KRDMD	KARDEMİR (D)	184	-38	16	97	99	74	72
TOTAL AVERAGE		629	525	670	667	604	518	

The highest average NOPAT is Koç Holding's with 2,006 million USD and lowest average NOPAT is Doğan Holding's with -28 million USD between 2008 and 2013. The highest total average NOPAT is in 2010 with 670 million USD and lowest total average NOPAT is in 2013 with 518 million USD.

Table 4: NOPAT of listed firms in TOPIX Core30 from 2008-2013

TOPIX Core30		**NOPAT (Million USD)**						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
8031	MITSUI & CO., LTD.	2,364	917	2,262	2,495	1,675	1,653	1,894
6301	KOMATSU LTD.	910	425	1,590	1,836	1,392	1,444	1,266
4503	ASTELLAS PHARMA INC.	1,500	1,183	850	942	1,012	1,064	1,092
4063	SHIN-ETSU CHEMICAL CO.	1,395	744	1,065	1,072	1,033	1,044	1,059
8058	MITSUBISHI CORPORATION	3,528	1,152	2,255	1,942	881	1,192	1,825
7203	TOYOTA MOTOR CORP.	-2,762	936	3,341	2,547	8,689	13,765	4,419
8802	MITSUBISHI ESTATE CO.	830	946	1,129	1,048	779	968	950
5401	NIPPON STEEL&SUMITOMO	2,054	203	1,181	568	132	1,792	989
6758	SONY CORPORATION	-1,365	162	1,403	-470	1,490	159	230
TOTAL AVERAGE		939	741	1,675	1,331	1,898	2,565	

The highest average NOPAT is Toyota Motor Corporation's with 4,419 million USD and lowest average NOPAT is Sony Corporation's with 230 million USD between 2008 and 2013. The highest total average NOPAT is in 2013 with 2,565 million USD and lowest total average NOPAT is in 2009 with 741 million USD.

Invested capital of selected companies in BIST-30 and TOPIX Core30 are given in the following tables.

Table 5: Invested Capital of listed firms in BIST-30 from 2008-2013

BIST-30		INVESTED CAPITAL (Million USD)						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
KCHOL	KOÇ HOLDİNG	17,737	18,695	20,556	19,157	18,467	18,595	18,868
SAHOL	SABANCI HOLDİNG	15,460	18,145	22,255	19,729	25,839	26,149	21,263
TUPRS	TÜPRAŞ	2,995	3,225	3,271	3,336	4,820	5,044	3,782
EREGL	EREĞLİ DEMİR CELİK	5,681	6,311	6,308	5,717	5,800	5,427	5,874
ARCLK	ARÇELİK	2,562	2,150	3,213	2,967	3,532	3,437	2,977
SISE	ŞİŞE CAM	3,365	3,652	3,706	3,606	3,828	4,527	3,781
DOHOL	DOĞAN HOLDİNG	5,057	4,217	4,000	3,466	3,172	2,612	3,754
PETKM	PETKİM	958	1,025	1,093	958	1,000	951	998
KRDMD	KARDEMİR (D)	709	643	649	681	958	940	763
TOTAL AVERAGE		6,058	6,451	7,228	6,624	7,491	7,520	

The highest average invested capital is Sabancı Holding’s with 21,263 million USD and lowest average invested capital is Kardemir’s with 763 million USD between 2008 and 2013. The highest total average invested capital is in 2013 with 7,520 million USD and lowest total average invested capital is in 2008 with 6,058 million USD.

Table 6: Invested Capital of listed firms in TOPIX Core30 from 2008-2013

TOPIX Core30		INVESTED CAPITAL (Million USD)						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
8031	MITSUI & CO., LTD.	56,276	64,082	72,835	77,138	77,246	67,995	69,262
6301	KOMATSU LTD.	12,492	14,097	16,228	17,592	17,937	18,012	16,060
4503	ASTELLAS PHARMA INC.	10,756	11,633	13,177	13,120	12,014	11,855	12,092
4063	SHIN-ETSU CHEMICAL CO.	14,905	16,470	18,461	18,867	18,266	18,840	17,635
8058	MITSUBISHI CORPORATION	67,966	76,467	87,706	98,084	102,749	107,031	90,001
7203	TOYOTA MOTOR CORP.	191,914	210,424	228,871	227,864	239,516	259,203	226,299
8802	MITSUBISHI ESTATE CO.	37,770	39,639	44,654	46,226	44,273	38,727	41,881
5401	NIPPON STEEL&SUMITOMO	33,779	38,871	43,815	43,334	54,209	51,064	44,178
6758	SONY CORPORATION	82,849	94,239	66,502	66,182	105,013	102,203	86,165
TOTAL AVERAGE		56,523	62,880	65,805	67,601	74,580	74,992	

The highest average invested capital is Toyota Motor Corporation’s with 226,299 million USD and lowest average invested capital is Astellas Pharma’s with 12,092 million USD between 2008 and 2013. The highest total average invested capital is in 2013 with

74,992 million USD and lowest total average invested capital is in 2008 with 56,523 million USD.

Table 7: WACC of listed firms in BIST-30 from 2008-2013

BIST-30		WACC %						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
KCHOL	KOÇ HOLDİNG	4.00	3.50	4.11	3.42	2.84	3.04	3.48
SAHOL	SABANCI HOLDİNG	10.02	4.33	3.93	3.91	3.93	3.67	4.97
TUPRS	TÜPRAŞ	17.49	8.11	7.00	7.39	5.16	5.35	8.42
EREGL	EREĞLİ DEMİR CELİK	5.00	2.91	3.62	2.71	3.56	3.52	3.55
ARCLK	ARÇELİK	10.54	2.99	1.28	2.35	2.32	2.87	3.72
SISE	ŞİŞE CAM	4.36	2.69	2.47	2.53	2.28	2.46	2.80
DOHOL	DOĞAN HOLDİNG	5.97	4.84	4.55	3.27	3.71	4.26	4.43
PETKM	PETKİM	5.44	4.26	2.10	2.22	2.38	2.10	3.08
KRDMD	KARDEMİR (D)	5.00	3.50	1.43	2.66	3.94	1.83	3.06
TOTAL AVERAGE		7.54	4.13	3.39	3.38	3.35	3.23	

The highest average WACC is Tüpraş's with 8.42% and lowest average WACC is Şişe Cam's with 2.80% between 2008 and 2013. The highest total average WACC is in 2008 with 7.54% and lowest total average WACC is in 2013 with 3.23%.

Table 8: WACC of listed firms in TOPIX Core30 from 2008-2013

TOPIX Core30		WACC %						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
8031	MITSUI & CO., LTD.	1.07	0.91	0.69	0.57	0.72	0.88	0.81
6301	KOMATSU LTD.	0.87	0.67	1.11	0.98	0.65	0.58	0.81
4503	ASTELLAS PHARMA INC.	0.43	0.35	0.52	0.54	0.39	0.35	0.43
4063	SHIN-ETSU CHEMICAL CO.	0.17	0.27	0.11	0.16	0.16	0.16	0.17
8058	MITSUBISHI CORPORATION	1.60	0.90	0.74	0.84	1.06	0.96	1.02
7203	TOYOTA MOTOR CORP.	1.87	1.68	1.80	1.41	1.62	1.63	1.67
8802	MITSUBISHI ESTATE CO.	0.73	0.71	0.64	0.77	0.75	0.70	0.72
5401	NIPPON STEEL&SUMITOMO	0.84	0.66	1.01	0.97	0.75	0.68	0.82
6758	SONY CORPORATION	1.79	1.60	1.77	1.67	1.72	1.73	1.71
TOTAL AVERAGE		1.04	0.86	0.93	0.88	0.87	0.85	

The highest average WACC is Toyota Motor Corporation's with 1.67% and lowest average WACC is Shin-Etsu Chemical Corporation's with 0.17% between 2008 and 2013.

The highest total average WACC is in 2008 with 1.04% and lowest total average WACC is in 2013 with 0.85%.

Table 9: EVA of listed firms in BIST-30 from 2008-2013

BIST-30		EVA (Million USD)						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
KCHOL	KOÇ HOLDİNG	2,486	1,185	1,272	1,645	1,188	834	1,435
SAHOL	SABANCI HOLDİNG	-279	1,051	1,321	1,071	1,119	865	858
TUPRS	TÜPRAŞ	156	277	302	584	259	-254	221
EREGL	EREĞLİ DEMİR CELİK	249	-156	350	567	132	394	256
ARCLK	ARÇELİK	-37	333	288	201	243	328	226
SISE	ŞİŞE CAM	93	32	201	235	114	85	126
DOHOL	DOĞAN HOLDİNG	-120	-228	-277	-571	-8	2	-200
PETKM	PETKİM	-122	-22	43	47	-21	7	-11
KRDMD	KARDEMİR (D)	181	-61	7	79	61	57	54
TOTAL AVERAGE		290	268	390	429	343	258	

The highest average EVA is Koç Holding’s with 1,435 million USD and lowest average EVA is Doğan Holding’s with -200 million USD between 2008 and 2013. The highest total average EVA is in 2011 with 429 million USD and lowest total average EVA is in 2009 with 268 million USD.

Table 10: EVA of listed firms in TOPIX Core30 from 2008-2013

TOPIX Core30		EVA (Million USD)						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
8031	MITSUI & CO., LTD.	1,761	336	1,760	2,057	1,122	1,054	1,348
6301	KOMATSU LTD.	801	331	1,411	1,664	1,275	1,340	1,137
4503	ASTELLAS PHARMA INC.	1,453	1,142	782	871	965	1,023	1,039
4063	SHIN-ETSU CHEMICAL CO.	1,370	700	1,044	1,041	1,004	1,014	1,029
8058	MITSUBISHI CORPORATION	2,440	465	1,607	1,121	-206	160	931
7203	TOYOTA MOTOR CORP.	-6,342	-2,592	-781	-666	4,819	9,534	662
8802	MITSUBISHI ESTATE CO.	553	665	842	691	447	696	649
5401	NIPPON STEEL&SUMITOMO	1,771	-52	738	150	-273	1,442	629
6758	SONY CORPORATION	-2,847	-1,346	224	-1,573	-312	-1,605	-1,243
TOTAL AVERAGE		107	-39	847	595	982	1,629	

The highest average EVA is Mitsui&Co.’s with 1,348 million USD and lowest average EVA is Sony Corporation’s with -1,243 million USD between 2008 and 2013. The highest total average EVA is in 2013 with 1,629 million USD and lowest total average EVA is in 2009 with -39 million USD.

Table 11: MVA of listed firms in BIST-30 from 2008-2013

BIST-30		MVA (Million USD)						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
KCHOL	KOÇ HOLDİNG	-14,790	-12,584	-10,244	-12,612	-5,737	-8,375	-10,724
SAHOL	SABANCI HOLDİNG	-11,698	-11,362	-13,257	-14,097	-14,861	-18,049	-13,887
TUPRS	TÜPRAŞ	-1,378	306	1.519	1,001	1,676	-221	484
EREGL	EREĞLİ DEMİR CELİK	-4,609	-4,647	-3,835	-3,847	-2,090	-1,542	-3,428
ARCLK	ARÇELİK	-2,238	-344	-381	-1,055	563	239	-536
SISE	ŞİŞE CAM	-2,870	-2,706	-2,068	-1,994	-1,425	-2,579	-2,274
DOHOL	DOĞAN HOLDİNG	-4,150	-2,526	-2,211	-2,780	-1,898	-1,779	-2,558
PETKM	PETKİM	-358	-55	397	52	550	319	151
KRDMD	KARDEMİR (D)	-621	-353	-324	-409	-440	-423	-428
TOTAL AVERAGE		-4,746	-3,808	-3,378	-3,971	-2,629	-3,601	

The highest average MVA is Tüpraş's with 484 million USD and lowest average MVA is Sabancı Holding's with -13,887 million USD between 2008 and 2013. The highest total average MVA is in 2012 with -2,629 million USD and lowest total average MVA is in 2008 with -4,746 million USD.

Table 12: MVA of listed firms in TOPIX Core30 from 2008-2013

TOPIX Core30		MVA (Million USD)						
Code	**Stock**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Average**
8031	MITSUI & CO., LTD.	-19,213	-45,865	-42,084	-44,333	-47,272	-42,509	-40,212
6301	KOMATSU LTD.	15,108	-3,638	4,076	15,298	9,190	4,727	7,460
4503	ASTELLAS PHARMA INC.	9,339	2,886	3,775	5,551	7,200	13,272	7,004
4063	SHIN-ETSU CHEMICAL CO.	7,325	4,101	6,207	2,252	6,243	9,325	5,909
8058	MITSUBISHI CORPORATION	-18,412	-55,144	-44,615	-52,432	-64,599	-76,577	-51,963
7203	TOYOTA MOTOR CORP.	-33,504	-111,460	-103,190	-101,501	-103,999	-95,863	-91,586
8802	MITSUBISHI ESTATE CO.	-4,209	-24,251	-21,889	-22,694	-19,491	-424	-15,493
5401	NIPPON STEEL&SUMITOMO	-1,858	-21,776	-19,108	-23,208	-36,967	-31,924	-22,474
6758	SONY CORPORATION	-42,848	-73,967	-28,016	-33,989	-84,341	-84,570	-57,955
TOTAL AVERAGE		-9,808	-36,568	-27,205	-28,340	-37,115	-33,838	

The highest average MVA is Komatsu's with 7,460 million USD and lowest average MVA is Toyota Motor Corporation's with -91,586 million USD between 2008 and 2013. The highest total average MVA is in 2012 with -9,808 million USD and lowest total average MVA is in 2010 with -27,205 million USD.

Econometric analysis results of the explanatory power of EVA to MVA are presented in the following tables. These tables are correlation coefficients, regression coefficients and anova analysis.

Table 13: Correlation coefficients

			BIST-30		TOPIX Core30	
Year	**N**	**Variable**	**Correlation Coefficient**	**Significance**	**Correlation Coefficient**	**Significance**
2008	9	EVA-MVA	-0.650	0.058	0.646	0.060
2009	9	EVA-MVA	-0.813	0.008	0.882	0.002
2010	9	EVA-MVA	-0.877	0.002	0.556	0.120
2011	9	EVA-MVA	-0.749	0.020	0.419	0.262
2012	9	EVA-MVA	-0.799	0.010	-0.306	0.423
2013	9	EVA-MVA	-0.805	0.009	-0.331	0.384

To the results that calculated with correlation analysis;

The relationship between EVA and MVA values are negative for selected companies that are listed in BIST-30 index from 2008 to 2013. H_1 (2st Hypothesis) is accepted and H_0 (1st Hypothesis) is rejected for 2009, 2010, 2011, 2012 and 2013 because of their significance level except 2008.

The relationship between EVA and MVA values are positive from 2008 to 2011 and negative in 2012 and 2013 for selected companies that are listed in TOPIX Core30 index. H_0 (1st Hypothesis) is accepted and H_1 (2st Hypothesis) rejected for 2008, 2010, 2011, 2012 and 2013 because of their significance level except 2009. In 2009, correlation coefficient is positive and significant, so H_0 (1st Hypothesis) is rejected and H_1 (2st Hypothesis) is accepted.

Table 14: Regression coefficients

		BIST-30			TOPIX Core30		
Year	**N**	**R**	**R^2**	**Adjusted R^2**	**R**	**R^2**	**Adjusted R^2**
2008	9	0.650	0.422	0.340	0.646	0.418	0.335
2009	9	0.813	0.660	0.612	0.882	0.777	0.745
2010	9	0.877	0.769	0.736	0.556	0.309	0.210
2011	9	0.749	0.560	0.498	0.419	0.175	0.057
2012	9	0.799	0.639	0.587	0.306	0.094	-0.036
2013	9	0.805	0.648	0.597	0.331	0.110	-0.018

To R2 values, 42.2% in 2008, 66% in 2009, 76.9% in 2010, 56% in 2011, 63.9% in 2012 and 64.8% in 2013 of dependent variable MVA can be explained by independent variable EVA for selected companies that are listed in BIST-30 index. For the selected companies that are listed in TOPIX Core30 index, 41.8% in 2008, 77.7% in 2009, 30.9% in 2010, 17.5% in 2011, 9.4% in 2012 and 11% in 2013 of dependent variable MVA can be explained by independent variable EVA.

Table 15: Anova analysis

Index	Year	N	Model	Sum of Squares	df	Mean Squares	F	Significance
BIST-30	2008	9	Regression	87444488.95	1	87444488.95	5.119	0.058
			Residual	119575665.3	7	17082237.9		
			Total	207020154.2	8			
	2009	9	Regression	127162001	1	127162001	13.606	0.008
			Residual	65423383.49	7	9346197.641		
			Total	192585384.5	8			
	2010	9	Regression	157311959.5	1	157311959.5	23.308	0.002
			Residual	47244852.87	7	6749264.696		
			Total	204556812.3	8			
	2011	9	Regression	137098875.5	1	137098875.5	8.923	0.020
			Residual	107550859.5	7	15364408.51		
			Total	244649735.1	8			
	2012	9	Regression	131126343.1	1	131126343.1	12.394	0.010
			Residual	74059148.78	7	10579878.4		
			Total	205185491.9	8			
	2013	9	Regression	188972026.9	1	188972026.9	12.866	0.009
			Residual	102814732.5	7	14687818.93		
			Total	291786759.3	8			
Index	**Year**	**N**	**Model**	**Sum of Squares**	**df**	**Mean Squares**	**F**	**Significance**
TOPIX Core30	2008	9	Regression	1333684361	1	1333684361	5.026	0.060
			Residual	1857458898	7	265351271.1		
			Total	3191143259	8			
	2009	9	Regression	9407885634	1	9407885634	24.421	0.002
			Residual	2696693494	7	385241927.7		
			Total	12104579128	8			
	2010	9	Regression	2919618226	1	2919618226	3.131	0.120
			Residual	6527706204	7	932529457.7		
			Total	9447324430	8			
	2011	9	Regression	1799109563	1	1799109563	1.487	0.262
			Residual	8468397850	7	1209771121		
			Total	10267507412	8			

	2012	9	Regression	1296476866	1	1296476866	0.722	0.423
			Residual	12564308349	7	1794901193		
			Total	13860785215	8			
	2013	9	Regression	1644343523	1	1644343523	0.861	0.384
			Residual	13368145643	7	1909735092		
			Total	15012489166	8			

F value and significance value represents the level of significance of statistical model. So if the level of significance is p<0.05, it is accepted as statistically significance. The levels of significance are lower than 0.05 between 2008 and 2013 for selected companies that are listed in BIST-30. In TOPIX Core30 index, levels of significance are higher than 0.05 except in 2009.

5. CONCLUSION

In recent years, EVA became increasingly relevant in the context of management. In fact, it was in the last decade of the twentieth century that this measure becomes a key tool in evaluating the creation of value. The relationship of EVA with MVA that has developed in literature gave popularity to use these performance evaluation measures.

In this study, we aimed the following items for research:

Compare two different countries' companies with modern performance measures EVA and MVA between 2008 and 2013,

Analyze explanatory power of EVA to MVA in BIST-30 and TOPIX Core30.

Average EVAs of BIST-30 were positive but there were not any significant improvement between 2008-2013. Average EVAs of TOPIX Core30 were positive, except 2009. The negative EVA in 2009 was the effect of global economic crises. However there were significant increases after 2009 due to growing sales in companies. Average MVAs of BIST-30 were negative between 2008-2013. It may be proof of market ineffiencies in Borsa İstanbul. Also average MVAs of TOPIX Core30 were negative between 2008-2013. Especially after 2008, it is understood from financial statements that Japanese companies invested large amount of capital. Although many stock prices recovered to their prior levels before global crises, MVAs were negative due to large invested capital. Another assumption; companies consumed their future EVAs, so positive EVAs and negative MVAs can be interpreted such a way. Although many studies found sound link between EVA and MVA, this study examined that explanatory of EVA to MVA is not strong. The company's target is to maximize the MVA and not only the market value, since the MVA reflects the difference between the company's market value and the capital invested.

REFERENCES

Anctil, R. M., Jordan, J. S., & Mukherji, A. (1998). Activity-based costing for Economic Value Added®. *Review of Accounting Studies*, 2(3), 231-264.

Bartov, E., Goldberg, R. & Kim, M. (2001), The Valuation-Relevance of Earnings and Cash Flows: An International Perspective, *Journal of International Financial Management and Accounting*, No. 2, 103-132.

Bayrakdaroğlu, A. & Ünlü, U. (2009), Performans Değerlemede EVA ve MVA Ölçütleri: Bu Ölçütler Açısından İMKB ve NYSE'nin Karşılaştırmalı Analizi. Suleyman Demirel University, *The Journal of Faculty and Administrative Sciences*, Vol.14, No.1, 287-312.

Biddle, G. C., Bowen, R. M., & Wallace, J. S. (1997). Does *EVA* beat earnings? Evidence on associations with stock returns and firm values. *Journal of Accounting and Economics*, 24(3), 301-336.

Bowen, R. M., & Wallace, J. S. (1999). Interior Systems, Inc. The decision to adopt *EVA* registered trademark. *Accounting Education*, 14(3), 517-541.

Chari, L. (2009), Measuring Value Enhancement through Economic Value Added: Evidence from Literature, The *IUP Journal of Applied Finance*, 15(9), 46-62.

Chen, S., & Dodd, J. L. (1997). Economic Value Added (*EVA*TM): An empirical examination of a new corporate performance measure. *Journal of Managerial Issues*, 9(3), 318-333.

Copeland, T., Koller T. & Murrin J. (1996) *Valuation: Measuring and Managing the Value of Companies*, Second Ed., New York, John Wiley&Sons, Inc.

Damodaran, A. (1998). Value creation and enhancement: back to the future. *Contemporary Finance Digest*, 2(4), 5-52.

DeWet, J.H. (2005). EVA versus traditional accounting measures of performance as drivers of shareholder value - A comparative analysis. *Meditari Accountancy Research*, 13(2), 1-16.

Dodd, J. L. & Johns, J. (1999). *EVA* reconsidered. *Business and Economic Review*, 45(3), 13-18.

Dodd, J. L., & Chen, S. (1996). *EVA*: A new panacea? *Business and Economic Review*, 42, 26-28.

Grant, J. (1997) *Foundations of Economic Value Added*. Pennsylvania: Frank J. Fabozzi Associates.

Gücenme, Ü. & Arsoy, A. P. (2006), Muhasebe Standartlarındaki Sınıflandırılmış Nakit Akım Tablosu Formatı ile Finansal Performansın Ölçülmesi. *The Journal of Accounting and Finance*, 30, 66-74.

Hall, J. H. & Brumer, L. M. (2001), The Relationship Between the Market Value of a Company and Internal Performance Measurements. Working Paper [Online] Available:
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=141189

Holian, M. & Reza, A. (2011), Firm and industry effects in accounting versus economic profit data, *Applied Economics Letters*, 18(6): 527-529.

Kramer, J. K. & Pushner, G. (1997), An Empirical Analysis of Economic Value Added as a Proxy Measure for Market Value Added, *Financial Practice and Education*, Vol. 7 (1), 41-49.

Mäkeläinen, E. (1998). Economic Value Added as a Management Tool. [Online] Available: http://www.*EVA*nomics.com/*EVA*study/ *EVA*study.shtml.

Milunovich, S. & Tsuei, A. (1996), EVA in the computer industry, *Journal of Applied Corporate Finance* 9(1): 104-116.

Milunovich, S., & Tsuei, A. (1996). *EVA*O in the computer industry. *Journal of Applied Corporate Finance,* 9(1), 104-115.

Mouritsen, J. (1998). Driving growth: Economic Value Added versus Intellectual Capital. *Management Accounting Research,* 9(4), 461-482.

O'Byrne, S. (1996), EVA and Market Value, *Journal of Applied Corporate Finance,* 9(1): 116-125.

O'Byrne, S. F. (1996). *EVA* and market value. *Journal of Applied Corporate Finance,* 9(1), 116 - 125.

O'Hanlon, J., & Peasnell, K. (1998). Wall Street's contribution to management accounting: the Stern Stewart *EVA*® financial management system. *Management Accounting Research,* 9(4), 421-444.

Pettit, J. (2001), EVA® & Strategy II: Portfolio Management, *EVAluation, Stern Stewart Research, 3(2).*

Pike, R.& Neale, B. (1999) *Corporate finance and investment.* London: Prentice Hall Europe.

Rappaport, A. (1981), Selecting Strategies that Create Shareholder Value, *Harvard Business Review,* May-June, 139-149.

Rappaport, A. (1998) *Creating shareholder value: the new standard for business performance.* New York: Free Press.

Stern, J., Stewart, G. B. & Chew Jr., D. H. (1995), The EVA Financial Management System, *Journal of Applied Corporate Finance*, 8 (2), 32-46.

Stern, J., Shiely, J. & Ross, I. (2001), *The EVA Challenge: Implementing Value Added Change in an Organization*, New York John Wiley & Sons.

Stewart & Co. (2000). WWW home page. [Online] Available: http://www.sternstewart.com

Stewart, G. (1991), *The quest for value: the EVATM Management Guide*. New York: Harper Business.

Stewart, S. (2002), How to Structure Incentive Plans That Work, Stern Stewart Research, Evaluation, Vol.4, Issue 4, April [Online] Available:

http://www.sternstewart.com.br/publicacoes/pdfs/how_to_structure_incentive_plans_that_work.pdf

Uyemura, D. G., Kantor, C. C., & Pettit, J. M. (1996). *EVA®* for banks: Value creation, risk management, and profitability measurement. *Journal of Applied Corporate Finance,* 9(2), 94-113.

Wallace, J. S. (1997). Adopting residual income-based compensation plans: Evidence of effects on management actions. *Working paper*, University of California, Irvine, CA.

Wallace, J. S. (1997). Adopting residual income-based compensation plans: Do you get what you pay for? *The Journalof Accounting and Economics*, 24, 275 - 300.

Yılgör, A. G. (2005) İşletme Performansının Değerlendirilmesinde Ekonomik Katma Değer (EVA) ve Piyasa Katma Değeri (MVA)Yöntemleri ve Bu Yöntemlerin Hisse Senedi Getirilerini Açıklama Gücünün İncelenmesi: İMKB 100 Örneği, *Ankara University SBF Journal*, 60–1, 225–248.

Yılmaz, T. & Bastı, E. (2013), İmalat Sanayi Şirketlerinin Ekonomik Katma Değer (EVA) ve Piyasa Katma Değerine (MVA) Dayalı Performans Analizi: İMKB Örneği. *Journal of Management and Economics Research*, No.21, 82-105.

明治大学
MEIJI UNIVERSITY

Business Valuation and Internally Generated Goodwill

Fujio YAMAGUCHI
Meiji University

Key Words

- business valuation
- internally generated goodwill
- intangible asset
- DCF: discounting cash flows
- subjective profit
- list of property
- Reliability and Cost of accounting data

contents

0. purpose & agenda
1. What's Business Value?
2. 4 profit concepts
3. Three Cases about the Valuation of Intangible Assets
4. Classification of Intangible Assets
5. Illustration of Intangible Assets
6. Subjective Profit of Edwards and Bell
7. Conclusion & Bibliography

The purpose of this paper is

To classify internally generated goodwill and intangible assets in the list of property

and to eliminate prediction from income determination.

Business Valuation and Internally Generated Goodwill

- An analysis of financial statements is necessary for business valuation.
- the evaluation of the business implies the prediction of future cash flows

  ; however, it is difficult to forecast the future by using past and present data.

IAS38 :

Internally generated goodwill
shall not be recognised
as an asset.

In this presentation,

Focus on intangible assets,

- and propose a method of classification for intangible assets, including internally generated goodwill.
- These valuations of intangible assets convert the value of assets on the balance sheet into business value.

AGENDA

If these intangible assets are difficult to use both on B/S and P/L because of the lack of objectivity,

these value should be entred in a different column on B/S to report separately,

or these intangible assets might be disclosed in the list of property.

Ⅰ. What's Business Value?

Fig.1 Balance Sheet

③	②assets	①assets	Liabilities
business		(historical	Capital Stock
	(current	cost)	Reserves
	cost)		revaluated profit
value	subjective goodwill		

Ⅱ. 4 profit concepts which are related with above method of valuation.

- ①-1 Increase in money except capital transactions under the principle of historical cost.
- ①-2 A profit not including appraisal profit or loss by means of revenue and expense view under the principle of historical cost.
- ②Profit through an asset-debt view in which revaluated profit or loss and other comprehensive profit is added.
- ③ Profit as an increment of business value calculated by means of a discounting method

Ⅲ. Three Cases about the Valuation of Intangible Assets

Olympus Co.
Livedoor Co., Ltd.
Rakuten, Inc

Olympus co.

- a Japan-based manufacturer of optics established in 1919, initially specializing in microscope, camera and optics business. It enjoys a majority share of the world market in gastro-intestinal endoscopes.
- Olympus deferred the loss added up by securities investments in the 1990s. The losses piled up to 100 billion yen. The rewards that were paid after the purchase of the Gyrus Group PLC, which was a British medical equipment maker, and stock buyback funds for three domestic companies were used to pay off the loss.

There were some doubtful acquisitions around 2008, particularly the 220 billion yen deal in 2008 to acquire Gyrus Group including 69 billion yen paid as a success fee. The amount of intangible assets, including purchased goodwill, by these mergers was 404 billion yen in 2008. However, these accounting procedures were judged as fraudulent accounting and amendment reports were submitted which showed the amount of intangible assets for 2008 was 331 billion yen.

- From the Olympus case, we can see that the calculation of the fair value of intangible assets and discovery of off-balance sheet assets (debt, loss) is important for the discovery of fraudulent accounts (negative internal reserves).

Fig.3 Consolidated Assets of Olympus

Million yen

	2006.3	2007.3	2008.3	2009.3	2010.3	2011.3
Intangibles Assets	102,666	100,351	*404,030*	*264,620*	*265,646*	*248,405*
Amended Intangibles Assets	**102,666**	**100,351**	***331,285***	***253,762***	***216,030***	***205,979***
Total Assets	976,132	1,091,800	1,358,349	1,106,318	1,152,227	1,063,593
AmendedTotal Assets	***888,619***	***1,002,665***	***1,217,172***	***1,038,253***	***1,104,528***	***1,019,160***

Livedoor co.,Ltd

- Founded in 1996 and became a Japanese Internet company based in Tokyo, Japan. It was listed on the stock exchange in 2000. Livedoor Co., Ltd. purchased Nippon Global Securities Inc. by TOB in 2004 and subsequently founded or purchased various companies. The company acquired nine subsidiaries, and merged six companies, mainly by the exchange of shares from 1999 through 2003. In 2004, it merged five companies by exchange of shares, two by TOB, made ten companies into affiliates, and founded six subsidiaries.
- Consolidation account adjustments or purchased goodwill generated by these mergers were all retained as an intangible asset. A small amount of intangible assets were amortised, and then almost all intangible assets are retained. In 2005, the amount of intangible assets was 25,306 million yen. However, the amortisation of intangible assets was only 387 million yen from 2003 to 2005.
- Therefore, Livedoor Co., Ltd. could continue to create net income in the profit and loss statement every period. Capital stock and capital reserve of Livedoor Co., Ltd. increased from 2003 to 2005 through the increase of capital from general stockholders. To maintain a high stock price, Livedoor Co., Ltd. needed to not be burdened by a deficit.

Fig.2

Higahlight of Livedoor (Consolidated)

million yen

	2000.3	2001.3	2002.3	2003.3	2004.3	2005.3
Net sales	1,207	3,601	5,891	10,825	30,869	78,422
Amortization in administrating Expences	0	0	0	255	0	0
Amortization in Special Expences	0	0	61	0	179	0
Income Before Tax	-170	290	780	986	5,405	18,840
Total Assets	6,380	7,755	9,332	16,640	100,220	330,240
Intangible Assets and goodwill	19	61	1,093	2,176	4,652	25,306
Consolidated Adjustment Account in Intangebles	0	0	987	870	2,409	19,926
Equity Ratio	95.9%	80.8%	70.8%	71.8%	53.4%	58.6%

source: Annual Reports livedoor

Rakuten, Inc.

- Japanese electronic commerce and internet company founded in 1997 and listed on the stock exchange in 2004.
- Its e-commerce platform, Rakuten Ichiba, is the largest e-commerce site in Japan and among the world's largest by sales. It made Infoseek Corporation and Aozora Bank, Ltd . its subsidiaried by a share acquisition in 2004 and founded or purchased various companies. It merged two companies in 2000, one company in 2001, two companies in 2002, four companies in 2003, five companies in 2004 and sixteen companies in 2005.
- See Fig.5. Consolidation adjusting accounts or purchased goodwill generated by these mergers were all amortised immediately and included in the extraordinary losses. Therefore, net income became in deficit subsequent to the immediate amortisation from 2001, and deficit amounted 58 billion yen in 2003 when the merger was increased.
- However, that accounting procedure of instant amortisation of the consolidation adjusting account or purchased goodwill was prohibited by an auditor in 2005.

Fig.5 Higahlight of Rakuten (Consolidated)

	2001.12	2002.12	2003.12	2004.12	2005.12	
Net sales	6,780	9,894	18,082	45,567	129,775	
Amortisation in administrating Expenses	0	0	0	0	0	
Amortisation in Special Expenses	**3,011**	**3,487**	**58,614**	**10,712**	0	
Income Before Tax	**-3,450**	**-2,951**	**-55,801**	**-8,437**	**34,276**	
Total Assets	40,255	36,387	34,054	188,016	307,556	1,667,708
Intangible Assets and Goodwill Consolidated	660	1,041	1,475	3,761	65,609	
Adjustment Account in Intangibles	0	0	0	0	56,868	
Equity Ratio	92.7%	88.7%	14.0%	14.9%	4.6%	

source: Annual Reports Rakuten

Three cases of Olympus, Livedoor, and Rakuten

- Amortisation of intangible assets was rarely observed by Livedoor.
- In contrast, Rakuten amortised them immediately until 2004.
- Amendment reports for intangible assets were made later at Olympus, and the amount was largely corrected.
- These cases show that the valuation of intangible assets is subjective and an accurate valuation may be difficult.

4.Classification of Intangible Assets and Goodwill

(Valuation**)

1. Tangible assets historical cost (HC) current cost (CC) discounted future cash flows (DCF)
2. Intangible assets*
   a. Purchased Patents, Trademarks, Business rights, Brand, Software (HC or CC,DCF)
   b. Consolidated adjustment account (HC or CC, CV: commitment value***)
   c. Human capital (CV)
   d. Processes (CV)
   e. Networks (CV)
   …
   m. Negative intangible assets (e.g. risks)
   n. Adjustment of overlap among intangible assets

* Adjustment of the total corporate value (Business value) is conducted by m. negative intangible assets (e.g. risks) and n. overlap adjustment between intangible assets.

** The evaluation method is divided into three: historical cost, market value, discounted present value (commitment value).

*** The amount of commitment value is calculated by a method similar to a fair value evaluation or discounted present value evaluation.

Features of the classification of Yamaguchi are :

1. It considers negative intangible assets (e.g. risk).
2. It considers the inseparable nature of intangible assets, or holistic characteristics (The grand total of elements is not equal to the whole).
3. (n) contains the adjustment of the overlapping part of the accounts in intangible assets.

- The historical cost, market value, and discounted value (called the "commitment evaluation") should be chosen on the valuation. It is desirable the consolidated adjustment calculation of b to be distributed into c-n. The purpose of this classification is to identify the intangible assets including internally generated goodwill.
- The source of the excess profitability of a company can be clarified by this intangible asset classification, which balances intangible assets with the internal reserves of the capital account from the perspective of total business value. It is a tentative approach which presents the framework of classification of intangible assets.

5. Illustration of Intangible Assets in Four Balance Sheets

	A	B	C	D
Debtor Assets	Aquisition cost Book value − Depreciation	Market value	Discounted Value of Future Cash Flows (Business Value)	Compornents of Business Value (commitment value)
			HC+CC+DCF*	HC+CC+CV*
• Facilities	100-10	110	150	90 +20
• Intangibles: Internally Generated Goodwill (human, Intellectual assets, goodwill, brand･･･)				40
• Financial assets	10	10	10	10
• Total assets	100	120	10 +150	100+20+40
Creditor				
• Liabilities	40	40	40	40
• Stock	50	50	50	50
• Retained earnings	10	10	10	10
Revaluated gains (of facilities)		20	(20)	20
Accumulated other reserves			(40) 60	40
Total Liabilities and equity	100	120	100 +60	100+20+40

- * HC: historical cost, CC: current cost, DCF: discounted present value, CV: commitment value is similar to discounted present value

- A: Amount of assets = book value – depreciation; book value is based on historical cost.
- B: Facilities are revaluated at the market price and the revaluated gain of 20 is reported as a credit to revaluated gain account
- C: The amount of the discounted present value of future cash flows is 150, which is 40 over the current cost of the facilities. This discounted value (150) plus securities (10) are equal to the business value (160). The balance of debits and credits of internal reserves is 60. These internal reserves are divided to revaluated gain (20) and the other reserves (40).
- D: The amount of the discounted present value of future cash flows from the facilities is 150, but the current price is 110. The value of the company's intangible assets is 40 more than the current price.
- The intangible assets and 40 of the other internal reserves, which are not recognised in the normal balance sheet, are created by the internally generated goodwill. The excess earning power of the company was subsumed by intangible assets, especially internally generated goodwill. In this case, the contents of intangible assets are not precisely classified.
- In this balance sheet, each account is classified with three different columns according to a method of evaluation.

6. Subjective Profit of Edwards and Bell

- In modern enterprise economics, the definition of business value is simple. If we assume business is a process of generating cash flows, the business value is defined as **a valuation of future cash flows.**
- The primary method used to evaluate future cash flows is the discounting method. Here we must realise that the amount of the discounted present value of **future cash flows is not the same as the present cash flows**. Future cash is different from present cash.

define the concept of income, we apply the concept of E. O. Edwards and P. W. Bell, *The Theory and Measurement of Business Income*, University of California Press, 1961

Improved and defined

- subjective profit,
- realisable profit,

and

- business profit

Their work is described as a bridge between economics and accounting profit concepts.

Subjective value of the business

is a discounted present value of future cash flows(p.38). This subjective value means the business value

and contains subjectivity because it needs the prediction of the future.

Subjective profit is defined as the increment of the business value between terms and it also contains subjectivity.

To avoid its subjectivity Edwards and Bell abandon this concept telling as follows (E&B.43-44).

- Subjective profit according to our interpretation of principal managerial purpose of accounting must be **discarded** as the ideal concept for accounting measurement because (1) it **cannot be measured objectively** and (2) even its subjective measurement normally cannot be accomplished until the firm's plan of operation has already been revised.

Realizable Profit and Business Profit as alternative formulation

- Realizable profit deducted a change of the market value of the capital goods of the period from a net cash flow.
- Realizable profit uses the market value instead of discounted future cash flows. Current price evaluation is required for inventories, fixed assets in addition to financial assets and appraisal profits are recognised in the realisable profit.

Nature of Accounting Profit

- Accounting profit based on a acquisition cost **does not separate operating profit of normal business activities from holding gains** created by the price changes.
- In other words when the product or service is sold, accounting profit based on acquisition cost is recognised all together with normal business activities and holding gains created by the changes of prices.

Business Profit

IT shows that inventories including half-finished goods and products are revaluated by their original input raw materials current price in manufacturing process. Value increases for operating profit when raw materials become the product or half-finished goods,

but the **business profit does not recognise operating profit until sale**. At this point Business Profit is similar to "the realization concept" of the accounting profit.

Subjective Income needs discounting future cash flows and it **cannot be measured objectively**

and need more trouble and cost.

E&B abandon Subjective profit

- But contemporary accounting adopt DCF method for measurement of some accounts.
- And we also use DCF for the valuation of intangible assets especially for internally generated goodwill.

7. conclusion

- to entre these value in **Three different column** on the balance sheet to **report separately in B/S**
- **To keep clean surplus equation, Three kinds of profits are produced; Revenue and expense view profit, revaluated gains and** Profit as an increment of business value

Alternatively
An **property book** is prepared with a market price and future price evaluation **separately.**

B/S and P/L should be used to **present the performance** of the production carrying a **historical cost**.

Historical cost data are the **fundamental records** for enterprise

- and inevitable especially for **management** of production and for **taxation**.
- The **reliability** of the data and the **cost** is important for accounting.

- If this improved F/S is denied because of the luck of objectivity,

  contemporary accounting is denied as well because DCF is popular and luck of objectivity;

  i.g. pention funds, impairment accounting and valuation of securities.

Thank you

bibliography

- COSO(2004), Enterprise Risk Management Integrated Framework, 1)Executive Summary, Framework, 2)Application Techniques, The Committee of Sponsoring Organizations of the Treadway Commission（COSO）
- Danish Ministry of Science, Technology and Innovation [2003], Intellectual Capital Statement - The New Guideline
- Edvinsson,E. and Malone,M.S.(1997) *Intellectual Capita*l, Harper Collins Publishers
- The Commission of the European Communities Enterprise Directorate General (2003), Study on the Measurement of Intangible Assets and Associated Reporting Practices, Presented for the Commission of the European Communities Enterprise Directorate General
- Lev, B and Sougiannis(1996) The Capitalization, Amortization, and Value-relevance of R&D, *Journal of Accounting and Economics*, vol. 21
- Edwards E. O. and P. W. Bell, *The Theory and Measurement of Business Income*, University of California Press, 1961
- Fisher I.(1930), *The Theory of Interest*, Macmillan,1930 ,reprinted as Income and Capital, In R.H. Parker and G.C. Harcout(eds), *Readings in the Concept and Measurement of Income*, Cambridge University Press,1969）
- Hick J.R.（1946）、Value and Capital, Claredon Press, 2nd,edition
- International Accounting Standard 38(2006) Intangible Assets
- Ijiri Yuji(2004), Fukugoutuuka sonota no syomondai, *Aoyama Management Review*, Vol.5 Nikkei BP
- Lee, T. A.（1975）, *Income and Value Mearurement: Theory and Practice*, University Park Press

THE EFFECT OF COST MANAGEMENT IN BUSINESS DECISION-MAKING PROCESS: A RESEARCH IN THE TEXTILE SECTOR IN KAHRAMANMARAS

Zeynep HATUNOGLU*
Lecturer Sevda DEMIR**

ABSTRACT

Globalization, increasingly shortened product life cycles, intensive competition, changing customer expectations and increasing customer needs make today's business world rather more complicated. Today's customers claim more quality and functional products at lower prices. To survive and achieve competitive advantages in the market, the businesses have to design and produce products and services in response to the customer demands. Effective cost management has become a prerequisite for gaining sustainable competitive advantage in today's competitive business world. Cost management helps to increase profit by efficiency, diversity and cost minimization. Cost management is also one of the key factors in effective decision making.

The purpose of this study is to examine the cost management techniques used by the firms in textile sector, and to identify the effects of cost management approach on their decision making process. Data will be collected through survey and analyzed by using SPSS program. The results are discussed both theoretically and empirically.

Keywords: *Cost Management, Cost Management Approaches, Decision Making*

Jel Classification: *M10, M41*

* Assoc. Prof. Dr. Zeynep HATUNOGLU, KSU Faculty of Economics and Administrative Sciences, zhatunoglu@hotmail.com
** Lecturer Sevda DEMIR, OKÜ Bahçe Vocational High School, sevdademir@osmaniye.edu.tr

1. INTRODUCTION

Globalization, increasingly shortened product life cycles, intensive competition, changing customer expectations and increasing customer needs make today's business world rather more complicated. Today's customers claim more quality and functional products at lower prices. To survive and achieve competitive advantages in the market, the businesses have to design and produce products and services in response to the customer demands. Traditional cost methods became insufficient to drive out the risks, complexity and uncertainty in the increased competition environment. An efficient management became a necessity to eliminate or to turn those negative effects to an opportunity. Management needs relevant, timely and accurate cost information for decision making. Effective cost management has become a prerequisite for gaining sustainable competitive advantage in today's competitive business world.

Traditional cost accounting considers cost as an output that have to be beared while it provides the cost information necessary to prepare financial statements. Cost management has a much broader scope than traditional cost accounting. It doesn't only calculate the cost, but also tries to understand the factors that drive costs, such as cycle time, quality and process productivity. Cost management requires a detailed understanding of a firm's cost structure, and considers costs as an input that should be managed in manufacturing processes, and emphasis on cost planning and managing (Hansen and Mowen, 2006, p.4).

It helps to increase profit by efficiency, diversity and cost minimization. and, also is one of the key factors in effective decision making. Thus cost management includes comprehensively both the cost accounting and management accounting information systems.

Factors affecting cost management (global competition, the growth of the service industry, advances in information technology and advances in manufacturing environment) all stimulated to develop relevant cost management technics especially from the beginning of 1980s. Increased number of companies that produce similar products in different countries in the intense competition environment, transition from one dimension to another, decreased cost with high quality and conscious customers are drivers of new cost concepts and new management practices. In the present day, while new cost management technics are being developed, applicability of those technics changes depending on the sector and market company operates in.

In this study, cost management methods that can be applied to different sized companies in different sectors are mentioned. These methods are classified as Activity Based Costing Method, Target Costing, Kaizen Costing, Just-in-Time Production and Balanced Scorecard. First cost management concept, new developed cost methods, decision making concepts and the importance of decision making for companies are mentioned. Then survey done for companies in the textile sector (included SMSe) and the conclusion will take place.

2. COST MANAGEMENT

Although cost management concept first was emerged after 1980s, it started to take place extensively in literature and practice especially after 1990s. A cost of a product can be defined as the monetary value of production factors spent by a company to produce a product or service (Bursal and Ercan, 2000, p. 3).

Cost management is defined as the management and control of activities to compose a company strategy in the direction of determining the cost of the product accurately, developing the processes, preventing wastage, defining the cost factors and planning the activities (Koşan and Geçgin, 2011, p. 54-55). On the other hand Bhimani et al (2008) defines cost management as the process of short-term and long-term planning and controlling the cost incurred to decrease the cost of product and services, and to increase the customer value (Demir, 2008, p. 3).

Cost accounting and cost management focus on different areas. While cost accounting focuses on historical cost, cost management focuses on the planning, management and cost deduction. Based on the globalization phenomenon and the technological developments, an effort to add new features to old or new products also increased the competition. Manufacturing and service industries convert their production technology from the serial production which has limited features and variety to flexible manufacturing which emphasis on customer satisfaction. As a result, managers change their focus from mass production to mass customization which really cause a decrease in costs, increase the production quality, and provide on time delivery and service after the sale (McCarthy, 2004, p. 348). It is the business of cost management to determine the activities which create customer value to increase competitive edge (Sevim, 2013, p. 3).

The basic goal of cost management is to prepare guide information for effective and efficient resource usage in manufacturing product and services which can have a competitive advantage with its feature in cost, quality, time and function (Sevim, 2013, p. 6).

Developed cost management techniques in the new global competitive environment are mentioned respectively in the following subtitles.

2.1. Cost Management Approaches

Under the changing market conditions, earning profit or bearing minimum loss in competitive market environment can only be achieved through an emphasis on cost management. Price occurs naturally in market conditions and has a fundamental impact on the formation of income. Transforming productivity (which has great significance in terms of rationality) to economics is also related with the price. So companies should give up the classical approach of "having ability to sell whatever produced at the price desired". And they should have an approach of "determining the cost to make a profit at the price occurred in the market" (Alkan, 2001, p.79-180).

Cost management contributes to determine the cost on one hand, on the other hand, it makes it possible to control the changes in the cost elements continuously. In this way, efficiency and economics are provided by the studies of performance monitoring and waste prevention. In this study, cost management technics are classifed as following:

- Target Costing (TC)
- Activity Based Costing (ABC)
- Just-In- Time Production
- Kaizen Cost Management
- Balanced Scorecard

2.1.1. Target Costing

Target Costing originated in Japan is also known as Market-Based Target Cost Management (Alagöz and Ceran, 2003, p. 62). Target costing is an approach that accepts the idea of determining the costs that will be beared after production and sales in design process of the product. While the way of decreasing cost is reducing scrap and inefficiencies in traditional cost management, target costing focuses on the design phase (Basık, 2012, p. 260).

Target cost, briefly, is the cost of all resources consumed in producing the product to be sold for a profit that is intended. The target cost is calculated as the difference between target price and target profit (Target Cost = Target Price - Expected Profit**).** Target costing can be used in industries which are producing small batches by combining a wide variety of parts. It was applied for the first time in 1965 in Toyota. This method has been developed and especially applied by companies which have discrete manufacturing process, relatively short product life cycles and regular model changes.

Traditional cost systems consider cost information while determining prices. According to Coşkun (2013, p.27) traditional cost analysis is misleading because of not complying with the following facts and it leads to target costing as a cost decreasing tool:

- Most of the production costs are determined before production. Therefore, the cost reduction efforts during production may be misleading.
- Product prices are determined by the market, not by the majority of costs. Therefore, considering only cost in determining the price of the product has the risks of not having a competitive advantage in the market and of bringing unreasonable profit.
- By not taking into consideration the cost during the design stage leads to inefficient product manufacturing.
- Changes in the business environment made it possible to determine more and more cost factors in the planning and design stage.

Target costing also applied by some American and European companies beside Japan companies and it is observed that target costing made contributions to domestic and international market success of those companies. However, all the application of target costing is not successful. A study conducted on the American companies in Fortune-500 (1995-1996) list demonstrates that application of this system is often failed in the United

States. The first application of target costing in the automotive sector in Germany was unable to obtain the desired level of success (http://www.ekonomist.8m.net/m10.html).

Nevertheless, target costing integrates quality, cost and time factors. Accordingly, it has an important role in controlling costs. Overall, 85-90% of the cost of the product is determined at the design stage. Therefore, effective cost management programs, should begin at the design stage in product life cycle (Köse, 2002, p. 87).

2.1.2. Activity Based Costing (ABC)

Robert Cooper and Robert S. Kaplan developed Activity Based Costing (ABC) to eliminate the deficiencies of traditional cost management, in 1980s (Özal, 2010, p. 32). ABC is a costing method in which raw material cost and the cost of all activities performed to produce a product generate product cost. In other words, ABC is a methodology that produces a bill of activities that indicates the cost build up for individual products, services or customers (Moore, 2000, p.4). ABC focuses on activities rather than products. ABC originated in the manufacturing sector and provided greatest benefit, then it has been applied by service companies.

Kaplan explained the Activity Based Cost model as a system which is designed to inform management for the economic consequences of the activities that was done in the past, still are being done and will be done in the future by management (Arzova, 2002, p.12).

In the implementation of activity based costing, resources are traced to activities using resource drivers, then the cost of each acivity which consumes the resources is calculated. Each activity has its own cost pool. Activity costs are traced by using activity drivers to each product or service that consumes given activity (Özal, 2010, p.33).

2.1.3. Just-in Time Production

In 1970s, Just-in Time production method was developed at Toyota, a Japanese car brand. In this philosophy, inventory, which is one of the important element in traditional production system, is kept at very low level and even is decreased to zero level. Thus, as the amount of inventory is decreasing, defects in production activities will be reveald and will be interfered quickly (Gersil, 2007, p.110).

The main objective of JIT production is to reduce waste and inventory. So it embrace the principle of producing a product at desired amount and at the desired time by customers. Therefore, each production activities are carried out when it is requested by the next one (Basık, 2012, p.252).

2.1.4. Kaizen Cost Management

Kaizen can be described to ensure continuous improvement. According to Kaizen, it is necessary to improve and develop processes to improve results which are caused by processes. Thus, competition advantage may be gained (Köse, 2002, p.5).

Kaizen costing focuses on production process which is related to a specific product or all functional processes across the whole business. The purpose of the Kaizen costing program is to remove unnecessary costs and inefficiencies from the production process (Titiz and Çetin, 2000, p.127).

The performance of the machine is improved to reduce the waste, and the staff are motivated in order to meet required cost and quality standards. In short, Kaizen costing focuses on process, rather than the product itself (Sevim, 2013, p.240).

2.1.5. Balanced Scorecard

Balanced scorecard (BSC) is the expression of a company's mission, vision and strategies in physical dimensions (Kaplan and Norton, 1999, p.12). In other words, BSC is a strategic planning tool which is designed to meet customer's expectations and analyse the connection between goals, objectives and strategies (Karaman, 2009, p.418). On the other hand, BSC is a management method which use nonfinancial measures such as customer satisfaction (customer focus), in addition to financial (traditional) measures to measure the company's performance. Financial measures derives from historical data such as return on asset. Nonfinancial measures are future indicators. There are four perspectives; Financial, customer, internal business process and, learning and growth (Örnek, 2000, p. 257).

3. DECISION MAKING AND ITS IMPORTANCE

In Turkish dictionary, decision is defined as the certain judgement made after intensive thinking about an issue or a problem. Decision can also be defined as an election done between so many alternatives to achieve a goal or many goals (TDK, Turkish Dictionary). According to Mintzberg (1976), decision making is a dynamic factor and activity series which starts with the definition of necessary factors for action, and finishes with a specific judgement (Tekin and Ehtiyar, 2010, p.3396). Decision-making involves the selection of the best course of actions (Kociatkiewicz, 2006, s.6). Decision making can also be defined as an art of working on information and making a preference (Bağırkan, 1983, s.4). According to Emhan (2007, p. 213), there should be alternatives to make decision. If there is no alternatives, there may not be any decision making.

Making decision is part of our every day life. As an individual, we also make decisions almost everyday. Considering organisational life, it is often one of the main functions and tasks of management. In fact, management and decision-making can not be thought seperately. They are often regarded as belonging together. Managers usually take the major decisions of the organisation. Success rate of the organization in that decision depends on the accuracy (appropriateness) rate (Koçoğlu, 2010, p.79). In order to decide on the best option, management has to judge the effectiveness of various alternatives. In that case they need some guidance to help them to decide on the best alternative. This guide is usually provided in form of data and information as financial and economic information gathered by management accounting (Kociatkiewicz, 2006, p. 6). Accounting provides information for routine and nonroutine decision making. Routine decisions are related with pricing, inventory planning, customer services and others. Nonroutine decisions are related with capital investment, product differentiation, make or buy decisions and others. Nonroutine decisions usually have strategic characteristics (Kaygusuzoğlu and Uluyol, 2011, p. 304).

It is clear that accounting has an important role in business strategies by its function of providing information (cos, price and others) to management. Nowadays, new manufacturing systems have taken the place of traditional manufacturing systems in terms of calculating production cost. In traditional manufacturing systems, production cost is calculated after it occured. Whereas in modern manufacturing system, cost that will be occured determined before production. Modern systems have characteristics compatible with organizations' strategies. It is important especially in determining targets and politics for future. It has also important role on the structures and characteristics of decisions made by management (Otlu and Demir, 2005, p.169).

Accounting information does not only simplify decision making,but also cause an increase in the rational decision applications, efficiency, effectiveness and profitability of handled activities. Accounting is the most important tool of an effective management (Kaygusuzoğlu and Uluyol, 2011, p. 304). Contributions of a good accounting system can be put in order as increasing quality and productivity, decreasing the cost of good and services, and sharing information.

Researches show that accounting information has effect on the increased knowledge and abilities of managers on organizational decision making (Kalmış and Dalgın, 2010, p.114). Some studies show that especially SMS's do not pay attention to accounting informations and organizations do not recognize the positive advantage of accounting information such as making effective the management functions. Financial statements are prepared because it is legal (Reid and Smith, 2007, p. 31; Kaygusuzoğlu and Uluyol, 2011, p.305). Some other studies conducted in Turkey show that managers do not use accounting information in decision making because these information is not timely and clear (Kalmış and Dalgın, 2010, p.112-128).

Nowadays, in competitive business environment, companies should determine their strategies firstly, and all functions of the organization should work togather to reach the same goal by applying organization strategy. Cost management has an important role in strategic decision making (Sevim, 2013, p. 207).

4. METHODOLOGY OF THE RESEARCH

In this study, it is aimed to examine the cost management techniques used by the firms in textile sector, and to identify the effects of cost management approaches on their decision making process: in the city of Kahramanmaraş in Turkey.

For this purpose, the following research questions are investigated in the study:

- Which data do the textile organizations use in decision making process?
- What is the knowledge level of textile organizations in cost management approaches in Kahramanmaras?

- What is the implementation level of cost management approaches in textile organizations in Kahramanmaras?
- Do they benefit from cost management approaches in their decision making process?
- Is there any significant difference between respondents knowledge level of modern cost management approaches and demographic factors?

The data required for this study were collected by the questionnaire. Survey questions on this study are prepared by the researcher after a literature study. In a pilot study, the survey questions are asked for opinions of the profession members before the survey questionnaire is distributed. And after their feedback, the questionnaire is improved.

The sampling of the study is the companies in textile sector in the city of Kahramanmaraş in Turkey. There are 290 textile companies available as the scope of the research in Kahramanmaras. Industrialization is mostly increased in textile industry in Kahramanmaraş, which is the 13th biggest city of Turkey. In the economic environment, the following sectors are taking place; the textile, Steel Kitchenware, Garment, the Cotton Processing (gin), Construction, Banking, Food, Packaging, Paper and Machinery Manufacturing, Heating and Cooling Systems, Gold, ice cream and Red Pepper Powder. Ice cream sector is among the fastest growing sectors and being exported to many countries. There are around 8.830 companies and 25.369 craftsmen in Kahramanmaras.

List of textile companyies is taken from the Kahramanmaras Chamber of Commerce and the questionnaires randomly have been sent to 200 textile companies and received 152 usable responses. Consequently, a response rate of 76 % has been reached. The questionnaires are applied during the period between May-June 2014.

The data is analyzed using SPSS program. Frequency tables, statistical analysis of ANOVA and t-test of mean differences are used to analyze the data.

The questionnaire contains four general sections: The first section searches for the information about the demographic characteristics of respondents and companies in the variables of gender, age, education level, experience and status of respondents, and gross profit, total operating year and number of employees of the company. The second section investigates the financial tables used in decision making process, the knowledge level of cost management methods, the applicability level of cost management methods, and the reason of nonapplicability of cost management methods. The third section examines the evaluation and efficiency of decision making process. In the last two sections, Likert Scale is used. Participants are asked to indicate the level of assessments (perception) by choosing one of five possible responses, “strongly disagree”, “disagree”, “neutral”, “agree” or “strongly agree” and "poor", "fair", "average", "good" or "excellent".

5. FINDINGS OF THE SURVEY

The demographic characteristics of the participants are shown in Table 1.

Table 1: Characteristics of Demographic Trends

Characteristics of Demographic	N	%	Characteristics of Demographic	N	%
Gender			**Experiance**		
Male	94	61.8	1-5 years	15	9.9
Female	58	38.2	6-10 years	61	40.1
			11-15 years	63	41.4
			16 + years	13	8.6
Age	**N**	**%**	**Education Level**	**N**	**%**
21-30	15	9.9	High School	3	2.0
31-40	58	38.2	Lower than Bachelor Degree	20	13.2
41-50	47	30.9	Bachelor Degree	71	46.7
51-60	30	19.7	Master Degree	51	33.6
61 +	2	1.3	Phd Degree	7	4.6
Status	**N**	**%**	**Number of Employees**	**N**	**%**
General Manager	21	13.8	2-9 employees	3	2.0
Accounting manager	52	34.2	10-49	53	34.9
Accounting supervisor	26	11.7	50-249	84	55.3
Finance manager	24	15.8	250 employees +	12	7.9
Finance supervisor	14	9.2			
Other	15	9.9			
Gross profit	**N**	**%**	**Total Operating Year**	**N**	**%**
Less than 20 million	15	9.9	1-5 years	35	23.0
21-50 million	86	56.6	6-10	59	38.8
51-80 million	28	18.4	11-15	46	30.3
80-100 million	20	13.2	16-20	5	3.3
111 million +	3	2.0	21 years +	7	4.6

Most of the respondents (41.4%) noted that they have been working in this profession between 11-15 years. They had a Bachelor Degree (46.7) and master degree (33.6%). Most of the respondents are male (61.8%). Most of the companies (55.3%) have employees number between 50-249. 38.2% of respondents are between 31-40 years old, 30.9% of them are between 41-50 years old. Most of the companies (56.6%) have gross profit between 21-50 million TL.

Table 2: The Degree of Benefit from Financial Statements in Decision Making Process

Financial Tables	1	2	3	4	5
	N (%)	N (%)	N (%)	N (%)	N (%)
Balance Sheet	2 (1.3)	4 (2.6)	23 (15.1)	90 (59.2)	33 (21.7)
Income statement	4 (2.6)	10 (6.6)	64 (42.1)	54 (35.5)	20 (13.2)
Statement of Profit distrubition	20 (13.2)	46 (30.3)	47 (30.9)	31 (20.4)	8 (5.3)
Cash Flow statement	47 (30.9)	41 (27.0)	31 (20.4)	24 (15.8)	9 (5.9)

1) Poor 2) Fair 3) Average 4) Good 5) Excellent

According to Table 2, Balance sheet is the most popular financial statement used in decision making process. Income statement is the second popular financial statement.

Table 3: Knowledge Level of Cost Management Approaches in Textile Organizations

Cost Management Approaches	1	2	3	4	5
	N (%)	N (%)	N (%)	N (%)	N (%)
Just-in Time Production	.....	4 (2.6)	20 (13.2)	86 (56.6)	42 (27.6)
Activity Based Costing	2 (1.3)	23 (15.1)	49 (32.2)	54 (35.5)	24 (15.8)
Target Costing	1 (0.7)	11 (7.2)	37 (24.3)	58 (38.2)	45 (29.6)
Kaizen Costing	40 (26.3)	41 (27.0)	29 (19.1)	29 (19.1)	13 (8.6)
Balanced Scorecard	78 (51.3)	21 (13.8)	21 (13.8)	25 (16.4)	7 (4.6)

1) Poor 2) Fair 3) Average 4) Good 5) Excellent

In Table 3, cost management knowledge level of participants has been analysed. 84.2% of applicants stated that they have good enough information about JIT production. 67.8 % of participants declared that they have good enough information about Target Costing. 51.3 percent of participants have good enough information about ABC. 51.3% of participants expressed that they have poor information about BSC. In general, it can be said that participants have information about modern cost management approaches.

In the following table, descriptive statistics and statistical analysis of ANOVA indicate that there is statistically significant ($p<.05$) differences between the education level of respondents and the knowledge level of cost management approaches.

Table 4: The Evaluation Of Relation Between Respondent's Education Level And Knowledge Level Of Cost Management Approaches

Items	Education Level of Respondents						F	Sig.
	1	2	3	4	5	Total		
	N Mean SD	N Mean SD	N Mean SD	N Mean SD	N Mean SD	N Mean SD		
Balanced Scorecard	3 2.33 1,155	20 1.60 1,142	71 1.87 1,287	51 2.59 1,344	7 2.00 1.00	152 2.09 1,314	3.225	0.014

1) High School 2) Lower than Bachelor Degree 3) Bachelor Degree
4) Master Degree 5) Phd Degree

* 0.05 (significant correlation)

According to Table 4, there is statistically significant differences between the education level of respondents and the knowledge level of BSC. Only the respondents who have master degree has average level of knowledge about BSC.

In Table 5, descriptive statistics and statistical analysis of ANOVA indicate that there is statistically significant ($p<.05$) differences between company's operating year and the knowledge level of cost management approaches.

Table 5: The Evaluation Of The Relation Between Company's Total Operating Year And Knowledge Level Of Cost Management Approaches

Items	Total Operating Year						F	Sig.
	1	2	3	4	5	Total		
	N Mean SD	N Mean SD	N Mean SD	N Mean SD	N Mean SD	N Mean SD		
Activity Based Costing	35 3.43 0.850	59 3.59 1.085	46 3.46 0.862	5 4.40 0.548	7 2.57 0.976	152 3.49 0.977	2.758	0.030
Kaizen Cost Management	35 2.11 1.388	59 2.46 1.264	46 3.07 1.083	5 2.60 1.517	7 2.43 1.512	152 2.57 1.295	5.019	0.001
Balanced Scorecard	35 1.74 1.120	59 1.81 1.210	46 2.76 1.353	5 2.00 1.414	7 1.86 1.464	152 2.09 1.314	2.661	0.035

1) Poor 2) Fair 3) Average 4) Good 5) Excellent

According to Table 5, organizations that have operating year 6-11 years and 16-20 years have good knowledge level of ABC. Companies that have 11-15 years and 16-20 years experiance have average knowledge level of Kaizen Costing. 11-15 operating years organizations have average knowledge level of BSC. The others have only fair knowledge level about BSC. It can be stated that organizations that operate for a long time are more aware of new cost management approaches than young ones.

To find out the modern cost mangement methods implemented mostly by companies, the follwing table is prepared.

Table 6: Modern Costing Methods Implemented in Textile Sector

Items	N	%
Just-in Time Production	95	62.5
Target Costing	37	24.3
Activity Based Costing	19	12.5
Kaizen Costing	1	0.7
Total	152	100

According to the result in Table 6, Companies implement the cost management approaches of JIT (62.5%), Target Costing (24.3%) and ABC (12.5). BSC is not implemented by textile companies in Kahramanmaraş.

In the following table, decisions of respondents about: the implementation level of these modern costing methods or the possible implementation level of them in their organizations are examined.

Table 7: Implementation or Possible Implementation Level of Modern Costing Methods

Items	1	2	3	4	5
	N %	N %	N %	N %	N %
Just-in Time Production	1 (0.7)	3 (2.0)	20 (13.2)	89 (58.6)	39 (25.7)
Target Costing	....	2 (1.3)	25 (16.4)	82 (53.9)	43 (28.3)
Activity Based Costing	5 (3.3)	10 (6.6)	40 (26.3)	69 (45.4)	28 (18.4)
Kaizen Costing	51 (33.6)	37 (24.3)	25 (16.4)	30 (19.7)	9 (5.9)
Balanced Scorecard	81 (53.3)	21 (13.8)	22 (14.5)	25 (16.4)	3 (2.0)

1) Totally inapplicable 2) Inapplicable 3) Uncertain 4) Applicable 5) Definitly applicable

According to the results, JIT (84.3%), Target Costing (82.2%) and ABC (63.8%) have the highest potential to be implemented. Potential of inapplicability is too high for KC and BSC.

To understand the reason of inapplicability of cost management approaches, the following table is prepared.

Table 8: Potential Reason in Inapplicability or Inefficient Applicability of Modern Costing Methods

Items	**N**	**%**
The lack of skilled personnel	48	31.6
Unwilligness to change the routine	26	17.1
Definite stance on this issue of top management	43	28.3
Belief on the inadaptability of this issue to our industry	32	21.1
Failure in the past experiment	1	0.7
(Others) Implementation is expensive	2	1.3
Total	152	100

In Table 8, reasons of inapplicability of modern cost management methods are listed in order as "the lack of skilled personnel" (31.6%), "definite stance on this issue of top management" (28.3), "belief on the inadaptibility of this issue to our industry" (21.1%) "unwillingness to change the routine" (17.1%), "implementation is expensive" (1.3%) and "failure in the past experiment" (0.7%).

Top management idea is the second important issue in potential reasons of modern cost management methods inapplicability. For this reason, it is tried to understand the decision making process in those companies.

Table 9: Effectiveness of the Decision Making Process

Items	**1**	**2**	**3**	**4**	**5**
	N **%**	**N** **%**	**N** **%**	**N** **%**	**N** **%**
Individual decisions are always more efficient and more important	3 (2.0)	10 (6.6)	27 (17.8)	90 (59.2)	22 (14.5)
Decisions made as a group are always more effective and more important	29 (19.1)	20 (13.2)	53 (34.9)	34 (22.4)	16 (10.5)
Participation and decisions of subordinate plays an important role while managerial decisions are made	27 (17.8)	22 (14.5)	36 (23.7)	37 (24.3)	30 (19.7)
In solving the encountered problems, pre-	21	20	36	67	8

determined rules and procedures are generally applied	(13.8)	(13.2)	(23.7)	(44.1)	(5.3)

1) Strongly Disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly Agree

According to Table 9, individual decisions are more prefferred than group decisions. 73.7 percent of respondents expressed that individual decisions are more efficient and more important in their organizations. 32.9 percent of respondents stated that group decisions are always more efficient and more important in their organizations. On the other hand, 44% of respondents expressed that subordinates participate in decision making process in their organizations. Also in these organizations predetermined rules and procedures are generally applied instead of new ones in solving problems (49.4 %). It means in most of the textile companies, top management take decision individually and it is hard for them to try new procedures to solve problems.

It is aimed to determine the potential and actual benefits of cost management approaches. The following table shows the ideas of respondents about the benefits of cost management approaches.

Table 10: Actual and/or Potential Benefits of New Cost Management Methods

Items	**1**	**2**	**3**	**4**	**5**
	N **%**	**N** **%**	**N** **%**	**N** **%**	**N** **%**
The use of cost management approach increase the the speed of decision making and make it easy to make accurate decision in a short time.	18 (11.8)	6 (10.5)	65 (42.8)	46 (30.3)	7 (4.6)
Cost management approaches increase operational efficiency and play an important role in doing routine tasks faster and at lower cost.	32 (21.1)	24 (15.8)	40 (26.3)	46 (30.3)	10 (6.6)

1) Strongly Disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly Agree

According to Table 10, while 42.8% of respondents are hesitant about the ability of cost management approach in speed of decision making process and accuracy of decision in a short time, 34.9 % of participants are agree with benefits of new cost management methods in the speed of decision making process and accuracy of decisions in a short time. 36.9% of respondents are agree with the item "Cost management approaches increase operational efficiency and play an important role in doing routine tasks faster and at lower cost". On the other hand the same percent (36.9%) of respondents are agree on the same item.

6. LIMITATIONS OF THE STUDY

One of the limitations of this study is that it was undertaken in only one region (in one city) in Turkey. Therefore, the results are based on a small sample of respondents. There is also some possibility that some respondents might have a bias toward providing average or non-committal answers to the questions in the questionnaire. Respondents were manegers, supervisors and other personnel in finance and accounting departments. This may also be another limitation of the study. This questionnaire may be also sent to general manager of the companies.

7. CONCLUSION

Increased competition, changes in customers preferences, developments in information technologies all changes the way companies operate. To have sustainable competition, companies have to produce quality and low-priced products. They give up and changed the understanding of 'what I produce, I can sell'. They started to think 'what should I produce to sell'. Companies implement cost management methods to produce high quality and low cost products at zero error with qualified staff. By this way, they decreased production cost and increased market share. To succeed, availability of qualified staff, the behavior of top management and the decision process of the organizations also affect the implementation of modern cost management approaches. Participation of subordinates is also important for implementation.

This study is carried out to determine the assessments of accounting and finance department staff in modern cost management approaches in textile companies in Kahramanmaraş. It is also intended to determine the implementation of modern cost management methods and its role in decision making process in textile companies.

The survey data indicates that the respondents have good enough information level about modern cost management methods. Their information level is high about Just in Time Production, Target Costing and Activity Based Costing. They have poor knowledge level about Kaizen Costing and Balanced Scorecard.

Other findings of survey are in the following,

- Significant differences between the education level of respondents and the knowledge level of modern cost management methods is in BSC. Only the respondents who have master degree has average level of knowledge about BSC.
- Organizations that operate for a long time are more aware of new cost management approaches than young businesses.
- Companies mostly implement JIT approach (62.5 %). Target costing ranks second (24.3%). It means, companies mostly operate with low inventory level to decrease inventory cost. BSC is not implemented by textile companies in Kahramanmaraş.
- JIT (84.3 %), target costing (82.2 %) and ABC (63.8 %) have the highest possibility to be implemented respectively .
- Reasons of inapplicability of modern cost mangement methods are "the lack of skilled personnel" (31.6 %), "definite stance on this issue of top management" (28.3 %), "belief on the inadaptibility of this issue to respndent's industry" (21.1 %) "unwillingness to change the routine" (17.1 %), "implementation is expensive" (1.3 %) and "failure in the past experiment" (0.7 %).

- Otherwise, individual decisions are more prefferred than group decisions. 73.7 % of respondents expressed that individual decisions are more efficient and more important in their organizations. 32.9 % respondents stated that group decisions are always more efficient and more important in their organizations.
- Finally, 34.9 % of participants are agree with benefits of new cost management methods in the speed of decision making process and accuracy of decisions in a short time.

As the main finding of this study, it can be concluded that respondents are aware of the advantages of Modern Costing Methods approaches, they know how to implement it in their organizations but they do not apply because of the lack of skilled personnel and their unwillingness of changing the routine. Non -vaue added activities in the production stage are determined and eliminated. Depending on the customers' requirements, they also redesign the product and make some changes without reducing the quality.

Future studies may be able to be undertaken in a number of cities with the greater number of respondents.

REFERENCES

Alagöz, A and Ceran, Y. (2003). "Stratejik Maliyet Yönetimi ve Kar Planlama Aracı Olarak Hedef Maliyetleme". Akademik Araştırmalar Dergisi. Sayı:15. ss:61-83

Alkan, H. (2001). "İşletme Başarısında Maliyet Yönetiminin Rolü Ve Maliyet Yönetiminde Yeni Yaklaşımlar (Ormancılık Açısından Bir Değerlendirme)". Süleyman Demirel Üniversitesi Orman Fakültesi Dergisi. Seri: A. Sayı: 2. Sayfa:177-192.

Arzova, S.B. (2002). *Faaliyet Tabanlı Maliyet Yönetimi*. Türkmen Kitabevi. İstanbul.

Bağırkan, Ş. (1983). *Karar Verme*. Der Yayınları. İstanbul .

Basık, F.O. (2012). *Rekabet Stratejisinde Maliyet Yönetimi*,Türkmen Kitabevi, İstanbul

Bursal, N. and Ercan, Y. (2000) *Maliyet Muhasebesi*, 8.Baskı, Der Yayınları, İstanbul.

Coşkun, A. (2003). *Stratejik Maliyet Yönetimi Aracı Olarak Hedef Maliyetleme*. Akademik Araştırrmalar Dergisi. Sayı:15. ss: 25-34.

Demir, V. (2008). *Yönetim Muhasebesindeki Değişim ve Değişimi Etkileyen Faktörler*.

Muhasebe ve Denetime Bakış Dergisi. Yıl:8. Sayı:26. ss:51-70.

McCarty, I.P. (2004). *Special issue editorial: the what, why and how of mass customization*. *Production Planning & Control* 25/4. 347-351.

Emhan, Abdurrahim. (2007). *The Use of Information Systems and in the Process, The Decision-Making Process.* Journal Of Electronic Social Sciences. 6/ 21. 212-224. www.esosder.com.

Hansen, D. R. and Mowen, M. M. (2006). *Cost Management: Accounting and Control*, Thomson South-Western. Fifth edition.

Gersil, A. 2007. *Üretim Sistemleri Ve Teknolojilerindeki Gelişmelerin ve Küreselleşmenin Geleneksel Maliyet Muhasebesine Etkileri*. Ankara Üniversitesi SBF Dergisi. 62-4. ss: 107-123.

Kalmıs, H. and B. Dalgın (2010), *Muhasebe Bilgilerinin Karar Almada Kullanımının Önemi ve Çanakkale'de Faaliyet Gösteren Sanayi İşletmelerinde Bir Uygulama*, Muhasebe ve Finansman Dergisi. Nisan 2010. Sayı: 46. s:112-128.

Kaplan, R. S. and Norton, D.P. (1999). *Balanced Scorecard*. Translatör: Serra Egeli. Sistem Publishing. İstanbul

Karaman, R. (2009). *İşletmelerde Performans Ölçümünün Önemi ve Modern Bir Performans Ölçme Aracı Olarak Balanced Scorecard*. Selçuk Üniversitesi İİBF Sosyal ve Ekonomik Araştırmalar Dergisi. sayı:16.

Kaygusuzoglu, M. and Uluyol, O. (2011), *İşletme Yöneticilerinin Muhasebe Bilgilerini Kullanım Düzeyinin Araştırılması ve Adıyaman Uygulaması*. Yönetim Bilimleri Dergisi. (9: 2). ss:300-320.

Kociatkiewicz, J. (2006). *The Impact of Accounting Information on Management's Decision-Making Process A Case Study*. School of Management and Economics. Bachelor Thesis. 10 P.

Koçoğlu, E. (2010). *İşletmelerde Yöneticilerin Karar Verme Süreci ve Bu Süreçte Bilişim Sistemlerinin Kullanımı: Ankara İli Örneği*. Yüksek Lisans Tezi. Atılım Üniversitesi. Ankara.

Koşan, L. and Geçgin, E. (2011). *Müşteri Beklentisi ve Maliyet Yönetimi Hedef Maliyet Sistemi ve Örnek Bir Uygulama*. Mali Çözüm Dergisi. Temmuz-Ağustos.

Köse, T. (2002). *Ürün Maliyetlerine Göre Karar Alma Araçları: Ürün Yaşam Seyri Maliyetlemesi, Hedef Maliyetleme ve Kaizen Maliyetleme*. Osmangazi Üniversitesi Sosyal Bilimler Dergisi. Cilt: 3. Sayı: 2. ss:77-104.

Moore, K., (2000). *Usıng Actıvıty-Based Costıng to Improve Performance: A Case Study Report*. www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA393980. Erişim Tarihi: 21.07.2014

Otlu, F. and Demir, O. (2005). *Stratejik Karar Verme Açısından Maliyet Sistemleri*. Fırat Üniversitesi Sosyal Bilimler Dergisi. Cilt: 15. Sayı: 1. ss: 155-170.

Örnek, A.S. (2000). "*Balanced Scorecard: Bilgiden Stratejiye Ulaşmada Kullanılabilecek Yeni Bir Araç*". Dokuz Eylül Ünv. Sosyal Bilimler Enstitüsü Dergisi. Cilt:2. Sayı:3. s.259.

Özal, H. (2010). *Stratejik Maliyet Yönetimi ve Hastane İşletmelerinde Uygulanabilirliği*. Yüksek Lisans Tezi. Süleyman Demirel Üniversitesi. Isparta.

Sevim, A. (2013). *Maliyet Yönetimi*. (Edit: Kartal, A. ve Sevim, A.). Anadolu Üniversitesi. Eskişehir.

Target Management. http://www.ekonomist.8m.net/m10.html. Access Date: 27.07.2014

Tekin, O. A. and Ehtiyar, V. R., (2010). *Yönetimde Karar Verme: Batı Antalya Bölgesindeki Beş Yıldızlı Otellerde Çalışan Farklı Departman Yöneticilerinin Karar Verme Stilleri Üzerine Bir Araştırma*. Journal of Yaşar University. 20(5). ss:3394-3414.

Titiz I. and Çetin, C. (2000). *Karar Almada Geleneksel Maliyet Yönetimi Yaklaşımında Yaşanan Gelişmeler ve Stratejik Maliyet Yönetimi*. Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi. cilt:5. Sayı:2. ss:121-138.

Türk Dil Kurumu Genel Türkçe Sözlük. http://tdk.org.tr: 27.07.2014