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FINANCIAL STATEMENT EFFECTS OF ADOPTING INTERNATIONAL ACCOUNTING STANDARDS: THE CASE OF TURKEY

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Yüksek Lisans Tezi olarak sunduğum " Financial Statement Effects of Adopting International Accounting Standards: The Case of Turkey " adlı çalışmanın, tarafımdan, bilimsel ahlak ve geleneklere aykırı düşecek bir yardıma başvurmaksızın yazıldığını ve yararlandığım eserlerin kaynakçada gösterilenlerden oluştuğunu, bunlara atıf yapılarak yararlanılmış olduğunu belirtir ve bunu onurumla doğrularım.

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ÖZET

Yüksek Lisans Tezi

Financial Statement Effects of Adopting International Accounting Standards: the Case of Turkey

Can SEÇER

Dokuz Eylül Üniversitesi
Sosyal Bilimler Enstitüsü
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Gelişen iletişim teknolojisi finansal piyasaların ve işletmelerin küreselleşmesine hız kazandırmıştır. Küreselleşme sürecinde muhasebe sistemlerinin de harmonizasyonu kaçınılmaz olmaktadır. Uluslararası Muhasebe Standartları (UMS) ile başlayan, Uluslararası Finansal Raporlama Standartları (UFRS) ile devam eden bu süreçte kural koyucular ve düzenleyici kurumlar dünyada kullanılmakta olan muhasebe sistemlerinin birbirlerine yakınsanması konusunda çok ciddi çalışmalar yapmaktadırlar. Bu nedenle, Avrupa Birliği (AB) adaylık sürecinde olan Türkiye diğer AB ülkeleri gibi, borsaya kote olmuş şirketlerin finansal raporlamasında UFRS'nı temel standartlar olarak kabul etmiştir. Bu geçişin etkileri ile ilgili literatürde az sayıda çalışma bulunmaktadır. Bu çalışma, UFRS ile SPK tarafından yayımlanan Genel Kabul Görmüş Muhasebe İlkeleri arasındaki farkları ortaya koymakta ve bu geçişin İstanbul Menkul Kıymetler Borsasına kote olmuş şirketlerin finansal pozisyonu ve performansına olan etkilerini incelemektedir. Bu geçişme sürecinin analizinde Gray (1980) ve Weetman et al (1998) tarafından ortaya konan "Karşılaştırma Endeksi" kullanılmıştır. Sonuçlara göre, finansal raporlarını zorunlu geçiş tarihi öncesi UFRS'na göre hazırlamaya başlayan şirketlerde, SPK tarafından yayımlanan Genel Kabul Görmüş Muhasebe ilkelerinin UFRS ye oranla sermaye ve karlılık yönünden daha muhafazakâr muhasebe uygulamalarına sebep olduğu saptanmıştır. Ancak UFRS öncesi yürürlüğe giren Enflasyon Muhasebesi uygulaması ile aradaki farklar büyük oranda azalmış ve zorunlu geçiş tarihinde UFRS ye göre finansal raporlamaya geçiş yapan şirketlerde bu bulguya rastlanmamıştır.

Anahtar Kelimeler: UFRS, UMS, Harmonizasyon, IMKB

ABSTRACT
Master Thesis

Financial Statement Effects of Adopting International Accounting Standards: the Case of Turkey

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Developments in communication technologies increased globalization of financial markets and companies. With the globalization process, the harmonization of the accounting systems becomes inevitable. Beginning with IAS, continuing with IFRS, standard setters/regulators are trying hard to develop a set of standards for the purpose of converging accounting systems used all over the world. For that matter, Turkey, in accordance with its European Union accession process, accepted IFRS as its main standard for the listed firms in Turkey. Within this transition period, the literature concerning the effects of this period is still somewhat unclear. This study addresses the differences between the Turkish GAAP and IFRS and tries to analyze IFRS transition's effects to financial position and performance of the listed firms in Istanbul Stock Exchange. By using Conservatism Index (Gray, 1980), which after renamed to Comparability Index (Weetman et al, 1998) Turkish transition period is analyzed quantitatively. According to the findings of the study, empirical evidence on early voluntary adopters show that Turkish GAAP is more conservative compared to IFRS relating to equity and net income. However, results on first time mandatory adopters show that differences were mostly eliminated by Inflation accounting application in 2004.

Key Words: IFRS, IAS, Turkish GAAP, Harmonization, Comparability Index, ISE

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FINANCIAL STATEMENT EFFECTS OF ADOPTING INTERNATIONAL ACCOUNTING STANDARDS: THE CASE OF TURKEY

CHAPTER THREE

TURKISH ACCOUNTING SYSTEM

CHAPTER FOUR

LITERATURE REVIEW

CHAPTER FIVE

RESEARCH ANALYSIS

ABBREVIATIONS

AISG	Accountants International Study Group
CESR	The Committee of European Securities Regulators
CMB	Capital Markets Board of Turkey
EC	European Commission
EFRAG	European Financial Reporting Advisory Group
EU	European Union
FASB	Financial Accounting Standards Board
FEE	European Accounting Federation
GAAP	Generally Accepted Accounting Principles
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
ICCAP	International Coordinating Committee for the Accounting Profession
IFAC	International Federation of Accountants
IFAD	International Forum for Accountancy Development
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commission
ISE	Istanbul Stock Exchange
R&D	Research & Development
SIC	Standards Interpretation Committee
SEC	Security Exchange Commission
TR	Turkey
US	United States

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDIXES

INTRODUCTION

As the globalization of the world continues with an unpredictable rate, enterprises all across the world are preparing financial statements according to different practices.

The presence of accounting differences creates weaknesses in both process of preparation and comparison of the financial statements. When the need for fair, comparable and reliable financial statements increases, the harmonization of accounting systems becomes inevitable. For that matter, standard setters, regulators and researchers are working on this concept called harmonization. Efforts of standard setters gave birth to International Financial Reporting Standards and efforts to make these standards globally accepted accounting standards is still ongoing.

Since European Union’s intention to accept IFRS as the framework of European Accounting System, importance of IFRS has been escalated. With European Union’s regulation (EC) No 1606/2002, starting from 2005, IFRS is chosen as the generally accepted accounting practice to be applied for the EU member states while early adoption is encouraged. As an applicant country for the European Union, Turkey adopted IFRS as its main accounting orientation and took steps towards achieving this goal. Starting from 2003, early voluntary IFRS adopters began preparing financial statements in accordance with IFRS, continuing with mandatory adoption in 2005. Because IFRS 1 states that, the company who prepares financial statement complying IFRS for the first time should restate the previous year’s financial statement, it gives the researcher the opportunity to compare the year before transition year’s financial statement prepared according to Turkish GAAP and IFRS. Differences in each country may be different due to differences in national standards, law orientation, culture, taxation systems and stage of economic development. For this reason the impact of IFRS adoption should be investigated separately for each country. With this purpose, as a member of Continental European law family, tax oriented and a developing country, IFRS transition experience of Turkey is investigated, especially with financial statement aspect.

The study contributes to the literature by measuring the impact of transition from Turkish GAAP to IFRS on equity, performance and on key ratios such as Current, Acid-Test, Gearing, ROE and ROA. Also for analyzing the effect of IFRS transition experience of Turkey, study does not limit itself only to first mandatory adopters on the contrary by also having included early voluntary adopters the scope of the study is extended. To enhance the understandability of the impact of the transition between Turkish GAAP and IFRS, the study examines the *de jure* differences. The research also contributes to the academic literature on international GAAP comparisons and it provides a benchmark with other studies utilizing Gray (1980)'s conservatism / Weetman et al (1998)'s comparative index particularly those within the members of Civil / Continental European law family.

In this study, it has been found that bigger companies decided to adopt IFRS early because these firms thought that financial reporting according to IFRS will be advantageous (like easier access to financing, enhance reporting quality, strengthen company image). For the early voluntary adopters, empirical evidence has been found regarding conservative practices of Turkish GAAP relating to equity and net income. Controlling for the *de jure* differences, minor differences were confirmed on issues such as inventories, property plant and equipment, deferred tax, leases, revenue recognition, retirement benefits, provisions, intangible assets. Concerning first time mandatory adopters, results support that firms were not significantly affected from IFRS transition because in 2004, the biggest differences between Turkish GAAP and IFRS which are inflation and long term investments were eliminated (Mugan & Akman, 2005:14).

The remainder of the paper is organized as follows: Section 1 starts with the description of harmonization and discusses the relating literature. Following the subject, the influential role of legal origin and culture is mentioned. In Section 2 a brief history concerning IFRS is exposed and the pros and cons towards this step are discussed. Section 3 summarizes Turkish Accounting Environment and discusses the *de jure* differences between Turkish GAAP and IFRS. Section 4 reviews relevant literature on IFRS transitions both locally and internationally. Section 5 describes the data, methodology, results, discussion and ends with limitations. The final section reviews and concludes the study.

CHAPTER ONE

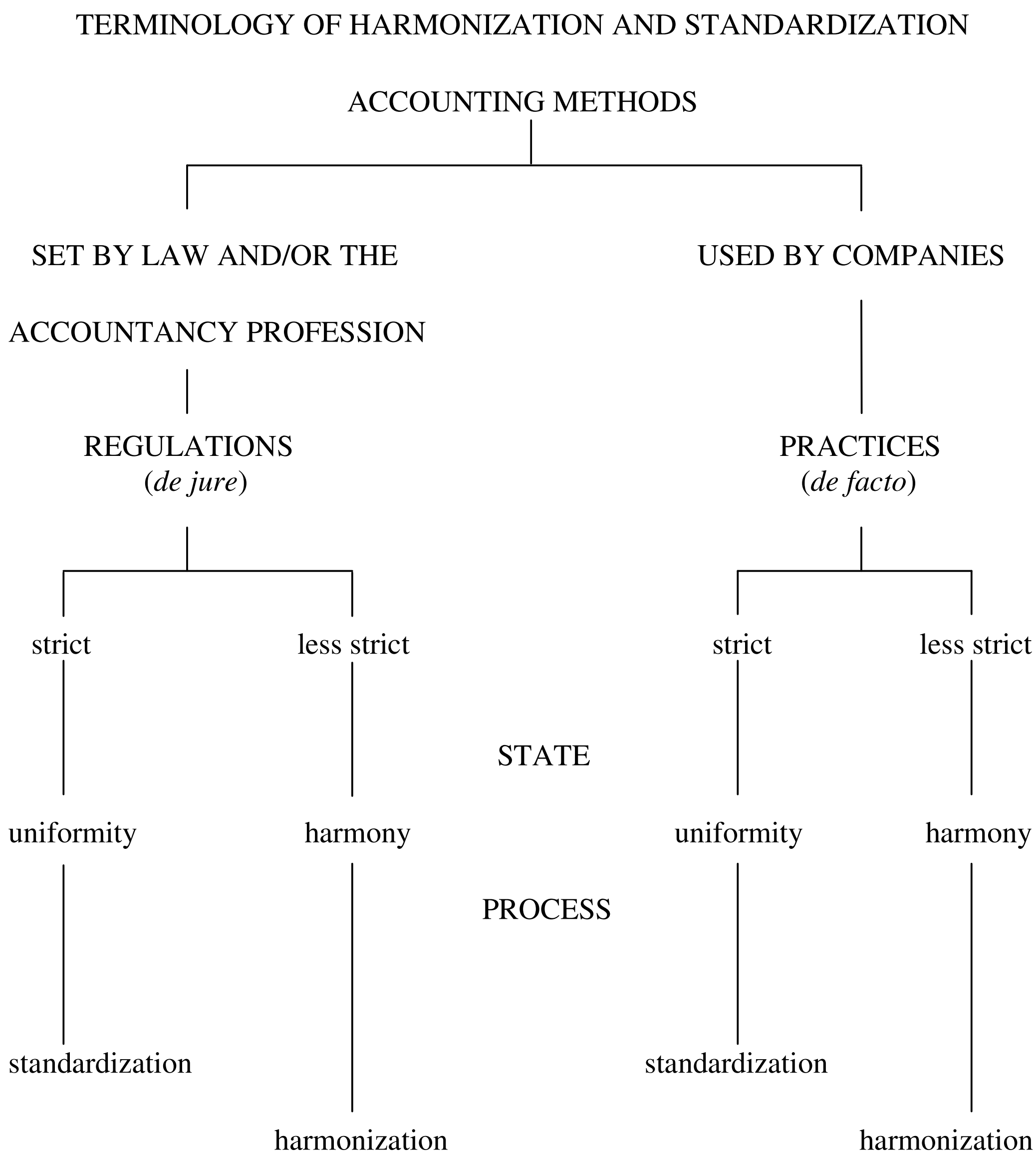
HARMONIZATION & THE ROLES

1.1 HARMONIZATION

"Harmonization (a process) is a movement away from total diversity of practice while Standardization (a process) is a movement towards uniformity (a state)" (Tay & Parker, 1990:73).

Tay & Parker (1990) contribution to the literature is to show that actual practice and the regulation of the accounting harmonization are different concepts and should not be confused. In this context, both states and processes may be either *de jure* or *de facto*. De jure harmonization refers to harmony and uniformity of accounting regulations (which may be contained in the law and/or professional accounting standards) (Tay & Parker, 1990:73). De facto (material) harmonization refers to the actual practices of companies (Tay & Parker, 1990:73). In other words it's vital to emphasize that the harmonization of standards differs from harmonization of financial reports, which have been introduced in Van Der Tas (1988) as formal versus material harmonization.

Figure 1: Distinctive description of harmonization and standardization



Source: (Tay and Parker, 1990:74)

While acknowledging Tay & Parker's research concerning the difference between *de facto* and *de jure* harmonization, Van Der Tas (1992) in his study made another distinction. According to his distinction, *de facto* and *de jure* harmonization's effect should be separated into two. First on issues related with measurement of either de facto and de jure harmonization which focuses on recognition, valuation and estimation of accounting data. Second on issues related with disclosure which is more associated with disclosure of financial information.

Literature on harmonization studies show that there are mainly three statistical methods used in measuring harmonization. These can be identified as descriptive statistics, nonparametric statistics and indices. Example of early studies using descriptive statistics are Evans and Taylor (1982), Mckinnon and Janell (1984), Nobes (1987). On the other hand Nair and Frank (1981), Doupnik and Taylor (1985) used non-parametric statistics in their articles based on Price-Waterhouse surveys. A third method which was firstly introduced by Van Der Tas (1988), employed two indexes namely; C-Index and I-Index, to measure the level of harmony and harmonization. Those indexes were originated from the Hirschman-Herfindahl index (H-Index) which were used to measure industrial concentration. C-Index is used to measure harmony in a national context and I-index was developed for measuring harmony in an international context.

Tay and Parker (1990) criticized Van Der Tas's (1988) indexes because they were not tested against statistical significance. Van Der Tas (1992) agreeing that this is a problem he commented that only H index suffers from this issue while the C index does not because it's not a concentration index as a matter of fact it's a ratio.

Emenyonu and Gray (1992) analyzed whether accounting measurement practices are harmonized in France, Germany and UK in line with EU initiatives using Van der Tas's index approach and at the same time considering Tay and Parker (1990)'s recommendations. Their findings show that the level harmony was low in France, Germany and UK.

There are various studies researching accounting harmonization in the literature but the articles mentioned in this section are perceived as the foundation of accounting harmonization literature.

The reason underlying this harmonization literature stems from different accounting systems that have been developed in countries. The need for harmonization is evident because every country has their own specific characteristics that shape their accounting systems and their development. These characteristics are mainly originated from countries' legal origin, culture and the development of economic structure. Latter sections in this chapter will focus on these characteristics and will try to explain their relationship with the evolution of accounting systems.

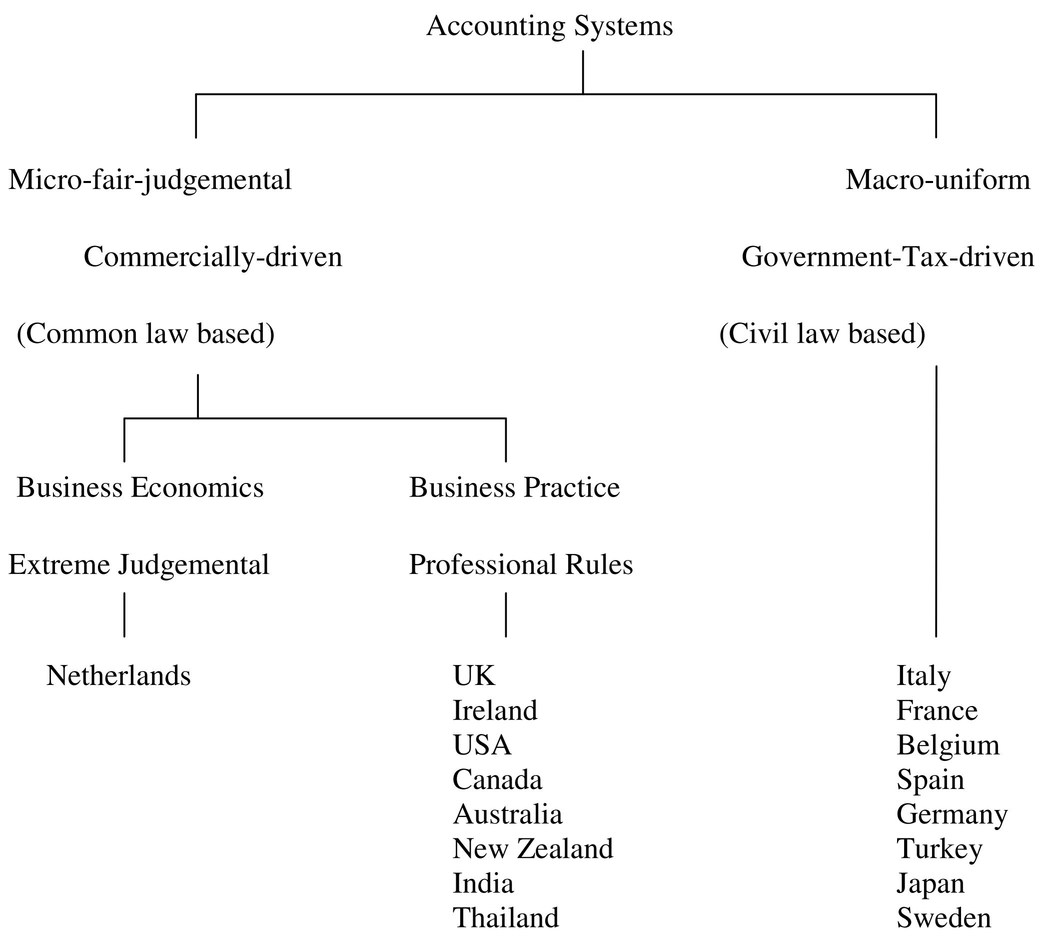
1.2 LEGAL ORIGIN

It is important to make the distinction of common versus civil law because countries legal origins differ from each other. The transition to IFRS process could be various for both of these families because of their legal culture; they could experience different difficulties. In order to understand these differences, it is vital to describe the countries and to which family they belong. It should also be mentioned that because IFRS is common law based set of standards, the importance of this distinction is escalated.

In general, there are two main law families which are common and civil law. The legal rules of civil law have its roots of "Roman Law" and these rules are developed by legal scholars then they are compounded into commercial law. On the contrary, common law comes from British and it was founded by judges who have tried to solve specific cases attained to particular problems.

Although countries have slight dispersions or sometimes conjunctions from these two main families, the countries and their legal origins can be identified as below:

Figure 2: Classification of legal origins



Source: (Nobes & Parker, 2002, La Porta et al, 1997)

Differences in legal culture, (common law and civil law) results in changes to business life and the way the business life runs. Broadly these differences can be summarized as below (Nobes & Parker, 2002, Nobes, 1980)

In common law countries, the main providers of capital are private shareholders while in civil law countries the main providers of capital are banks, state or family holdings. Because of the providers of finance differs, the equity market (which the capital is raised from the private capital holders) in common law countries is stronger than equity markets of countries who are members of civil law. In relation to that because the ownership concentration is high in civil law countries, the need for fair, comparable & reliable financial information from the outsiders is very little. While core, insider shareholders can retrieve any financial information from the inside, the outside shareholders can reach only a limited amount of financial information. Because there is little demand for published, audited financial information, the auditing profession in civil law countries is less developed or they serve for the needs of government which is the appropriate calculation of taxable income. Also because the banks and governments play critical roles and exert strong influence on corporations, the accounting applications in civil law countries is said to be more conservative. This is indeed the exact case of Turkey which is a considered to be a member of civil law family.

In this study, it is expected that Turkish GAAP is more conservative than IFRS because Turkey's accounting practices are mostly influenced from Continental Europe (will be discussed in later sections). According to Lara and Mora (2004), continental countries show larger balance sheet conservatism than those other European countries in fact it supports the theory of conservative accounting practice of Continental European family.

1.3 CULTURE

The differences which exist between National GAAPs and IASs are not only influenced by legal origin but also influenced by culture. Culture is seen as an important dimension for understanding how social systems differ because culture affects the norms and values of such systems and the behavior of groups in the interaction within and across systems (Gray & Radebaugh, 2001:42).

The culture model which is generally used and mentioned in literature is the "Cultural dimension model" of Hofstede (1980). This model is based on an attitude survey of IBM employees in 66 countries during the 1970s. Although being criticized, Hofstede identified four dimensions as representational values of national culture for each country analyzed:

- Individualism versus Collectivism: Individualism is described as the preference for having loose ties with groups other than family where as collectivism is described as people identify themselves as a member and belong to the group they are affiliated with.

- Large versus Small Power Distance: Power distance is the extent to which the members of a society accept that power in institutions and organizations is distributed equally.

- Strong versus Weak Uncertainty Avoidance: It's the degree to which members of a society feel uncomfortable with uncertainty and ambiguity and try to avoid such situations.

- Masculinity versus Femininity: Masculinity is identified as the preference in society for achievement, heroism, assertiveness, and material success. On the other hand, femininity stands for the preference for relationships, modesty, caring for the weak, and the quality of life.

Subsequently, a fifth dimension was incorporated entitled "Long Term Orientation" which is a result of the joint research of Hofstede and Bond (1988). This term refers to that people favor pragmatic, future oriented-perspective (like larger savings and so larger funds for investment) over short-term thinking.

Linking these cultural dimensions to accounting practices, Gray (1988) proposed four accounting values from a review of accounting literature and practice:

- Professionalism versus statutory control: This value reflects a preference for the usage of individual professional judgment as opposed to having compliance with legal or statutory requirements.

- Uniformity versus flexibility: This value represents the preference for the enforcement of uniform accounting practices between companies and for the consistent use of accounting practices. On the contrary flexibility stands for flexible practices could be considered depending on the circumstances.

- Conservatism versus optimism: Conservatism reflects a preference for a cautious approach to measurement that enables one to cope with uncertainty of future events while optimism advocates optimistic, risk taking approach.
- Secrecy versus transparency: This value reflects a preference for confidentiality and the disclosure of information about the business only to those who are closely related with the management of the business while transparency stands for open and publicly accountable approach.

When Turkey's situation is considered, Turkish accounting practices mostly depend on statutory control because professional accountants' role have been concerned primarily with the implementation of prescriptive and detailed legal requirements. On the other dimension, Uniformity is one of the concepts relating our accounting values because in Turkey there is a uniform accounting plan as well as the imposition of tax rules for measurement purposes have been used in the system. Also as noted in the previous section, Turkish accounting system is identified as conservative because of historical cost applications used in accounting practices. Closely related with conservatism, Turkish accounting system prefers secrecy over transparency because as the capital market is limited, businesses share information only with insiders or the government because of the enforcement of taxation.

A study employed by Ding et al (2005) shows that culture matters more than legal origin (common law/civil law) in explaining divergences from IAS. The authors found that diversity in cultural factors plays a role in opposition to IFRS. Although authors have sampled National 2001 GAAP Survey, the results are robust for two proxy culture models namely, for Hofstede's and Schwartz's culture models.

1.4 DEVELOPMENT OF ECONOMIC STRUCTURE

The nature and extent of economic structure and development also influences the accounting system as a change from an agricultural to a manufacturing economy will pose new accounting problems, such as the depreciation of machinery, leasing. In most of the countries, services are now becoming more essential so problems and solution related to how to account for intangible assets such as brand names, goodwill and human resources is different from one to another. Another issue which is related to the economic structure is the inflation. Inflation is often associated with economic growth and is a major influence on accounting systems where hyperinflation is a part of the economy so that alternative approaches to historical cost approaches are often used.

When it's thought that IFRS/IAS is a product of developed-industrialized countries, the attention it receives in developed countries is as expected. The developing countries are also adopting IAS for increasing their level of accounting standards but the attention it received is below compared to the developed countries. A study by Zeghal & Mhedhbi (2006) provides information concerning the factors affecting the adoption of international accounting standards by developing countries. Their findings say that education level, existence of a financial market and cultural membership are highly correlated with tendency to adopt IAS. As a conclusion, they have found that countries who have the highest literacy rate, that have a capital market settled and are from the Anglo-American culture can adopt IAS at ease.

CHAPTER TWO

INTERNATIONAL FINANCIAL REPORTING STANDARDS

2.1 HISTORY OF INTERNATIONAL FINANCIAL REPORTING STANDARDS

International financial reporting standards are a set of standards which are designed to increase the transparency, comparability and consistency of financial information prepared by the firms all around the world. Fundamentally these standards take fair value as a basis over the historical value in application of financial accounting practices.

When we look at the development of IFRS, at the beginning it was formerly issued as IAS: “International Accounting Standards”. International Accounting Standards Committee (IASC) was the body which has prepared IAS. The formation of IASC goes way back to 1966. In 1966, a proposal to create an Accountants International Study Group is agreed by professional accountancy bodies in Canada, United Kingdom and United States in order to prepare comparative studies of accounting and auditing practices in the three nations. The predecessor of IASC was created with the name of Accountants International Study Group in 1967. Afterwards AISG published its first study on comparative accounting practices for inventories in Canada, UK, and US and 20 more studies which some of them used by IASC in early standards prior to disbandment in 1968. Yet in 1973, IASC was formed by representatives of the professional accountancy bodies in Australia, Canada, France, Germany, Japan, Mexico, Netherlands, United Kingdom/Ireland, and United States. The body set its objectives as to formulate and publish accounting standards that can be used in the presentation of financial statements; and work for the development and harmonization of accounting standards and practice in accordance with the presentation. The London based organization incorporated 6 more members (Belgium, India, Israel, New Zealand, Pakistan, and Zimbabwe) into its structure. In

1975, a proposal was given concerning the establishment of International Federation of Accountants (IFAC), another vital organization worked on the harmonization of the standards, to replace the International Coordinating Committee for the Accounting Profession (ICCAP). Also the first standard IAS 1 was published that year. IFAC was formed and AISG ceased its activities in 1977. Throughout the following years, IASC continued to publish standards on various subjects like depreciation accounting, accounting for research and development costs and information on disclosure and the member count was increasing year by year. During 1989, European Accounting Federation (FEE) supported international harmonization and greater European involvement in IASC and IFAC adopted a public sector guidance to require government business enterprises to follow IAS so the preliminary studies on harmonization were on its way. Financial Accounting Standards Board (FASB – U.S. accounting regulator created by Securities Exchange Commission to be responsible for setting accounting standards for public firms in U.S.) and European Commission (EC) have taken their seats as observer in IASC board. At the early nineties, IASC has changed its constitution.

Because it would be impossible to prepare & complete a set of international accounting standards without the support of one of the most powerful organizations involved in the development and implementation of worldwide standards, that is to say International Organization of Securities Commission (IOSCO), IOSCO and IASC crossed roads for the preparation of international standards. IOSCO is an organization which consists of securities regulators from more than 80 countries. The main goals of IOSCO are to develop international consensus on and promote universal accounting standards, setting up the protection of investors with the necessary standards, and work in hand to hand for implementation and continuation of these standards. In 1995, IASC agreed with IOSCO to complete the core standards by 1999 and IOSCO stated that if the core standards are successfully completed, IOSCO will review them with the objective of endorsing IAS for cross-border offerings. But it was believed that IOSCO would not be eager to endorse the standards till SEC’s agreement on these core standards because SEC had already declared that these standards which will be published by IAS should meet the following criteria (SEC, 1996):

- IASC standards should include a core set of accounting pronouncements that constitute a comprehensive, generally accepted basis of accounting;
- IASC standards should be of high quality; they must result in comparability, transparency and they must provide for disclosure
- And IASC standards should be rigorously interpreted and applied.

EC supported the agreement between IASC and IOSCO and concluded that IAS should be followed by European Union (EU) multinationals. Till the mid nineties, IASC didn't have any successful relationships with national regulators from major developed countries like USA and UK which have many foreign listings on their exchanges and known for producing sound, comparable financial information. The conflict between major countries prevented IASC from being more successful in the preparation of harmonized international accounting standards. Also the IASC's structure plays a critical role in slowdown because the organization lacked the necessary requirements of a global standard setting which are described as: technical expertise, independence of its members and representativeness of the decision making body. IASC also acknowledged that its success is not certain so that its role should change. As the rapid growth in international capital markets, with the increase in cross-border listings and foreign investments continues, and the demand by regulators around the world for transparent and comparable disclosures grows, the IASC must abandon its role as a harmonizer and take on the role of a catalyst and initiator (IASC, 1998). People's Republic of China which is one of the major countries became a member of IFAC and joined the IASC Board as observer in 1997. During 1998, IFAC/IASC membership expanded to Latin America (new member bodies in Bolivia, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) as well as Haiti, Iran, and Vietnam, bringing membership to 140 bodies in 101 countries. New laws in Belgium, France, Germany, and Italy allowed large companies to use IAS domestically in their consolidated financial statements. In response to Asian financial crisis, the G8 Summit, the G7 finance ministers and central bank governors, the World Bank, and the International Monetary Fund (IMF) all called for rapid completion and global adoption of high quality international accounting standards. Finally, IASC completed the core standards after the approval of IAS 39. IOSCO and EC started to review completed 40 IASC core standards and EC study finds no significant conflicts between IAS and the European Directives in 1999. EC adopted a financial services action plan that includes use of IAS as European GAAP. After 1999, harmonization efforts increased significantly with the groundbreaking support of major organizations of the world and changes started to occur because of the obvious need of a harmonized universal accounting language. At the year of 2000, Basel Committee expressed support for IAS and for efforts to harmonize accounting internationally. SEC issued a concept release inviting comments on the use of international accounting standards in the United States. On the other hand IOSCO recommended that its members permit multinational issuers to use IASC standards in cross-border offerings and listings which was an important step through the harmonization. European Commission announced a plan to require all EU listed companies to use IAS starting no later than 2005.

As part of its restructuring program, IASC Board approved a new constitution and within the year 2001, the new International Accounting Standards Board (IASB) takes over from the IASC the responsibility for setting International Accounting Standards. New Board held its first meeting, adopted existing IAS and Standards Interpretation Committee's (SIC) interpretations, and deliberated its agenda and other issues. In 2002, EC presented legislation to require use of IASC Standards for all listed companies no later than 2005. European Financial Reporting Advisory Group (EFRAG) is created by the accounting profession, preparers, users, and national standard-setters in EU countries to advise the EC on acceptability of individual IAS for Europe, as well as to respond to IASB comment documents. The Big 7 Audit Firms (Arthur Andersen, BDO, Deloitte Touché Tohmatsu, Ernst & Young International, Grant Thornton, KPMG, and PricewaterhouseCoopers) prepared a report entitled "GAAP 2000" comparing the national accounting rules and IAS to use it to benchmark national GAAPs for International Forum for Accountancy Development (IFAD). In 2002, Europe adopts regulation requiring all listed companies, including banks and insurance companies, to prepare their consolidated accounts in accordance with IAS starting from 2005.

2.2 ADVANTAGES OF HARMONIZATION (Proponents of IFRS)

While the world is moving towards the route of harmonization, the pros and cons of this move is still an ongoing debate. In this section, the advantages of harmonization will be summarized according to the existing literature.

The first argument related with the advantage of harmonization is the elimination of setup cost of preparing adequate codified standards of accounting and auditing. Hence the harmonization (IFRS) would not only eliminate these costs but also it would help those countries with insufficient accounting standards to increase reporting quality with application of international accounting standards (Belkaoui, 1994:63)

The second argument related with the advantage of harmonization is that the need to raise external capital. Firms in developing countries cannot raise capital internally because the capital accumulation in those countries is limited. So these firms choose to raise capital in the international equity markets. As international lenders demand fair and audited financial information, their requests cannot be fully satisfied because of diverse accounting policies. In favor of harmonization is that if all the countries used the same accounting language then it would be easier for firms who are seeking external finance to access international capital. Hence the recent literature acknowledges the same advantage. A study employed by Shi & Kim (2007) tries to find if the cost of capital is lower for the full IFRS adopters in 34 countries for the period of 1998-2004. Their results imply that cost of equity capital is significantly lower for the full IFRS adopters than for the non-adopters because IFRS adopters enjoy from greater and better disclosures via IFRS by having a lower cost of raising capital from international equity markets.

However some other part of literature has contradicting findings with this argument. Although transition to IFRS sounds fancy for most of the firms, some researchers have found the opposite for voluntary adoption which is a sign of the attention the harmonization receives. Delvaille et al. (2005) mentioned that only a few of Italian listed companies planned moving towards IFRS as their projects resulting in only 2 firms to adopt IFRS early voluntarily. This could confirm the findings of the reviewed studies showing that most of EU listed companies did not plan to converge from national GAAP to IAS/IFRS before the required adoption, and they were not clearly motivated to move to this international accounting regime (Cordazzo, 2008:25-26). Hence this is reasonable for EU Countries because EU firms have already gained access to international area while the firms of developing countries must comply with international financial reporting standards to attract external financing. For example, Turkey which is a developing country, nearly 1/3 of the listed firms is the early adopters of IFRS. High number of voluntary adopter firms in Turkey might be an indication of perceived advantage of harmonization by Turkish firms.

2.3 DISADVANTAGES OF HARMONIZATION (IFRS criticism)

It's almost certain that harmonization process has some advantages for the accounting environment but it's clear that implementation of this process has its unique costs. Since the foundation of the harmonization idea, it met criticism from various sources. Depending on the literature (Choi et al, 1990 in Li, 2001:17) these arguments are:

- International standards are a too simple solution for a complex problem. The fact that accounting is flexible in nature and can be adapted to different number of situations but if accounting standards are harmonized it is believed that they won't be flexible enough and the standards set internationally cannot possibly fit for the wide range of national circumstances, legal systems, stages of economic development, and cultural differences (Diaconu, 2007:6). Hence the fact that IFRS is a set of common law based standards; it raises a doubt that IFRS will be able to cover the needs of countries who are members of civil law family.

- These standards may be unnecessarily complex and costly for some firms and countries. When we think on the country level, these problematic issues will be various for the countries. Because throughout the world we have developed, developing and undeveloped countries. As developed countries are already using local GAAPs similar to IFRS, the cost of the harmonization would not be high when it's compared to developing and undeveloped countries. Other than this distinction according to development level, previously it was mentioned that legal culture of the countries is also different. Those who are the members of civil law family will realize more difficulties i.e. this process would be more costly for them because IFRS is a common law based set of standards or it would not be surprising if international standards will be applied differently by civil law countries and common law countries. That is a certain fact that ready-made set of standards will eliminate the setup costs but problems like infrastructure might occur for developing and underdeveloped countries. IFRS requires intensive usage of computer systems in preparation of financial information. Those firms who operate what are they going to do? Will they choose to invest on their technological infrastructure? Will they choose to do it voluntarily or will they be forced to do it? At the end would they be able to compensate for their investment? These are the questions that are essential for the standard setters and regulators especially when they are brainstorming on developing or undeveloped countries.

- They are politically unacceptable challenge to national sovereignty. Those countries who choose to become part of this process will give up their power to influence the accounting environment which regulates their local profession.

- These international standards are a tactic for the big audit firms to expand their markets. Because the major audit firms play a critical role in preparation of this standards, these standards are seen as an advantage for those firms but not for the countries. When it's thought that audit firms will be the ones who will check if that financial information was prepared according to the international standards, they are the primary source of information which undoubtedly will compensate for having this kind of advantage.

CHAPTER THREE

TURKISH ACCOUNTING SYSTEM

3.1 TURKISH ACCOUNTING ENVIRONMENT

Turkish accounting environment was mostly affected by the western countries because of the economical and political relationships between Turkey and the West. Our first commercial code which was in effect on 1850 was a translation of the French Commercial Code and though it was a proof of dominant French influence on those years. This Law formed the first accounting regulation in Turkey (Bilginoğlu, 1988: 15). Starting from the beginning of 20th century, trading bonds were increasing between Turkey and Europe with Germany on the lead because of the expiration of trade concessions. The historical and political developments through the First World War years and the fact that foreign manufacturing entities were operated by Germans, led to strong German influence on the economical environment in Turkey. After the Turkish Republic was born in 1923, a second Commercial Code had been put in effect which was based on the German Commerce and company laws that also regulated the accounting practices (Mugan & Akman, 2005:9). Because private capital was limited, national entrepreneurs' performance in industry was insufficient. So state assumed a leading role on economy by creation of large enterprises which aims to have a boosting effect on industrialization. These state founded and operated companies were called "State Economic Enterprises" (SEE), and the German influence was on SEEs was so clear because they were acquired from German companies with means of nationalization (Alp & Ustundag, 2007:6).

Furthermore, in the late 1930's, Turkey welcomed German academicians of various fields in the Turkish universities. Consequently, financial and cost accounting practices of the State Economic Enterprises, and the training by the visiting German professors established the rules for accounting practices in the private companies (Bilginoğlu, 1988: 15).

Starting with the 1950's, Turkey started to follow more liberal policies and in 1957 Commercial Code had been put in effect which is the same Commercial Code that Turkey have been using it since. In 1959, Turkey applied for the European Union membership and negotiations are still ongoing. Although there are EU directives concerning accounting and auditing which have been translated into Turkish but no action was taken by the government to integrate them into Turkish accounting rules & regulations.

Starting from the 1960's, Turkey was under heavy influence of American system. Successful individuals who have been trained and pursued graduate degrees in foreign countries especially USA in various fields returned back to Turkey and accounting system has been heavily influenced by the American system or Anglo-Saxon system (Mugan & Akman, 2005:10). Also the uniform accounting system which has been developed for "State Economic Enterprises" by "Committee for the Re-regulation of State Economic Enterprises" had an articulating effect on this influence (Alp & Ustundag, 2007:7).

At the beginning of 1980s, because of the need for establishing capital markets, in 1981 Capital Market Law No. 2499 was published in the Official Gazette therefore Capital Markets Board (CMB) the main regulator body was born. Following the Capital Market Law, in 1984 The Law of Istanbul Stock Exchange (ISE) was formed but it wasn't put in effect until 1986. With this Law, the one and only stock exchange of Turkey was born and it's still the only stock exchange. These developments concerning the capital markets and the foundation of the stock exchange led to increase in foreign investments. Foreign investments with in forms of joint ventures or acquisitions raised a demand for more advanced accounting and auditing practices resulting in the formation of "Big Eight" accounting firms in Turkey (Mugan & Akman, 2005:11).

Turkey's first generally accepted accounting standards were prepared by CMB in 1989 with CMB communiqué serial: XI no: 1. These rules are still applied for publicly traded companies, listed companies, insurance companies, banks and brokerage firms and they are somewhat based on international accounting standards. In 1992, Ministry of Finance prepared accounting principles and a uniform chart of accounting that would be used by all companies. These rules were published on communiqué serial: I on December 26, 1992 of Official Gazette being effective by January, 1994. As a result of those developments, financial reporting for different types of companies is regulated presently by the Ministry of Finance's regulation 1992, the CMB rules, the Commercial Code and the Procedural Tax Law, Banking Regulation and Supervision Agency and the Central Bank regulations (Mugan & Akman, 2005:13). Failure to ensure a standardization covering all companies in accounting practices has lead to the preparation of more than one financial statement for a single enterprise such as the "commercial statement" prepared in accordance with Commercial Code, the "financial statement" prepared in accordance with the tax laws, and the statement prepared in line with CMB's requirements (Alp & Ustundag, 2007:8). On the other hand, foreign enterprises that operate in Turkey also had to prepare financial statements in accordance with IAS and/or US GAAP depending on the country which their headquarters report to.

On 2001, November 28th, CMB published communiqué serial: XI no: 20 and no: 21 regulating the financial accounting standards prepared on highly inflationary periods. Subsequently, those communiqués were amended with communiqué serial: XI no: 22 and no: 23 on 2002, January 17th, and communiqué serial: XI no: 24 on 2003, February 18th. With those amendments being effective of January 1st, 2003, the biggest differences between Turkish GAAP (CMB accounting standards) and IFRS which were accounting for inflation and long-term investments were eliminated (Mugan & Akman, 2005:14). With European Union's, regulation (EC) No

1606/2002 on the application of international accounting standards aiming all member states comply with IFRS starting from 2005, CMB on November 17th, 2003 declared communiqué serial: XI no: 25 "Accounting Standards in the Capital Market" accompanying communiqué serial: XI no: 27 which will be in effect starting from January 1st, 2005 with an option of early adoption. Precisely, with this communiqué, early adoption of IFRS was encouraged in 2003 but starting from the first period of 2005, IFRS application became mandatory for listed companies.

3.2 DIFFERENCE BETWEEN TURKISH GAAP & IFRS

The table below presents the significant differences between IFRS and Turkish GAAP as of 2003 IAS by IAS. These differences are presented in three dimensions which are measurement, classification and disclosure.

Table 1: Comparison of significant differences between IFRS and Turkish GAAP as of 2003.

IFRSs	Turkish GAAP
IAS 2 - Inventories	**Measurement:** Inventories shall be measured item by item at lower of cost and net realisable value (Item by item lower value rule). In decision of the cost of inventories all possible methods can be used including LIFO. The use of different cost formulas for inventories of different nature or use is not permitted and in no case is the grouping of similar or associated goods permitted (this applies also to the case of material and other supplies). In no case may borrowing costs are included in the cost of inventories, even if they need time to mature. Previous write-downs of inventories to fair value may not be reversed.

	Classification: No difference (Like common classifications such as supplies, raw materials, work-in-progress and finished goods) **Disclosure:** The method used in the current period, the method used in the previous period and if any difference resulted because of the method change should be disclosed.
IAS 10 - Events after the balance sheet date	**Measurement:** Dividends declared after the balance sheet date shall be recognised as a liability. Only if these dividends are declared for the purpose of an increase in capital shall they be recognised in equity (Akbulut & Yanık, 2007:73) **Classification:** No Difference (Adjusting & Non-Adjusting Events) **Disclosure:** No disclosure required for adjusting events, disclosure is required only for non-adjusting events.
IAS 11 - Construction contracts	**Measurement:** Turkish GAAP requires that costs and revenues related with the construction constracts accounted on the basis of completion of contract method while IFRS requires the use of percentage of completion or cost recovery methods. (Mugan & Akman,2005:16) **Classification:** Not Applicable **Disclosure:** Similar. Slight Difference
IAS 12 - Deferred Tax	There is no concept of deferred tax in Turkish GAAP though there is no distinction between current and deferred tax.

IAS 14 – Segment Reporting	Segment reporting is not covered. Only changes in production and sales amounts related to sales or production groups must be disclosed in income statement footnotes.
IAS 16 - Property, Plant and Equipment	**Measurement:** For subsequent measurement, revaluation method is applicable but it's allowed according to a ratio. Also impairment is not allowed for Property, Plant and Equipment. **Classification:** Assets held as investment properties are recorded under tangible fixed assets instead of being recorded under noncurrent items. (Akdogan, 2006:12, Akbulut & Yanık, 2007:73) **Disclosure:** Almost the same
IAS 17 - Leases	**Measurement:** Initial measurement is calculated by the present value of the minimum lease payments, fair value of the leased property is not considered. As lease payments are generally recognized in line with the legal arrangements, they may not be recorded on a straight-line basis. (Durukan, Özkan, Dalkılıç, 2004:22) **Classification:** There is no difference between capital leases and operating leases. All leases are treated as operating leases according to Turkish GAAP. (Mugan & Akman, 2005:16) **Disclosure:** There are no disclosures required relating lease contracts.
IAS 18 - Revenue	**Measurement:** Revenue recognition is heavily influenced by tax authority. Revenue is recognised when services or products have been invoiced which usually takes place after the delivery of goods or rendering the services. For credit sales, revenue is recorded including the interest though the effective interest method is used. **Classification:** Not Applicable

	Disclosure: Information regarding to revenue, neither recognition policy nor the amount of the sale of goods is not disclosed. Only notes related with the following is given. 1.) If percentage of sales and purchasing amounts to affiliates, subsidiaries are more than 20%, 2.) If percentage of products, by products, scraps or services to their gross amounts are more than 20%, 3.) If any government grant is received related with those sales, 4.) For every main sales group considered individually, changes in the sales and service amounts should be disclosed on the accompanying income statement footnotes.
IAS 19 - Retirement benefits	**Measurement:** There is no concept of defined benefit plan. A company has the obligation to pay a lump-sum to the employees who made redundant or retired. The amount of that sum depends on the employee length of service, the way of leaving the company (redundancy or retirement) and salary upon that date. In calculation of pension obligations, discounting is not used. Also there are provisions for employee benefits other than lump-sum termination indemnities. (Durukan, Özkan, Dalkılıç, 2004:21) **Classification:** No Difference. **Disclosure:** Method of calculation of the provisions regarding pension obligations and the provision amount of current and previous years' is disclosed.
IAS 20 - Accounting for Government Grants and Disclosure of Government Assistance	**Measurement:** Government grants are recognized if there is reasonable assurance that the grants will be received but contrary to IFRS, enterprises complying with any conditions attached to grant are not considered. Grants that are not related with Property, Plant & Equipment are recognized directly as income. If grants are related with Property, Plant

	& Equipment, the enterprise can choose to whether to deduct it from the cost or recognize it as an income. If recognized as income it should be recorded at a special account under shareholders equity within the life of Property, Plant & Equipment however the enterprise must follow a consistent policy on recognition for every asset basis. **Classification:** Not Applicable **Disclosure:** The amount related to the government grant is disclosed.
IAS 23 - Borrowing Costs	**Measurement:** Borrowing costs (financing expenses including exchange rate differences) that can be traced directly to the acquisition costs can be capitalized. If any financing is made after the capitalization of the asset, this cost cannot be capitalized for the same asset. **Classification:** Not Applicable **Disclosure:** Not Applicable
IAS 28 - Investments in Associates	**Measurement:** For being accepted as an associate, Turkish GAAP says that investor must hold at least 10% of the investment. Investments in associates are recorded at cost and profits are recognized in equity under an account called "Revaluation Fund – Increase in Market Value". If the balance of this item is positive, any losses are first deducted from the item and afterwards remaining loss is recognized on income statement. **Classification:** Not Applicable **Disclosure:** 1. Receivables from/Liabilities to Associates 2. Stock issuances of any Associates 3. Doubtful Receivables from Associates 4. Summarised financial and non-financial information of

	associates such as aggregated amounts of profit or loss, names of shareholders, if the associates financial statements are audited or not and if they are audited, the opinion of the report 5. The amount of capital increase through bonus issues in Associates. 6. Amounts of liabilities to Associates arising from Warranty, Contract, Endorsement, and Prepaids. 7. Should be disclosed if the percentage is over 20% among total amount • Related financing expenses of Associates • Sales and purchasing amounts to/from Associates
IAS 37 - Provisions, Contingent Liabilities and Contingent Assets	**Measurement:** Similar for Contingent Liabilities and Assets. **Classification:** No Difference. **Disclosure:** Similar for contingent assets and liabilities. • Regarding Provisions, There are several notes given under IAS headings because according to Turkish GAAP definition of provision covers both provisions and allowances.
IAS 38 - Intangible assets	**Measurement:** There is no definition related to intangible assets. Intangible assets are considered as “Rights & Goodwill”. They are recognized at cost. If rights useful life cannot be reliably estimated, they are amortized over 5 years so as goodwill. Research and Development costs can be capitalized under circumstances mentioned below: • There is a project or a product that can be identified explicitly and costs related to the project or product can be reliably estimated.

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Managers of the business have decided to manufacture, market or use the product.
Product or project should be technically realizable.
There should be opportunity for a firm to benefit from the developed product or project.
There should be enough financing to complete the project.

If R&D is capitalized, the asset is amortized over 5 years in equal amounts.

Classification: Not Applicable

Disclosure: No Disclosure

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IAS 32 - Financial instruments: disclosure and presentation

IAS 39 - Financial instruments: recognition and measurement

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Measurement: According to Turkish GAAP, Financial instruments are perceived as marketable securities. These are identified as stocks, investment funds, bill, bond and income sharing certificates. Accordingly they are divided into two group in financial statements:

1. Available For Sale Marketable Securities – short term purposes
2. Held to Maturity Marketable Securities – long term purposes

<u>Available For Sale Marketable Securities</u>

Stocks that have been purchased with the intention of "available for sale" are recorded according to their last 5 days' average value before the balance sheet date on the stock market. Investment funds are recorded according to their weighted average. Bond, bills and income sharing certificates are recorded at cost. If any loss/profit occurs, they are recognized in income statement under "profit/loss from other operations".

<u>Held to Maturity Marketable Securities</u>

All the securities listed here are also recognized like "Available For Sale Marketable Securities" but profits are recognized in equity under an account called "Revaluation

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	Fund / Increase in Market Value". If the balance of this item is positive, any losses are first deducted from this item and afterwards remaining loss is recognized on income statement. Turkish GAAP doesn't allow hedge accounting. There is no guiding on de-recognition of financial instruments (Durukan, Özkan, Dalkılıç, 2004:21). **Classification:** Current Marketable Securities – Fixed Marketable Securities **Disclosure:** Financial instruments other then mentioned above are off balance sheet. Info is given only at notes to B/S.
IAS 41 - Agriculture	There is no concept relating to biological assets or agricultural produce in Turkish GAAP.

CHAPTER FOUR

LITERATURE REVIEW

4.1 STUDIES ON THE IFRS TRANSITIONS

The literature based on IFRS transitions is primarily focused on two research types. One of those types is that the studies trying to explore the effect of IFRS adoption on financial reports of the companies whiles the others trying to answer the question of to what extent and how those differences on financial statement items are caused by IFRS transitions. As the majority of the studies are based on capturing the impact of those differences caused by IFRS adoption in transiting countries, consistent with the scope of this study, articles using Gray (1980)'s conservatism / Weetman et al (1998) 's comparative index will be the ones that are mostly reviewed.

Jermakowicz (2004) lists the benefits and challenges of adopting IFRS in Belgium, a country as an example of continental model of accounting, below according to the survey on BEL-20 Companies:

Benefits:

-Harmonization of internal and external reporting

-Better comparability with other businesses

-Greater reporting transparency

Challenges/Costs:

-Increased Volatility of Earnings

-High cost of implementing IFRS

-Complex nature of IFRS

-Lack of IFRS implementation guidance

-Tax-driven nature of standards

Besides those findings mentioned, the author concluded that significant changes occurred in internal and external reporting activities and the impact on reported equity and net income is noteworthy.

Aisbitt (2006) analyzes the effects of IFRS transition in UK by analyzing the reconciliations accompanying the annual, interim reports and separate IFRS transition document/press release/presentation. In this study, the individual line items are investigated and it has been found that while the change to the final net assets figure is not significant, the effect of individual line items in the balance sheet should be analyzed with intensive care. The reason behind insignificant final net asset effects could be that because like IFRS, UK accounting practice belongs to Anglo Saxon model. So countries belonging to Continental Europe family would expect greater changes in respect of financial reports when complying with IFRS.

Recent study employed by Stenka & Ormrod (2007), focused on group accounting differences of IFRS transition in UK. The authors emphasized that this area is highly critical because this is the area where UK GAAP and IFRS differs most. According to their findings, goodwill treatment had the biggest impact on the reported profits of companies that have been analyzed. Additionally, the researchers stated that because under IFRS where there is a disposal of a subsidiary, goodwill is not recycled back into the profit or loss on disposal calculation, it’s also found to have a major impact to some sample companies’ profit.

Hung & Subramanyam (2007) analyzed the transition experience of Germany by using reconciliation statements of firms which have voluntarily adopted IFRS for the first time. The authors sampled the firms who have adopted IFRS between 1998 and 2001. They’ve chosen 1998 as the base-starting year because in that year the core IAS standards were completed and those firms which are voluntary IAS adopters were mandated to fully comply with the IAS standards (Prior to 1998, firms were able to choose to comply with only a sub set of IAS standards). Their findings show that the transition of early adopters resulted in major differences in deferred taxes, pensions, PP&E and loss provisions. While being less significant, it has been found that adjustments related to intangibles/R&D are economically significant for certain firms. Additionally, total asset and book value of equity are significantly larger under IAS than under German GAAP (HGB) and cross-sectional variation in book value and net income are significantly higher under IAS than under HGB. Additionally, authors also investigated whether those IAS and German GAAP adjustments are value-relevant or not. Their results suggest that there is little evidence concerning that IAS improves the combined value relevance of book value and income. Secondly, IAS income is entirely transitory while German GAAP income is highly persistent so income is more value relevant under HGB than IAS and book value of equity is more value relevant under IAS. With their findings, they also confirm that IAS is more balance sheet-focused and fair value oriented in comparison with German GAAP.

Another study on German transition handled by Schiebel (2007), tries to answer the question whether those IFRS adjusted financial data (equity book value) are value relevant or not. The author applied regression analyses to the companies' financial data belonging to the period of 2000-2004. Choosing the sample among transiting firms by using a set of criteria (like using consolidated financial reports, requiring listing of companies after 2000, having a free float rate exceeding 50%, etc), the author's findings suggest that equity book values are significantly both value relevant under German GAAP and IFRS but German GAAP is found to be more value relevant.

A study dealing with Spain's transition is employed by Perramon & Amat (2006). According to their results analyzing the effects of transition on non-financial listed companies by using interim financial reports, it is confirmed that the introduction of international accounting standards can influence the profit results most likely primarily due to the application of fair-value for derivative instruments and new rules for accounting for goodwill. Their empirical results state that the adoption of IFRS in Spain has a diverse effect on the net profit but also the difference caused by IFRS for the consolidated profits does not depend on the profit rate and total assets of the analyzed companies. Considering Spain, it's mentioned that the effect of adoption of international accounting standards may be different for companies of different size and profitability.

Another recent article analyzing the transition of Spain is composed by Callao, Jarne & Lainez (2007). The authors have researched balance sheet figures and income statement items and financial ratios for the given 25 manufacturing firms listed in IBEX-35 representing the highest capitalization on Spanish Stock Market. Considering balance sheet figures, debtors, cash and cash equivalents, equity, long-term and total liabilities were significantly affected items. Among the financial ratios, cash, solvency and indebtedness ratios, as well as the return on assets and return on equity, varied significantly as a result of the changes in the balance sheet and income statement. The authors conclude that the economic and financial positions of Spanish firms, reflected in accordance with IFRS, are significantly different from the statements prepared according to Spanish accounting standards.

There is also literature concerning the transitions of non-European countries. Chen et al. (1999) explored the transition experience of China for the period of 1994-1997. Although being a limited study because of the preliminary data, the authors shed light on earnings differences between two accounting regimes namely Chinese GAAP and IAS. Their findings suggests that on average Chinese GAAP reported earnings 20-30 percent higher than earnings reported under IAS.

Another examination on Germany's transition is employed by Beckman, Brandes, Eierle, (2007). Using comparability index (Gray, 1980 and Weetman et al., 1998), the authors analyzed net income and shareholders' equity of the firms complying with IAS and US GAAP through the period 1995-2002. Their results suggest that net income and shareholders equity are significantly different than 1 and consistent with the hypothesis that German GAAP is more conservative than IFRS. Interestingly enough, the study denotes that although the German accounting has conservative approach in reporting and market valuation, the case for leasing transactions is different because the supporting evidence shows that German GAAP shows greater aggressiveness rather than conservatism in this area when compared to IFRS and US GAAP.

Among the studies using conservatism/comparability index Lopes & Viana (2007) analyses the content of qualitative (narrative explanations of transition) and quantitative (reconciliations) disclosures by Portuguese listed companies. Including both early adopters and financials firms in their study by employing Gray's (1980) conservatism index, they have found that 70% of the Portuguese listed companies are in the category of neutral (-%5 and +%5 change) or pessimistic (more than -%5 change) when reporting profit under Portuguese GAAP rather under IFRS. Also regarding the quality of qualitative and quantitative disclosures, they stressed that CESR's recommendation was not achieved because objective of comparability, relevance and understandability of the disclosures demonstrated high degree of variability.

Bertoni and DeRosa (2006) measures balance sheet conservatism on firms listed on Italian Stock Exchange which has an accounting system classified as "Continental-European" and creditor oriented. Applying conservatism index of Gray (1980), they analyzed equity, net profit and ROE of listed firms. Additionally the authors studied financial statement reconciliations in order to measure partial standards effects. The authors found supporting evidence of conservatism hypothesis, although evidence is not as strong as expected. They also noted that further research is needed in order to understand the exact causes of accounting differences between Italian GAAP and IFRS.

A further study employed by Cordazzo (2008) analyzes the IFRS transition experience of Italy using proportionality index similar to conservatism/comparability index. By making use of both financial statements and reconciliation statements the author was able to investigate the partial effects of individual IASs. As a result, author has found that transition to IAS/IFRS has produced a quite relevant impact on Italian accounting practices that depend de facto on the tax driven nature of the Italian accounting system. Their findings show that Italian Net Income, Equity & ROE is lower than IFRS (12.47%, 4.78%, 9.47%) respectively which is consistent with the conservative & tax based approach of Italian accounting system.

Another study exploring the possible effects of IFRS transition in Greece by using reconciliation statements provided by Greek listed firms was employed by Tsalavoutas and Evans (2007). By making use of comparability index, the authors examined the impact of transition on companies' financial position, performance and key ratios. As the results denote IFRS implementation did have a significant effect on financial position (shareholders equity) of Greek listed companies and on gearing and liquidity ratios. Because authors studied reconciliation statements, they suggest that seven standards, appearing in more than 59% of the companies analyzed, contributed to these effects significantly.

4.2 STUDIES ON THE TURKISH TRANSITION

According to the literature, there are two studies analyzing the effects of the transition of IFRS to the Turkish companies which are listed in Istanbul Stock Exchange. None of the studies investigates the IFRS adoption extensively like early adoption and first time mandatory adoption. Neither two of them used the comparability index; one of them is written in Turkish while the other one is written in English.

The first study which was undertaken by Akbulut & Yanık (2007) tries to investigate the differences between IFRS and Turkish GAAP and analyzes the effects and at the same time comment on these differences in accordance with the IFRS standards. Unlike our study, they have just investigated a sample of 10 first time adopters, those who started applying IFRS in their balance sheets with the starting year of 2005, and they have compared financial statement data of 2004 because those firms who apply IFRS for the first time are obliged to restate previous year's financial statement according to IFRS 1. The financial statement data of 2004 which is inflation-restated was compared with 2004 financial statement data restated according to IFRS. For this purpose, the authors picked randomly 10 firms across 10 different industries and they have analyzed the firms individually by stating the differences in important items and commented on those differences by which standard that those firms could have done that necessary adjustments. The study didn't include any empirical findings on the contrary it was based on interpretations. Their primary findings in their study are:

- Among the firms investigated, it's seen that nearly most of the firms had capitalized their deferred tax assets & liabilities.

- The firms had chosen to reclassify their current marketable securities as non current financial assets in opening balance sheet related with IFRS 1. The most dominant factor in this decision seems that Profit/Loss arose from the revaluation is now reported under Shareholders & Equity, not in the Income Statement as it's used to be.

- The recalculation of employee benefits according to IAS 19 resulted in decreases to these liabilities for the firms mentioned. This situation positively affected the firms' profits.

- Recalculation of the contract costs of construction firms according to the stage of completion method reduced the asset/liability amount by half.

- It has seen that firms have reported debt provisions arising from legal or constructive obligations in opening balance sheet that has never been reported before on previous years.

- It's observed that some of the firms that have transitioned to IFRS, restated income statement first then after that restated the balance sheet by taking into consideration the trial balance.

Another study, which was employed recently by Ağca & Aktaş (2007), tries to address the issue of whether those differences arising from the implementation of adopted IFRS standards on first time adopters are significant or insignificant on financial ratios. In this mentioned study, the authors picked 12 financial ratios for analysis namely;

1. Current Ratio (CurR): Current Assets/Short Term Liabilities (STL)

2. Acid Test Ratio (ATR): (Current Assets - Inventories)/STL

3. Cash Ratio (CR): (Liquid Assets+ Marketable Securities)/STL

4. Inventory Turnover (IT): Cost of Goods Sold/Inventories

5. Receivables Turnover (RT): Sales/Trade Receivables

6. Assets Turnover (AT): Sales/Total Assets

7. Total Liability Ratio (TLR): Total Liabilities/Total Assets

8. Long Term Liability Ratio (LTLR): Long Term Liabilities/(Long Term Liabilities + Shareholders' Equity)

9. Profit Margin (PM): Net Profit/Sales

10. Return on Assets (ROA): Net Profit/Total Assets

11. Return on Equity (ROE): Net Profit/Shareholders' Equity

12. Equity Factor (EF): Assets/Shareholders' Equity

Like in the previous study, the authors retrieved 2004 financial data of non financial firms listed in Istanbul Stock Exchange because researchers' focus was to test if first time adopters realized significant differences in referred financial ratios. Comparison of 2004 financial data is done through the financial data prepared in accordance with the provisions of CMB communiqués issued prior to the communiqué (previous legislation) and the financial data prepared in accordance with the Capital Markets Board's "Communiqué on Accounting Standards in Capital Markets" dated 15/11/2003 with Series No: 25 (new legislation).

According to their findings, when we consider the general sampling of all first time adopters only Cash Ratio (CR) and Asset Turnover (AT) seems to be the significant financial ratios among 12 ratios given which were affected from the transition. When the same test is replicated among the industry-sector basis, only industries whose count is bigger than 10 is taken into analysis which is 4 in this case, the authors found that more ratios were affected significantly unlike the general sample. For Sector 1 (Textile Industry), Inventory Turnover (IT), Total Liability Ratio (TLR) and Asset Turnover (AT) found to be significant. For Sector 2 (Manufacture of Non-Metallic Mineral Products) and Sector 5 (Manufacture of Food, Beverage and Tobacco), only Cash Ratio (CR) like in the case of general sample is found significant. And for Sector 4 (Manufacture of Chemicals and of Chemical Petroleum, Rubber and Plastic Products) Return on Equity (ROE) is the only financial ratio that has been found significantly affected by IFRS transition.

CHAPTER FIVE

RESEARCH ANALYSIS

5.1 RESEARCH QUESTIONS

In order to analyze the effect of IFRS transition in Turkey, the following questions have been raised:

1.) Have the reported financial position of and performance of Turkish listed companies been materially affected by the IFRS transition?

2.) Does the effect of IFRS transition differ between early voluntary and first time mandatory adopters?

3.) How did the key ratios such as liquidity, gearing, ROE (Return on Equity), ROA (Return on Asset) were affected by the transition?

These questions are important because financial statements supply the necessary information to decision makers. Internal users for example managers, use these financial statements for making important business decisions. On the other hand, employees understand better the financial health and the direction of the company. When the focus is external users, prospective investors assess the viability of investing in a business depending on the financial position and performance of the company because investors require returns (in the form of dividends) for their investments in companies. Financial institutions (banks and other lending institutions) analyze the companies' debt ratios (i.e. leverage) to decide if they should provide the required financing needs of the companies.

These questions are also essential for regulators because the transition period affects every company in different ways. Some of the firms want to adopt IFRS voluntarily while the other ones wait for the mandatory date. These firms signal regulators for the pace of their adoption and their motivation for such an adoption.

As this study aims to provide insight on both de jure and *de facto* differences, it is vital that if those *de jure* differences lead *de facto* differences or not i.e. to the actual practices of companies. It is also essential to explore if *de facto* differences exist, how and why they exist. This could have been done by analyzing the particular standards effect but as Turkish transition didn't provide reconciliation statements, it is impossible to find plausible relationships hence the differences pertaining to underlying standards can only be interpreted like in the case of Akbulut & Yanık (2007).

The aim of this study is to investigate if the IFRS transition has material effects on Turkish listed firms. Although the aim is not measuring financial statement conservatism, as denoted in previous sections, because Turkey is a member of the civil law family, a tax oriented country, it is also expected that Turkish GAAP has more conservative accounting practices than IFRS.

5.2 RESEARCH METHODOLOGY

The research is based on the conservatism index that is firstly introduced by Gray (1980) to compare profit measurement practices of different European countries. Later on the name has changed to comparability index by Weetman et al (1998), the index of comparability indicates the measurement impact of accounting differences and may therefore be distinguished from other indicators of harmonization, such as H, I or C indices which quantify the incidence of accounting differences (Weetman et al, 1998:192-193).

Because IFRS 1 states that, the company who prepares financial statement complying IFRS for the first time should restate the previous year's financial statement, it gives the researcher the opportunity to compare the year before transition year's financial statement prepared according to Turkish GAAP and IFRS.

Here in this study because of the interest on key ratios, Hellman (1993), Whittington (2000), Bertoni and DeRosa (2006) are followed so ROE is analyzed additional to equity and net income. Also like Tsalavoutas and Evans (2007) liquidity and gearing is explored. Finally, it is decided to analyze acid-test ratio and ROA. ROA is chosen especially yet it is thought that it would be better to provide info on ROA additional to ROE to see if there is any change going to occur by including liabilities to the equation. Like ROE, acid-test ratio is added to the research to see if there is any change going to occur by removing inventories from the equation.

The ratios used in the study are defined as below:

Current Ratio $_t$ = Current Assets $_t$ / Current Liabilities $_t$

Acid-Test Ratio $_t$ = (Current Assets $_t$ – Inventories $_{t)}$ / Current Liabilities $_t$

Gearing Ratio $_t$ = Total Long-term Liabilities $_t$ / Equity $_t$

ROE $_t$ = Net Income $_t$ / Equity $_t$

ROA $_t$ = Net Income $_t$ / Total Assets $_t$

The main comparability index formula used throughout the study where Turkish GAAP produced equity is compared to IFRS produced equity is denoted below:

$$1-\frac{EQUITY_{IFRS} - EQUITY_{TURKISH\ GAAP}}{[\ EQUITY_{IFRS}\ ]}$$

Similar to previous studies which have used the index, a value larger than 1.0 implies that equity (or other) under Turkish GAAP is higher than equity (or other) under IFRSs, a value lower than 1.0 implies that equity (or other) under Turkish GAAP is lower than equity (or other) under IFRSs and an index value of 1.0 represents that there is no change in between.

These indices are tested statistically by using both parametric and non parametric statistics. As parametric test, one sample T-test is applied to test if each firm's index value is different than 1 or not. It is chosen to test if each individual firm has affected from the IFRS transition significantly. As a non parametric test, one sample Wilcoxon Test is applied for testing the same purpose, the outcomes of analyses are presented on results section.

One of the limitations using comparability index is that it reports extreme values if equity (or other amount) produced by IFRS approaches zero and equity (or other amount) under Turkish GAAP is a larger amount relatively (Tsalavoutas and Evans, 2007:18). However the presence of such outliers (extreme values) does not outweigh the attractiveness of the formula in having parallels in the accounting concept of 'materiality' (Weetman et al, 1998:194).

For remedying the outlier problem, with the purpose of avoiding extreme values, the index values which were lower than -2.0 and higher than 4.0 were excluded from the study. This means that symmetrically, cases where equity (or other) under Turkish GAAP was less or more than 300% of that under IFRSs are excluded (Tsalavoutas and Evans, 2007:21). The firms which have been neglected as outliers are shown in Appendix IV and Appendix V.

Here the benchmark of the adjusted equity (or other) or the denominator the 'yardstick' is IFRS equity (or other) because the audience of the study should view the differences as departures from Turkish GAAP rather than departures from IFRS. Like all other transiting countries, Turkey has been going through the route of accounting harmonization so IFRS is the next destination. Also using IFRS adjusted equity (or other) as the denominator, creates the opportunity of studies which are focusing on IFRS transition, to be comparable amongst them. As the literature review suggests, examples are (Lopes & Viana, 2007; Tsalavoutas and Evans, 2007; Beckman, Brandes, Eierle, 2007; Cordazzo, 2008)

Although materiality level used in the study does not have any statistical outcomes (other than treating extreme values as outliers), it is useful for its informative power. The literature suggests that researchers have mostly decided two levels of materiality which are 5% and 10% (Gray 1980; Weetman 1998; Lopes & Viana, 2007; Bertoni and De Rosa, 2006; Tsalavoutas, and Evans, 2007; Cordazzo, 2008).

In line with Gray (1980)'s materiality concept, it is considered that changes of less or more than 5% are classified as not material in other words "neutral", changes of more than 5% are classified as material though additional info is provided on 25% and 50% band for informational purposes.

5.3 RESEARCH DATA

The population as of 2005 which were or had been listed on ISE consisted of 345 firms. Eighty companies belonging to banking, insurance, and financial services sector were excluded. Thirty-nine companies were removed because their shares were suspended from trading or they were going through the supervision of CMB. Nineteen companies were removed because they were initial public offerings so they did not prepare financial statements for the year before the transition date. From a population of 345 companies, 207 sample companies were chosen that have successfully reported according to both IFRS and Turkish GAAP. The list of firms utilized in this study can be seen at Appendix I.

From these 207 firms, 63 were early voluntary IFRS adopters meaning that mentioned firms chose to prepare financial statements according to IFRS before the mandatory date which is 2005. Therefore, firms who have adopted IFRS and prepared financial statements accordingly in 2003 and 2004 are entitled as "Early Voluntary Adopters". On the other hand, firms who have adopted IFRS in 2005 are entitled as "First Time Mandatory Adopters".

The reasons mentioned below lead to the separation of the sample into two as "Early Voluntary Adopters" and "First Time Mandatory Adopters".

1.) With the publishing of CMB's communiqués no: 20, 21, 22, 23 being effective from 2003, financial statements prepared according to Turkish GAAP after mentioned date were all inflation adjusted. This situation made it impossible for early voluntary adopters + first time mandatory adopters to be included in the same sample because they had prepared financial statements according to a different Turkish GAAP which had minor adjustments leading to major impacts.[1]

2.) Early adopters may suffer from self selection bias in other words they are the hard working students of the class and solely they cannot be a good representative of the population. Stenka & Ormrod (2007) addresses the issue:

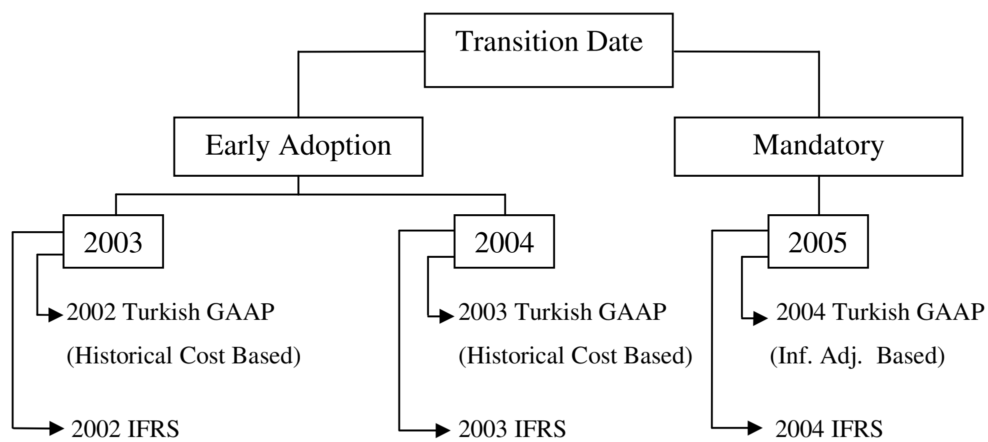
There have been a number of 'early adopters' of IFRS and the impact on the financial statements of these companies has been quite widely reported on an anecdotal basis. By itself, this is a weak evidence of the generalized consequences of IFRS adoption as this 'early adopter' sample suffers from self-selection bias. In other words, those companies that have adopted

[1] Although MEGES has adopted IFRS in 2004, MEGES had prepared historical cost based financial statements according to Turkish GAAP on 2003 that is the reason why it is not excluded from Early Voluntary Adopters.

IFRS early are likely to have selected to do so for a specific reason, such as the likelihood that it would have a favorable effect on reported profit or equity. In short, evidence from the early adopters cannot be relied upon to be an unbiased sample.

All the financial statement data for this study is gathered from ISE website. Annual financial statements were downloaded electronically for every individual firm then they are copied to spreadsheets for statistical analyses. The financial statement data used in this study can be summarized as in the figure below:

Figure 3: Detailed presentation of compared financial statement data for transition dates



Descriptive statistics related to the Early Voluntary Adopters and First Time Mandatory Adopters can be seen at Tables II-III.

Table II – Descriptive Statistics relating to Early Voluntary Adopters

Values in YTL	Mean	Standard Deviation	Minimum	Median	Maximum
Market Capitalisation (N = 63) *	470.651.998	1.048.943.017	8.419.950	108.976.200	7.000.000.000
Shareholders' Equity (N = 63)	240.600.872	43.412.515	-3.143.969	95.790.399	1.917.880.191
Net Sales (N = 54)	584.540.342	1.268.891.409	1.099.844	203.027.109	8.311.348.277
Net Income (N = 54)	18.612.644	57.520.788	-65.420.000	4.102.084	347.514.638

* Data for the market capitalisation represents the closing share price at the end of the year 2003 and 2004. All the data represented on the table are retrieved from financial statements prepared according to IFRS.

Table III – Descriptive Statistics relating to First Time Mandatory Adopters

Values in YTL	Mean	Standard Deviation	Minimum	Median	Maximum
Market Capitalisation (N = 144)	264.780.032	771.879.386	1.080.000	65.827.500	6.210.396.160
Shareholders' Equity (N = 144)	140.912.460	540.284.409	-1.603.446.008	43.309.844	4.541.443.319
Net Sales (N = 14)	217.293.413	664.688.896	34.768	14.813.319	2.519.746.986
Net Income (N = 67)	23.597.837	90.676.433	-31.027.872	1.038.295	616.851.106

* Data for the market capitalisation represents the closing share price at the end of the year 2005. All the data represented on the table are retrieved from financial statements prepared according to IFRS.

Referring to descriptive statistics, one fact attracts attention between early and mandatory adopters which is size. Although not tested against statistical significance, it would not be wrong to interpret that bigger companies decided to adopt IFRS early. The reason could be that because these companies have the necessary infrastructure, knowledge and the motivation (For ex: as reporting according to IFRS enhances reporting quality, this helps to strengthen company image from the view of both private and institutional investors) to implement IFRS.

Industry distribution according to both samples is also presented at Appendix II-III.

5.4 RESULTS

The main findings of the study are presented in Tables IV and V. The analyses are separately applied to Early Voluntary Adopters and First Time Mandatory Adopters because of the reasons mentioned earlier. As firms who had applied IFRS for the first time were not obliged to restate previous year's income statement, Net Income figure for those firms was not eligible. For this reason, indices connected to Net Income figure are affected though the sample count decreased to 54 for Early Voluntary Adopters, 67 for First Time Mandatory Adopters. For testing against statistical significance, both parametric and non parametric statistics are used. These notations are used for simplifying the comparability index tables and here are their expanded forms:

EQTYINDEX : Index of Equity

INCINDEX : Index of Net Income (Profit)

CRINDEX : Index of Current Ratio

ASTINDEX : Index of Acid-Test Ratio

GEARINDEX : Index of Gearing Ratio

ROEINDEX : Index of Return on Equity

ROAINDEX : Index of Return on Asset

5.5 DISCUSSION

Table IV presents statistics of the comparability indices relating to Early Voluntary Adopters. The index measuring the difference of Equity (EQTYINDEX) has a mean value of 0.47. Out of 63 firms, 62 firms are analyzed; one firm is neglected because it is treated as outlier (See Appendix IV for details). From the Early Voluntary Adopters, 59 firms which equals 95.16% of the sample is shown in pessimistic group meaning that their Equity value prepared in accordance to Turkish GAAP is lower than that value prepared in accordance to IFRS. When we look at the results of statistical analyzes (both parametric and non parametric), the results are significant at 1% level. This finding shows that of the firms who have transited IFRS earlier are materially affected from transition period in terms of Equity. The mean value of Equity index supports conservative accounting application of Turkish GAAP in Shareholders' Equity, which is consistent with the hypothesis of continental European law families having conservative accounting practices.

Shifting our attention to Net Income (Profit) Index, the mean value is 0.69. Out of 63 firms, 48 firms are analyzed; 9 firms did not restate previous year's income statement so Net Income values were not available and 6 firms are neglected as outliers. Considering Net Income Index, the percentage of the pessimistic group now has declined to %64.58 among Early Voluntary Adopters. Although results exhibit profit conservatism somewhat the evidence is not strong as in the case of Shareholders' Equity. Statistical analyzes notifies that the results are robust at 5% level.

Following to the next, Current Ratio index produces a mean value of 1.01. Out of 63 firms, 61 are analyzed: 2 firms are neglected as outliers. For the current ratio, the majority of the group is dispersed around neutral group. 37.70% of the sample is identified as pessimistic. As materiality rule suggests changes of 5% are classified as more or less neutral. Statistical analyses also verify this weakness because only the non parametric media test yields significant results only at 10% level.

Table IV – Comparability Indices relating to Early Voluntary Adopters

		EQTYINDEX		INCINDEX		CRINDEX		ASTINDEX		GEARINDEX		ROEINDEX		ROAINDEX	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	< 0.50	32	51,61%	23	46,94%	0	0,00%	2	3,23%	13	22,41%	14	36,84%	17	38,64%
II	0.50-0.74	25	40,32%	5	10,20%	3	4,92%	1	1,61%	9	15,52%	4	10,53%	5	11,36%
III	0.75-0.94	2	3,23%	3	6,12%	20	32,79%	10	16,13%	6	10,34%	1	2,63%	2	4,55%
Pessimistic	< 0.95	**59**	**95,16%**	**31**	**64,58%**	**23**	**37,70%**	**13**	**20,97%**	**27**	**47,37%**	**18**	**48,65%**	**23**	**53,49%**
IV	0.95-0.99	0	0,00%	1	2,04%	13	21,31%	10	16,13%	0	0,00%	0	0,00%	0	0,00%
V	1.00	0	0,00%	0	0,00%	4	6,56%	4	6,45%	0	0,00%	0	0,00%	0	0,00%
VI	1.01-1.05	0	0,00%	1	2,04%	8	13,11%	15	24,19%	3	5,17%	1	2,63%	2	4,55%
Neutral	(0.95-1.05)	**0**	**0,00%**	**2**	**4,17%**	**25**	**40,98%**	**29**	**46,77%**	**3**	**5,26%**	**1**	**2,70%**	**2**	**4,65%**
VII	1.06-1.25	1	1,61%	5	10,20%	7	11,48%	14	22,58%	2	3,45%	0	0,00%	0	0,00%
VIII	1.26-1.50	0	0,00%	4	8,16%	4	6,56%	3	4,84%	10	17,24%	3	7,89%	5	11,36%
IX	1.50	2	3,23%	7	14,29%	2	3,28%	3	4,84%	15	25,86%	15	39,47%	13	29,55%
Optimistic	> 1.05	**3**	**4,84%**	**15**	**31,25%**	**13**	**21,31%**	**20**	**32,26%**	**27**	**47,37%**	**18**	**48,65%**	**18**	**41,86%**

Total Number of Firms ^^	**62**	**48**	**61**	**62**	**57**	**37**	**43**
Mean	0,47	0,68	1,01	1,03	1,10	0,85	0,73
One Sample T-Test For Mean (m≠1)	t=-8.199, p=0.000 ***	t=-2.124, p=0.039 **	t=0.389, p=0.699	t=0.477, p=0.635	t=0.966, p=0.338	t=-0.758, p=0.453	t=-1.550, p=0.129
Standard Deviation	0,51	1,05	0,27	0,50	0,79	1,19	1,13
Minimum	-1,94	-0,90	0,58	-1,57	-0,90	-1,85	-1,59
Maximum	2,44	3,92	2,46	2,91	3,38	2,93	3,13
Median	0,49	0,54	0,98	1,01	1,02	0,89	0,85
One Sample Wilcoxon Test For Median (m≠1)	t=121, p=0.000 ***	t=335, p=0.010 **	t=702, p=0.081*	t=1154, p=0.215	t=918, p=0.470	t=316, p=0.597	t=356, p=0.160

^^ Number of Firms excluding Outliers: Index < -2 & Index > 4 are excluded from the study. See Appendix IV for Outliers.

*****Significant at 1%, **Significant at 5%, *Significant at 10%**

Although evidence is insufficient, it means the firms are affected from the transition but some of the firms had higher index value while the other ones had lower index value. The implementation of IFRS had various impacts on firms' Current Ratios. Continuing with Acid-Test Ratio which is highly correlated with Current Ratio, the index produced a mean value of 1.03. Referring to the index, only 1 firm is classified as outlier. The outcomes of the acid-test ratio analyses are not surprising. The percentage of the pessimistic group decreased to 20.97%. Findings suggest that firms under IFRS recognized more amount of inventory. The effect of historical stock valuation is clear because as inventory item is removed from the equation, we witness that IFRS and Turkish GAAP had similar accounting practices relating to the current assets.

Gearing index represents a mean value of 1.10. Out of 63 firms, 57 firms are analyzed: 1 firm's data was not eligible, 5 firms are ignored as outliers. Statistical tests produced insignificant results meaning that firms transitioned to IFRS have not been materially affected from transition in terms of Gearing. But the mean value of 1.10 tells us that on average Turkish Firms according to IFRS has more leverage than they had with Turkish GAAP. From the previous results, it is already evident that Equity prepared according to IFRS was bigger than Equity prepared according to Turkish GAAP. This leads us to the conclusion that on average under IFRS, firms recognized more long term liabilities. Concordant with Akbulut & Yanık (2007), differences in long term liabilities can be explained as recognition of deferred tax liabilities and different recognition criteria for pension obligations in accordance with IAS 19. While most of the early adopters recognized fewer pension obligations according to IFRS, this adjustment represented a decrease in long term liabilities, on the other hand because of the recognition of deferred tax liabilities, this adjustment resulted to an increase on long term liabilities. As the amount of deferred tax liabilities was bigger than the decrease in pension obligations in total the value of the long term liabilities had increased.

Coming to the final indexes, ROE index has a mean value of 0.85. Among 63 firms, 37 firms are included; 16 firms are neglected as outliers, remaining 10 firms did not provide information. Results indicate that firms have not been affected from transition significantly, while half of the group is classified as pessimistic while the other half of the group is classified as optimistic. For ROA index, the analyses yielded a mean value of 0.73, a value lower than ROE. This time, the number of outliers is 11 therefore number of firms included is 43. Again, the results of analyses did not produce any significant results. Adding total liabilities to the equation of the ROE index seemed not to make any difference.

These findings related to Early Voluntary Adopters support that in aggregate there is little difference between the de facto application of Turkish GAAP and IFRS. Financial position and performance indicators which are Equity and Net Income items are affected from the transition significantly. The results seem to be in line with Bertoni and De Rosa (2006), Lopes and Viana (2007), Tsalavoutas and Evans (2007) who reported that the IFRS implementation led to less conservative accounting practices in Italy, Portugal, Greece with regards to Equity and Net Income, although the difference is small.

Table V – Comparability indices relating to First Time Mandatory Adopters

		EQTYINDEX		INCINDEX		CRINDEX		ASTINDEX		GEARINDEX		ROEINDEX		ROAINDEX	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	< 0.50	4	2,82%	4	6,90%	2	1,42%	1	0,71%	22	15,83%	5	8,77%	4	6,90%
II	0.50-0.74	7	4,93%	6	10,34%	5	3,55%	7	5,00%	16	11,51%	7	12,28%	7	12,07%
III	0.75-0.94	41	28,87%	8	13,79%	12	8,51%	11	7,86%	15	10,79%	8	14,04%	7	12,07%
Pessimistic	< 0.95	**52**	**36,62%**	**18**	**31,03%**	**19**	**13,48%**	**19**	**13,57%**	**53**	**38,13%**	**20**	**35,09%**	**18**	**31,03%**
IV	0.95-0.99	20	14,08%	3	5,17%	28	19,86%	28	20,00%	7	5,04%	7	12,28%	5	8,62%
V	1.00	14	9,86%	22	37,93%	58	41,13%	57	40,71%	7	5,04%	7	12,28%	12	20,69%
VI	1.01-1.05	24	16,90%	3	5,17%	22	15,60%	21	15,00%	5	3,60%	8	14,04%	11	18,97%
Neutral	(0.95-1.05)	**58**	**40,85%**	**28**	**48,28%**	**108**	**76,60%**	**106**	**75,71%**	**19**	**13,67%**	**22**	**38,60%**	**28**	**48,28%**
VII	1.06-1.25	22	15,49%	9	15,52%	9	6,38%	9	6,43%	29	20,86%	12	21,05%	10	17,24%
VIII	1.26-1.50	7	4,93%	0	0,00%	2	1,42%	4	2,86%	12	8,63%	2	3,51%	0	0,00%
IX	1.50	3	2,11%	3	5,17%	3	2,13%	2	1,43%	26	18,71%	1	1,75%	2	3,45%
Optimistic	> 1.05	**32**	**22,54%**	**12**	**20,69%**	**14**	**9,93%**	**15**	**10,71%**	**67**	**48,20%**	**15**	**26,32%**	**12**	**20,69%**

	EQTYINDEX	INCINDEX	CRINDEX	ASTINDEX	GEARINDEX	ROEINDEX	ROAINDEX
Total Number of Firms ^^	**142**	**58**	**141**	**140**	**139**	**57**	**58**
Mean	0,98	0,95	1,02	1,00	1,08	0,91	0,95
One Sample T-Test For Mean (m≠1)	t=-0.774, p=0.440	t=-1.077, p=0,286	t=0.779, p=0,437	t=0.140, p=0,889	t=1.409, p=0.161	t=-1.995, p=0.051 *	t=-1.051, p=0.298
Standard Deviation	0,35	0,36	0,31	0,26	0,68	0,33	0,37
Minimum	-1,68	-0,50	0,30	-0,15	-0,59	-0,40	-0,51
Maximum	3,19	2,51	3,27	2,97	3,94	1,68	2,59
Median	0,99	1,00	1,00	1,00	1,02	1,00	1,00
One Sample Wilcoxon Test For Median (m≠1)	t=3871, p=0.066*	t=293, p=0.178	t=3452, p=0.232	t=3237, p=0.304	t=4900, p=0.497	t=578, p=0.225	t=647, p=0.413

^^ Number of Firms excluding Outliers: Index < - 2 & Index > 4 are excluded from the study. See Appendix V for Outliers

*****Significant at 1%, **Significant at 5%, *Significant at 10%**

Table V presents the statistics of comparability indices relating to First Time Mandatory Adopters. The first index, which is Equity index, has a mean value of 0.98. Among the 144 firms, 142 firms are analyzed; 2 firms are excluded because they are tagged as outliers (See Appendix V for details). The majority of the group is identified as neutral with 40.85%. Although non parametric median test provides significance, the result is inconclusive because significance level is %10.

Analysis concerning Net Income index produces a mean value of 0.95. Among the 144 firms, 58 firms are analyzed; 9 firms are neglected as outliers while net income data of 77 firms were not available[2]. Statistical analyses don't yield significant results as a result we can say that 58 firms are not affected from the transition according to Net Income (Profit).

Evaluation of Current Ratio index produces a mean value of 1.02. Among the 144 firms, 141 are analyzed; 1 firm is neglected as outlier. The majority of the group is vastly identified as in neutral group meaning that the difference between Turkish GAAP and IFRS is less than 5%. The outcome of the statistical analyses did not prove to be significant. Considering Acid-Test Ratio index, the results are very similar to the Current Ratio index. Acid-Test ratio index produced a mean value of 1.00. Majority of the group is classified as neutral again and both parametric and non parametric analyses did not exhibit any sign of significance.

Gearing index, which demonstrates level of debtness, has mean value of 1.08. Among 144 firms, 139 of them are utilized; 5 firms are excluded because they are outliers. 48.20% of the sample is identified as optimistic while 38.13% of the sample is identified as pessimistic. For most of the first time mandatory adopters IFRS transition resulted in a lower gearing ratio although statistical analyses show that IFRS transition did not have any significant effect on gearing ratios of first time mandatory adopters.

Analysis relating to ROE index produces a mean value of 0.91. Number of sample companies here decreases to 57 because of the firms who did not restate

[2] As a total amount, 130 firms did not restate previous year's income statement, so remaining net income data were retrieved from "Current Period Income" on balance sheet. Therefore the sample size increased to 58 instead of 14.

previous year's income statement and are neglected as outliers. Only parametric t-test yields weak evidence of conservative practice of Turkish GAAP. When we continue with the ROA, results show that 48.28% of the firms are in neutral zone and statistical analyses confirm the majority of neutral grouping.

Our findings referring to First Time Mandatory Adopters seem to confirm the findings of Akbulut & Yanık (2007) while contradicts with the findings of Ağca & Aktaş (2007). Although Ağca & Aktaş (2007) found that IFRS transition affected First Time Mandatory Adopters' Cash Ratio significantly, the findings do not verify their results. The index and outlier approach utilized in this study could be the reason for this contradiction.

For additional analysis, these tests are replicated over industry basis. For Early voluntary adopters, statistical tests were not performed because of the small sample size which is 57. Appendix VI and VII shows average comparability indices for every industry relating to first time mandatory adopters. Computations are first performed including every individual industry no matter what the number of firms included in the industry. Then the same test is replicated with industries whose count is bigger than 10. The findings support that for Equity Index and Gearing Index, there is significant difference between industries meaning each industry is affected differently from the transition. According to the results of Equity index, Basic Metal Industries and Textile Industries had a mean value of 0.87 which implies that these industries had reported more conservative Equity amounts under Turkish GAAP than IFRS. The reason for this increase in Equity under IFRS is related with associates being consolidated according to Equity Method and some portion of the difference is recognized in Equity (Akbulut & Yanık, 2007:94). Related with the Equity Index, these industries had higher Gearing ratios while it is expected to have lower ratios because of the increase in Equity. Results suggest that because the increase in Long Term liability amounts is bigger than the increase in Equity, Gearing Ratios of these industries increased. Like in the case of early voluntary adopters, the reason of this increase in Long Term liability is the recognition of deferred tax liabilities.

5.6 LIMITATIONS

A noticeable limitation of the study is its weakness for considering short-term timing differences in accounting policies. A firm's accounting policies can differ from one period to another, and additionally the period analyzed may not reflect a typical economic environment and typical accounting policies (Norton, 1995:199). Most of the studies that investigates IFRS transition can only compare financial statements for one year which is the transition year because the restatement of the financial statements is only required in the occasion of the first time application of IFRS (Bertoni and DeRosa, 2006:6).

Due to some data restrictions, the study was restrained on fully exploring "Net Income" which is an item of income statement. The reason underlies beneath is that firms who had applied IFRS for the first time were not obliged to restate previous year's income statement, consequently some firms' income statement data were not eligible. This shortcoming affected analyses related to net income, ROE and ROA indexes consecutively. In the case of Early Voluntary Adopters, the percentage of the firms who had voluntarily restated previous year's income statement was 85.71% (54 of 63 firms). Within First Time Mandatory Adopters, percentage has vastly decreased to a level of 9.72% (14 of 144 firms).

Another constraining aspect of the study is its inability of investigating if international accounting standards has any partial effect on financial statements or not. In the case of Turkey, it is not possible to perform such an analysis because as Turkish transition didn't provide reconciliation adjustments, researcher has no information concerning which standard lead to IFRS adjustments with which magnitude on accompanying financial statements. Hence particular standards effect on financial statement items could not be analyzed they can only be interpreted.

CONCLUSION

International Financial Reporting Standards are becoming the main accounting framework for all the countries throughout the world. Turkey with its EU accession process, accepted these standards and companies started preparing financial statements complying with IFRS in 2003 voluntarily.

Every country has their own specific characteristics that shape their accounting systems resulting in different applications of accounting concepts. For that matter, countries experience related to harmonization of accounting systems is various. In this study, as a member of Continental European law family, tax oriented and a developing country, IFRS transition experience of Turkey is investigated focusing on the financial statement aspect of this transition.

The study takes advantage of IFRS 1 and analyzes the differences between Turkish GAAP and IFRS because IFRS 1 states that, the company who prepares financial statement complying IFRS for the first time should restate the previous year's financial statement. This standard provides researcher the necessary opportunity to compare the year before transition year's financial statement prepared according to Turkish GAAP and IFRS.

The study contributes to the literature by measuring the impact of transition from Turkish GAAP to IFRS on equity, performance and on key ratios such as Current, Acid-Test, Gearing, ROE and ROA. Also for analyzing the effect of IFRS transition experience of Turkey, study does not limit itself only to first mandatory adopters on the contrary by also having included early voluntary adopters the scope of the study is extended. To enhance the understandability of the impact of the transition between Turkish GAAP and IFRS, the study examined the *de jure* differences. The research also contributes to the academic literature on international GAAP comparisons and it provides a benchmark with other studies utilizing Gray (1980)'s conservatism / Weetman et al (1998)'s comparative index particularly those within the members of Civil / Continental European law family.

In this study, it has been found that bigger companies decided to adopt IFRS early because these firms thought that financial reporting according to IFRS will be advantageous (like easier access to financing, enhance reporting quality, strengthen company image). For the early voluntary adopters, empirical evidence has been found regarding conservative practices of Turkish GAAP relating to equity and net income. Controlling for the *de jure* differences, minor differences were confirmed on issues such as inventories, property plant and equipment, deferred tax, leases, revenue recognition, retirement benefits, provisions, intangible assets. Concerning first time mandatory adopters, results support that firms were not significantly affected from IFRS transition because in 2004, the biggest differences between Turkish GAAP and IFRS which are inflation and long term investments were eliminated (Mugan & Akman, 2005:14). Additional industry analysis related to first time mandatory adopters revealed that industries have affected differently from the IFRS transition in matters of Equity and Gearing Index.

The findings of the study are important for the Turkish Accounting System. With the expected acceptance of the new Turkish Commercial Code, non-listed companies will prepare financial statements according to set of standards that are published by Turkish Accounting Standards Board which are based on IFRS. Although it's obvious that the IFRS adoption experience of publicly traded companies and non-listed companies may not be similar, the results of the study can provide insight for expected impact of IFRS application on non-listed companies.

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APPENDIXES

Appendix I – Firms Utilized In the Study

	Early Voluntary Adopters				First Time Mandatory Adopters							
	2003			2004	2005							
Codes of Firms included in the study	ADEL	DENCM	OTKAR	MEGES	ABANA	BAGFS	DARDL	ESEMS	KAPLM	MERKO	PRTAS	USAK
	AEFES	DITAS	PETUN		ACIBD	BAKAB	DENTA	FENIS	KARTN	METUR	RAKSE	TIRE
	AKCNS	DOBUR	PINSU		ADANA	BERDN	DERIM	FMIZP	KERVT	MMART	RKSEV	TUKAS
	ANACM	DOKTS	PNSUT		AFYON	BFREN	DESA	FRIGO	KIPA	MNDRS	SABAH	TUMTK
	ARAT	DYOBY	PTOFS		AKALT	BISAS	DMSAS	FVORI	KLBMO	MRDIN	SANKO	TUPRS
	ARCLK	EGPRO	SASA		AKENR	BOLUC	DOGUB	GEDIZ	KLMSN	MTEKS	SAPAZ	UCAK
	ARENA	EMNIS	SKTAS		AKIPD	BOYNR	ECILC	GENTS	KNFRT	MUTLU	SARKY	VAKKO
	ASUZU	FROTO	SODA		AKSA	BRMEN	ECYAP	GEREL	KONYA	NETAS	SELGD	VANET
	AYCES	GIMA	TATKS		AKSUE	BROVA	EDIP	GOLTS	KOTKS	NTTUR	SERVE	VESTL
	AYGAZ	HURGZ	TBORG		ALCAR	BSOKE	EGEEN	GOODY	KOZAD	NUHCM	SIFAS	YATAS
	BANVT	IDAS	TCELL		ALCTL	BTCIM	EGGUB	GUBRF	KRDMD	OKANT	SKPLC	ZOREN
	BEKO	IZOCM	THYAO		ALKA	BUCIM	EGSER	HEKTS	KRSTL	PARSN	SNPAM	
	BOSSA	KARSN	TNSAS		ALKIM	BURCE	EMKEL	HZNDR	KRTEK	PENGD	SONME	
	BRISA	KENT	TOASO		ALTIN	BURVA	ENKAI	IHEVA	KUTPO	PETKM	TEKTU	
	BRSAN	KORDS	TRCAS		ARSAN	BYSAN	EPLAS	INDES	LINK	PIMAS	UKIM	
	CELHA	MAALT	TRKCM		ASELS	CBSBO	ERBOS	INTEM	LIOYS	PKART	ULKER	
	CIMSA	MIGRS	TUDDF		ASLAN	CEMTS	EREGL	IPMAT	LUKSK	PKENT	UNTAR	
	CLEBI	MILYT	UZEL		ATEKS	CEYLN	ERSU	ISAMB	MAKTK	POLYL	UNYEC	
	CMBTN	MIPAZ	VKING		AYEN	CYTAS	ESCOM	IZMDC	MEMSA	PRKAB		
	CMENT	MRSHL	YUNSA							PRKTE		
	CMLOJ	OLMKS										
Total Count	62			1	144							

Appendix II – Distribution of Early Voluntary Adopters by Industry

Industry Group	N	%
MANUFACTURE OF FABRICATED METAL PRODUCTS, MACHINERY AND EQUIPMENT	12	19,05%
MANUFACTURE OF CHEMICALS AND OF CHEMICAL PETROLEUM, RUBBER AND PLASTIC PRODUCTS	10	15,87%
MANUFACTURE OF NON-METALLIC MINERAL PRODUCTS	8	12,70%
MANUFACTURE OF FOOD, BEVERAGE AND TOBACCO	8	12,70%
WHOLESALE AND RETAIL TRADE, HOTELS AND RESTAURANTS	6	9,52%
TEXTILE, WEARING APPAREL AND LEATHER INDUSTRIES	6	9,52%
MANUFACTURE OF PAPER AND PAPER PRODUCTS, PRINTING AND PUBLISHING	5	7,94%
BASIC METAL INDUSTRIES	3	4,76%
TRANSPORTATION, COMMUNICATION AND STORAGE	3	4,76%
MANUFACTURE OF WOOD PRODUCTS INCLUDING FURNITURE	1	1,59%
INFORMATION TECHNOLOGY	1	1,59%
Total Count	63	100,00%

Appendix III – Distribution of First Time Mandatory Adopters by Industry

Industry Group	N	%
TEXTILE, WEARING APPAREL AND LEATHER INDUSTRIES	31	21,53%
MANUFACTURE OF NON-METALLIC MINERAL PRODUCTS	17	11,81%
MANUFACTURE OF FOOD, BEVERAGE AND TOBACCO	15	10,42%
MANUFACTURE OF FABRICATED METAL PRODUCTS, MACHINERY AND EQUIPMENT	15	10,42%
MANUFACTURE OF CHEMICALS AND OF CHEMICAL PETROLEUM, RUBBER AND PLASTIC PRODUCTS	14	9,72%
BASIC METAL INDUSTRIES	10	6,94%
WHOLESALE AND RETAIL TRADE, HOTELS AND RESTAURANTS	10	6,94%
MANUFACTURE OF PAPER AND PAPER PRODUCTS, PRINTING AND PUBLISHING	9	6,25%
INFORMATION TECHNOLOGY	6	4,17%
ELECTRICITY, GAS AND WATER	4	2,78%
OTHERS	4	2,78%
MANUFACTURE OF WOOD PRODUCTS INCLUDING FURNITURE	3	2,08%
CONSTRUCTION AND PUBLIC WORKS	2	1,39%
EDUCATION, HEALTH, SPORTS AND OTHER SOCIAL SERVICES	1	0,69%
DEFENCE	1	0,69%
MINING	1	0,69%
TRANSPORTATION, COMMUNICATION AND STORAGE	1	0,69%
Total Count	144	100,00%

Appendix IV – Early Voluntary Adopters excluded as outliers

	EQTYINDEX	INCINDEX	CRINDEX	ASTINDEX	GEARINDEX	ROEINDEX	ROAINDEX
Index < -2		CELHA (-7.69), CIMSA (-2.75), FROTO (-5.4), OTKAR (-2.71)			DYOBY (-2.24), TRCAS (-9.35)	CELHA (-10.92), CIMSA (-4.89), DYOBY (-8.16), EGPRO (-3,68), FROTO (-46,95), MAALT (-3.6), OTKAR (-5.01), PNSUT (-2.10), TRCAS (-6.59),	CELHA (-9.54), CIMSA (-4.73), FROTO (9.39), MAALT (-4.01), OTKAR (-3.68)
Index > 4	GIMA (5.22),	AYCES (4,56), CMLOJ (19.35),	CMENT (895.93), HURGZ (6.55),	HURGZ (6.64)	DOKTS (5.2), FROTO (7.85), UZEL (8.4)	ARCLK (4.98), AYCES (17.31), CMLOJ (25.21), DENCM (7.39), KENT (20.06), PTOFS (4.36), UZEL (15.78),	ARCLK (4.45), AYCES (18.33), CMLOJ (23.80), DENCM (5.25), DYOBY (4.17), KENT (8.72),
Total number of outliers excluded in Early Voluntary Adopters	1	6	2	1	5	16	11

Appendix V – First Time Mandatory Adopters excluded as outliers

	EQTYINDEX	INCINDEX	CRINDEX	ASTINDEX	GEARINDEX	ROEINDEX	ROAINDEX
Index < -2	EMKEL (-24.60),	BYSAN (-3.98), ECYAP (-24.63), KOTKS (-4.85)			BERDN (- 65.94),	BERDN (-96.19), BYSAN (-4.13), ECYAP (-24.71), KOTKS (-11.31),	BYSAN (-3.95), ECYAP (-24.31), KOTKS (-5.14),
Index > 4	ALCTL (12.74),	ABANA (11.50), CEMTS (8.50), ESCOM (4.17), HZNDR (4.64), KERVT (24.5), PIMAS (6.58)	AYEN (4.62), GENTS (4.82), MAKTK (5.25)	AYEN (4.64), GENTS (4.83), GOLTS (8.22), MAKTK (7.23)	KNFRT (9.97), KOTKS (4.11), LINK (4,48), SANKO (20.38),	ABANA (11.39), CEMTS (8.37), ESCOM (4.18), HZNDR (4.5), KERVT (13.03), PIMAS (7.33),	ABANA (11.39), CEMTS (8.56), ESCOM (4.15), HZNDR (4.64), KERVT (30.49), PIMAS (6.65),
Total number of outliers excluded in First Time Mandatory Adopters	2	9	3	4	5	10	9

Appendix VI - Average Comparability Indices for First Time Mandatory Adopters broken down by Industry

		EQTYINDEX	INCINDEX	CRINDEX	ASTINDEX	GEARINDEX	ROEINDEX	ROAINDEX
Industries of First Time Adopters	Total	N (Mean) *	N (Mean) *	N (Mean) *	N (Mean) *	N (Mean) *	N (Mean) *	N (Mean) *
INFORMATION TECHNOLOGY	6	5 (1.03)	1 (1.00)	6 (1.01)	6 (0.98)	5 (1.68)	1 (1.00)	1 (1.00)
ELECTRICITY, GAS AND WATER	4	4 (0.93)	1 (1.00)	3 (1.00)	3 (1.00)	4 (0.77)	1 (0.98)	1 (1.00)
FOOD, BEVERAGE AND TOBACCO	15	15 (1.08)	10 (0.72)	15 (1.02)	15 (1.00)	14 (1.00)	10 (0.74)	10 (0.74)
CONSTRUCTION AND PUBLIC WORKS	2	2 (2.15)	1 (1.58)	2 (1.00)	2 (1.01)	2 (1.16)	1 (1.40)	1 (1.23)
PAPER AND PAPER PRODUCTS, PRINTING AND PUBLISHING	9	9 (0.74)	2 (0.54)	9 (1.04)	9 (1.03)	9 (0.52)	2 (0.52)	2 (0.53)
CHEMICALS AND OF CHEMICAL PETROLEUM, RUBBER AND PLASTIC PRODUCTS	14	14 (0.92)	5 (0.88)	14 (1.00)	14 (1.03)	14 (1.16)	5 (0.90)	5 (0.90)
MINING	1	1 (0.97)	0 (0.00)	1 (0.99)	1 (0.99)	1 (1.18)	0 (0.00)	0
BASIC METAL INDUSTRIES	10	10 (0.87)	3 (0.99)	10 (1.00)	10 (1.01)	10 (1.33)	3 (1.10)	3 (1.01)
FABRICATED METAL PRODUCTS, MACHINERY AND EQUIPMENT	15	14 (1.02)	10 (0.93)	14 (0.91)	14 (0.89)	15 (0.95)	9 (0.79)	9 (0.90)
WOOD PRODUCTS INCLUDING FURNITURE	3	3 (1.03)	1 (1.00)	2 (1.00)	2 (1.01)	3 (1.26)	1 (1.04)	1 (0.99)
WHOLESALE AND RETAIL TRADE, HOTELS AND RESTAURANTS	10	10 (1.02)	5 (1.02)	10 (1.33)	10 (1.34)	9 (1.50)	5 (0.96)	5 (1.00)
EDUCATION, HEALTH, SPORTS AND OTHER SOCIAL SERVICES	1	1 (0.81)	1 (0.90)	1 (0.98)	1 (0.98)	1 (1.18)	1 (1.11)	1 (0.94)
DEFENCE	1	1 (0.96)	0 (0.00)	1 (0.98)	1 (0.99)	1 (1.03)	0 (0.00)	0
NON-METALLIC MINERAL PRODUCTS	17	17 (1.07)	6 (1.25)	17 (1.07)	16 (0.93)	17 (0.66)	6 (1.12)	6 (1.26)
TEXTILE, WEARING APPAREL AND LEATHER INDUSTRIES	31	31 (0.87)	12 (0.97)	31 (0.96)	31 (0.96)	29 (1.23)	11 (0.94)	12 (1.00)
TRANSPORTATION, COMMUNICATION AND STORAGE	1	1 (0.93)	0 (0.00)	1 (0.61)	1 (0.62)	1 (1.74)	0 (0.00)	0
OTHERS	4	4 (0.96)	1 (1.00)	4 (1.00)	4 (0.99)	4 (1.03)	1 (1.00)	1 (1.00)
Total	144	142 (0.98)	59 (0.94)	141 (1.02)	140 (1.00)	139 (1.08)	57 (0.91)	58 (0.94)
Mean & Standard Deviation		0.98 (0.35)	0.94 (0.36)	1.02 (0.31)	1.00 (0.26)	1.08 (0.68)	0.91 (0.33)	0.94 (0.37)
Chi Square & P Value		32.984 - 0.007***	12.994 - 0.448	16.198 - 0.439	16.398 - 0.426	27.937 - 0.032**	15.261 - 0.291	10.407 - 0.660
Df		16,00	16,00	16,00	16,00	16,00	16,00	16,00

N* : Number of companies excluding outliers. Outliers: index < -2 & index > 4 are excluded from the study. For outliers, see Appendix V.
Non Parametric Kruskal Wallis Test, * Significant at %1, ** Significant at %5, * Significant at %10.**

Appendix VII - Average Comparability Indices for First Time Mandatory Adopters broken down by Industry (N>10)

		EQTYINDEX	INCINDEX	CRINDEX	ASTINDEX	GEARINDEX	ROEINDEX	ROAINDEX
Industries of First Time Adopters	Total	N (Mean) *	N (Mean) *	N (Mean) *	N (Mean) *	N (Mean) *	N (Mean) *	N (Mean) *
FOOD, BEVERAGE AND TOBACCO	15	15 (1.08)	10 (0.72)	15 (1.02)	15 (1.00)	14 (1.00)	10 (0.74)	10 (0.74)
CHEMICALS AND OF CHEMICAL PETROLEUM, RUBBER AND PLASTIC PRODUCTS	14	14 (0.92)	5 (0.88)	14 (1.00)	14 (1.03)	14 (1.16)	5 (0.90)	5 (0.90)
BASIC METAL INDUSTRIES	10	10 (0.87)	3 (0.99)	10 (1.00)	10 (1.01)	10 (1.33)	3 (1.10)	3 (1.01)
FABRICATED METAL PRODUCTS, MACHINERY AND EQUIPMENT	15	14 (1.02)	10 (0.93)	14 (0.91)	14 (0.89)	15 (0.95)	9 (0.79)	9 (0.90)
WHOLESALE AND RETAIL TRADE, HOTELS AND RESTAURANTS	10	10 (1.02)	5 (1.02)	10 (1.33)	10 (1.34)	9 (1.50)	5 (0.96)	5 (1.00)
NON-METALLIC MINERAL PRODUCTS	17	17 (1.07)	6 (1.25)	17 (1.07)	16 (0.93)	17 (0.66)	6 (1.12)	6 (1.26)
TEXTILE, WEARING APPAREL AND LEATHER INDUSTRIES	31	31 (0.87)	12 (0.97)	31 (0.96)	31 (0.96)	29 (1.23)	11 (0.94)	12 (1.00)
Total	112	111 (0.97)	51 (0.94)	111 (1.02)	110 (1.00)	108 (1.09)	49 (0.90)	50 (0.95)
Mean & Standard Deviation		0.97 (0.21)	0.94 (0.36)	1.02 (0.33)	1.00 (0.26)	1.09 (0.63)	0.90 (0.33)	0.95 (0.39)
Chi Square & P Value		21.519 - 0.001***	5.516 - 0.480	7.946 - 0.242	16.398 - 0.426	17.013 - 0.009**	7.191 - 0.304	3.922 - 0.687
Df		6,00	6,00	6,00	6,00	6,00	6,00	6,00

N* : Number of companies excluding outliers. Outliers: index < -2 & index > 4 are excluded from the study. For outliers, see Appendix V.

Non Parametric Kruskal Wallis Test, * Significant at %1, ** Significant at %5, * Significant at %10.**