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PUBLIC DISCLOSURE LEVELS OF ISE COMPANIES: OWNERSHIP AND CORPORATE GOVERNANCE EFFECTS

Bengi ERTUNA *
Ali TÜKEL **

Abstract
The aim of this paper is to measure public disclosure performance of the ISE companies and investigate the sources of differences among the companies. Disclosure performance is measured using a self-constructed public disclosure index (PDI) and applied to companies in the ISE-50 Index. Differences in PDI levels are analyzed using ownership and corporate governance characteristics, in an emerging market context dominated by concentrated ownership structure. The share of foreign portfolio investors is found to be the only significant variable influencing the PDI, especially its voluntary component. The findings support the argument of the Capital Market Board of Turkey, which emphasizes the role of corporate governance in attracting foreign capital.

I. Introduction

The aim of this paper is to explain the differences in disclosure performance of companies in the ISE, through documenting their level of disclosure shortly after the introduction of the Corporate Governance Principles (CGP) of Turkey. In order to improve the corporate governance environment and to integrate the Turkish capital markets with global financial markets, the Capital Markets Board (CMB), the regulatory authority of capital markets in Turkey, initially

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published the CGP in 2003 and reviewed and finalized these principles in 2005. The experience of the CMB was similar to the developments in other emerging markets, which all prepared their corporate governance codes around the same time and based on the OECD Principles. The OECD Principles, which were initially drafted in 1999 and subsequently amended in 2004, have been the major benchmark for the development of CGP in Turkey, similar to many other emerging as well as developed, markets (Mallin, 2004).

In order to strengthen their capital markets and to attract international capital, regulators try to improve their respective corporate governance environments. In the foreword of the amended CGP, the CMB points that the quality of corporate governance is as important as financial performance in international investment decisions and asserts that the implementation of these principles is effective in the structuring of Turkish financial markets as a part of the global financial system and in attracting investment in international markets (CMB, 2005). With this perspective, the CGP have been put into effect as of 2005 on a "comply-or-explain" basis. In other words, publicly trading companies were to either comply with these principles or explain why they could not comply. Furthermore, CGP specified, in detail, the information to be disclosed to the public relating to various dimensions of corporate governance. The CGP are organized in four sections; the second of which focuses on disclosure and transparency. In addition, the CMB requires publicly listed companies to prepare a Corporate Governance Compliance Report (CGCR) as an integral part of their Annual Reports and disclose their compliance status with all the sections of the CGP. Companies report their compliance with the CGP and disclose the reasons why they do not comply in the relevant section of this CGCR. Consequently, various sections of CGP, together with the CGCR, specify the information to be disclosed by publicly trading companies. Some of this information was already required disclosure, while some are introduced by CGP on a voluntary "comply-or-explain" basis.

In this paper, initially the disclosure performances of the ISE-50 Index companies are measured in order to investigate the factors that influence their public disclosure performance. The first part of the article reports the results of public disclosure levels, based on the information published in company websites. In order to measure the levels of public disclosure, a Public Disclosure

Index (PDI) is developed based on the disclosure items in different sections of the CGP and the CGCR and this index is implemented to the companies included in the ISE50 index. Disclosure performance is measured using PDI, developed in a way to assess compliance with all the disclosure items of CGP, some of which are mandatory while some are voluntary. Thus, performance is assessed as total PDI score, as well as mandatory and voluntary PDI scores. The second part of the article analyzes the differences in disclosure performance of the companies. Corporate governance and ownership characteristics of companies are investigated as factors to explain the differences in disclosure performance. Specifically, the association between the PDI results and corporate governance and ownership characteristics is analyzed, while firm size and industry are used as control variables. The findings provide an understanding of the disclosure performance of Turkish public companies and the factors associated with higher level of disclosures. In the first section, we find a relatively high compliance with disclosure requirements. The average PDI score is 75.6%, with mandatory scores higher than voluntary scores. The most striking finding of our study is that the share of foreign portfolio investors appears to be the only significant variable that explains the difference in the disclosure performance of the companies. There is a significant, positive relation between the percentage ownership by foreign portfolio investors and the PDI scores, especially for voluntary PDI score.

Studies covering companies in Turkey are limited. Turkish companies are represented in some with a small sample in multi-market studies such as in studies of Patel et al. (2002) and Bonson and Escobar (2006). On the other hand, several studies that evaluate the overall corporate governance environment in Turkey have been carried out by various institutions such as OECD (2006), IIF (2005). However, there are only a few academic studies which aim to measure and analyze public disclosure and transparency levels of companies in Turkey. This can be explained by the fact that the issue is new and companies have only recently begun to work on compliance with CGP. We aim to provide evidence on the public and disclosure levels of the ISE-50 Index companies through a self-constructed index and a hand collected data based on requirements and recommendations of CGP of CMB of Turkey. Furthermore, we provide evidence for the differences in disclosure performance of companies based on

their ownership and corporate governance attributes, which are among the least studied determinants of disclosure (Kenton and Yang, 2008) even in developed markets. The finding of a positive relation between the share of foreign investors in free float and public disclosure level is the primary contribution of this paper. The paper is organized as follows: A survey of related literature is presented in the second section. Then, data and methodology of the study are presented, they are followed by the fourth section on results and discussion and section five concludes.

II. Literature on Disclosure Practices and Their Determinants

Public disclosure is a method of communicating company performance and governance to the present and potential investors. Various theoretical perspectives utilize different approaches to explain the role of disclosures in governing the company. An extensive review by Verrechia (2001) identifies agency theory, political cost theory, signaling theory, legitimacy and institutional theory, proprietary costs theory and contingency theory as the major theoretical perspectives on voluntary disclosure. Since corporate governance is a concept which has originated in developed market settings, agency theory has been the dominant perspective in the development of the mechanisms of governance. In developed markets, which are mostly characterized by dispersed ownership and resulting separation of ownership and control, the major conflict of interest is between the managers and the shareholders. Corporate governance mechanisms try to align the interests of the managers with the shareholders and resolve the classical agency conflict (Jensen and Meckling, 1976). In a dispersed ownership structure, shareholders do not have direct access to management, thus face information asymmetry and monitoring costs. Reducing asymmetry is the starting point of theories on explaining disclosure (Verrechia, 2001). Information asymmetry, signaling and transaction cost perspectives all utilize the agency relationship in explaining how disclosure operates as an important mechanism of corporate governance. Companies disclose information in order to reduce agency and monitoring costs. On the other hand, transaction cost theory stresses the managerial assessment of costs and benefits of disclosure in deciding about transparency (Gray et.al, 1990). Political cost theory also takes a similar stance and explains disclosure as a means of minimizing political

costs (Bonson and Escobar, 2006).

More recent discussions take into consideration the existance of different types of ownership structures and related conflicts of interests. In concentrated ownership structure, which is the prevalent form in most of the developing countries, the critical issue is the protection of the minority shareholders from expropriation by majority shareholders (Schleifer and Vishny, 1997). Transparency and disclosure again emerge as an important mechanism considering the information asymmetry between controlling and minority shareholders. Majority shareholders have access to all company information that they can withold from minority shareholders. Public disclosure of information becomes a suggested remedy for the resolution of the majority-minority conflict.

Institutional theory explains disclosure practices of companies as ways of acquiring legitimacy from their environments (Cho and Patten, 2007). In this respect, disclosure practices are determined by the environmental context of the company, including cultural, legal and institutional factors. Institutional perspective is best represented by studies investigating the impact of country-level and firm-level characteristics on corporate governance. Corporate governance practices of companies seem to be largely influenced by country-level characteristics. Recent international corporate governance research analyzes both country-level institutional factors and firm-specific organizational attributes as determinants of corporate governance and reveals the importance of country-level factors. In their influential study, La Porta et.al (1999) find that the corporate governance is mainly shaped by the level of investor protection offered by a country's legal system. Similarly, Doidge et.al (2007) document that country-level characteristics explain much more of the variation in corporate governance of firms than the firm-level characteristics. They also state that the impact of country-level characteristics is stronger in developing countries, with almost no impact of firm-level characteristics. In their study on a sample of firms from 14 emerging markets, Klapper and Love (2004) also find that overall firm level governance is related to country-level factors, but they observe a wide level of variation between firms. Durnev and Kim (2005) similarly observe a wide within-country variation in corporate governance and disclosure practices, which increases as legal protection of

investors in a country decreases. Firm-level corporate governance becomes a differentiating factor for companies, especially when the country-level contextual factors are underdeveloped and the country is open to the global capital flows. Consequently, another strand of research examines causes of the large differences in corporate governance practices. Growth or investment opportunities, need for external financing and concentration of ownership have been commonly identified as firm-level factors that influence the corporate governance practices of companies in international studies of both Durnev and Kim (2005) and Doidge et.al (2007). Access to global markets was also found to influence firm-level governance (Doidge et.al, 2007).

Sources of variation in disclosure practices of companies have been analyzed using firm attributes, as well as ownership and corporate governance characteristics. A pioneering and often cited study that takes public disclosure levels on the dependent variable, finds a positive relationship with firm size, firm performance and need for external financing and a negative relationship with stock returns and earnings (Ettredge et al. 2002). In another study on disclosure practices of 600 companies from 22 countries, Debreceny et al. (2002) find that firm characteristics such as size, listing in US markets and operating in high technology industry positively affect public disclosure levels together with the overall public disclosure environment in the country. Similarly, in a study done in China (Xiao et al. 2004), it is observed that public disclosure levels are influenced by auditor type, listing in foreign markets, ownership structure and regulations.

Ownership and corporate governance characteristics are less studied as compared to other firm attributes. Empirical findings of studies investigating ownership and governance attributes as sources of differences in public disclosures are conflicting, mixed and mostly contradictory to the expectations derived from theory. Major ownership attributes which are investigated in different studies are concentration of ownership and identity of controlling owners. Disclosure levels are found to decrease as concentration of ownership increases (Pattel et.al, 2003). Disclosure and concentration of ownership are suggested to be substitutes as monitoring mechanisms. As controlling owner typology, family ownership is found to influence the quality of the earnings disclosures positively, while level of corporate governance disclosures is

negatively related to family ownership (Ali et.al, 2007). Mostly studies concentrate on board structure in investigating corporate governance attributes as sources of differences in disclosure practices. Existence of independent board members is expected to increase the supervisory role of the board of directors and the quality of corporate governance. As a result, presence of independent board members is expected to influence levels of public disclosure. However empirical studies report different findings on the relationship between independent board members and level of public disclosure. While Eng and Mak (2003) find that the level of public disclosure declines as the ratio of independent board members increases, Cheng and Courtenay (2006) and Ho and Wong (2001) find that the level of public disclosure increases with the ratio of independent board members. Lopes and Rodrigues (2007) find no relation between ratio of independent members and level of disclosure in Portuguese listed companies. Board committees have also been studied as an attribute of corporate governance. Ho and Wong (2001) find that the Audit Committees set up in the Board of Directors have a positive impact on the level of public disclosure.

Two different studies on the ISE companies in Turkey investigate the relationship between the level of public disclosure and firm characteristics such as firm size, leverage, accounting profitability, market-to-book value ratios, ownership structure and identity of independent auditor. A positive relationship between firm size and the level of public disclosure was observed in both studies (Aksu and Kösedağ, 2006; Ağca and Önder, 2007). In addition to these variables, market-to-book value (Aksu and Kösedağ, 2006) and the identity of the independent auditor (Ağca and Önder, 2007) emerged as significant variables in explaining the differences in the level of public disclosure.

III. Methodology and Data

In order to test some of the predictions of various theoretical perspectives summarized above, a Public Disclosure Index (PDI) has been developed and implemented to companies that are included in the ISE-50 index as of July 1, 2006. Data is collected from various documents presented in the websites of these companies. An article in the "Public Disclosure and Transparency" section of the CGP (Article 1.11.5) calls for the publication of disclosure information

in the companies' websites (CMB, 2005). In line with this regulation, listed companies in Turkey have either organized their websites as stated in the CGP or set up websites for this purpose. Thus, publicly disclosed reports and information Namely, annual reports, corporate governance compliance reports (CGCRs), articles of association, agenda and minutes of shareholders' assembly and other relevant information have been accessed through company websites. Other studies in various different settings have also utilized company websites in measuring the disclosure scores of companies (Debreceny et.al, 1999; Ettredge et.al, 2002; Marston and Polei, 2004; Bonson and Escobar, 2006). At the time of the research, the most recent reports were reports for the year 2005, so index values were based on these reports. Index values were based on the disclosure on the company; the presence of an explanation for a certain index items was marked with a score of 1 and the absence with a score of 0.

In the second part of the study, the relationship between PDI levels and firm-level characteristics has been investigated using the variables which are presented in the variables section below.

3.1. Variables and Hypotheses

Public disclosure levels are measured by Public Disclosure Index while variables related to ownership and corporate governance characteristics are investigated as sources of differences in disclosure practices of companies. Firm size and industry are used as control variables.

3.1.1. Public Disclosure Index (PDI)

The level of public disclosure of firms is measured by the Public Disclosure Index (PDI). Public disclosure and transparency levels of companies have been measured through the means of constructing indices by various institutions such as rating agencies, financial analysts and academic researchers. In academic studies either indices are self-constructed or previously developed indices are used to measure disclosure levels. A great majority of these studies have been carried out either with developed country samples (financially developed markets) or with large samples including many countries and using indices developed in the context of developed markets.

The PDI has been developed according the provisions of the CGP of Turkey. The CGP are organized into the following four main sections: shareholders; public disclosure and transparency; stakeholders and the board of directors. The PDI consists of items that are relevant to disclosure and recommended to be disclosed by CGP through CGCR or company websites. Despite the voluntary nature of the CGP, some of the items are required public disclosure by CMB through communiqués issued previously. Thus, some disclosure recommendations in CGP are required disclosure in nature. This fact is taken into consideration in the construction of the PDI and the items in the index are grouped into the "required" and "voluntary" categories. Specifically, the PDI measures the public disclosure levels of companies through the 50 criteria, out of which 17 are required, 33 are recommended disclosure, according to CGP. This categorization provides three index values, namely, total PDI, required PDI and voluntary PDI. The Public Disclosure Index thus constructed is presented in Annex I.

3.1.2. Variables on Ownership Characteristics

Ownership and control structure is analyzed as a source of differences in the disclosure performance of companies through the variables of ownership structure, free float and share of foreign investors in free float.

Ownership Structure: Family control and foreign control are the two dimensions of ownership structure in this study. In order to determine their ownership structure, the companies in the ISE-50 index are initially grouped into five categories depending on the identity of the controlling shareholder/s. These categories are the following:

1. Family Control: Companies that comply with either of the following criteria are included in this category: free float ratio of less than 50% and the controlling family owns a majority of shares or free float ratio is greater than 50%, but the minority shareholding family elects a majority of board members through privileges that are part of the articles of association
2. Institutional Control: Companies that have a free float ratio of less than 50% and controlling shareholders are domestic institutions such as foundations and pension funds, thus, no ultimate individual shareholders.

3. Foreign Control: Companies that have a free float ratio of less than 50% and controlling shareholder is a foreign corporation.
4. Joint Control: Companies that have a free float ratio of less than 50% and control is exercised jointly by two corporations, one domestic one foreign with equal shares and/or voting rights
5. State Control: Companies that are controlled by state institutions

These categories are subsequently grouped, for purposes of analysis, as "firms under family control" (category 1) versus others (categories 2, 3, 4, 5) and "firms with foreign control" (categories 3, 4) versus others (categories 1, 2, 5). Thus, family control (FAMILY) and foreign control (FOREIGN) are defined as two separate dimensions of ownership structure.

Family control is an important feature of the Turkish corporate context. Evidence on the impact of family control on disclosure levels is scarce, especially relating to developing countries. A recent study (Ali et.al, 2007) which provides evidence on the disclosure performance of family firms, is heavily criticized for its methodology (Hutton, 2007). Although empirical evidence does not permit formulation of clear expectations, different theoretical perspectives provide a basis for our expectations. The prevalent conflict of interest is between the minority shareholders and majority shareholders, who are the family members in family-controlled companies. Family controls the company through various mechanisms, which leads to an information asymmetry between the majority and the minority shareholders. Public disclosure becomes an effective governance mechanism to decrease this information asymmetry. Furthermore, family-controlled firms might be using disclosure as a signaling mechanism to reduce the costs arising from this information asymmetry. Accordingly, family firms can be expected to have more public disclosure, thus higher PDI.

H1: Firms under family-control have higher PDI levels.

Foreign companies are becoming important players in developing markets as globalization is gaining pace. Foreign firms face information asymmetry in the host-country. As foreign companies, they might replicate their home-country disclosure practices in the host country or they might adapt to the practices relevant in the host-country. In our sample, out of the 11 companies

that are controlled singly or jointly by foreign companies, the foreign owner is an EU based company in eight cases and US based company in two cases. In both regions, the corporate governance environment has developed earlier than Turkey. The question is whether they transfer the same standards to their subsidiaries. If they do so, firms under foreign control may be expected import their better disclosure practices from their home country and disclose more as compared to other local companies. Thus, foreign-control can be expected to influence the public disclosure levels positively.

H2: Firms with foreign-control have higher PDI levels.

Free Float (FREEFLOAT): Ratio of shares in free float to total shares outstanding. The ratios published by the ISE on their website are compared with the shareholding information published by the firms on their websites. In case of any discrepancy between the two sources, disclosure by firms is accepted.

The level of free float represents the share of dispersed ownership which does not belong to block holders. The share of block holders determines the concentration of ownership. Concentration of ownership seems to be the major mechanism of control, especially in developing countries where the legal protection of shareholders is weak. Concentration of ownership and disclosure are suggested to be substitute mechanisms of control, as disclosure is found to decrease as concentration of ownership increases (Pattel et.al, 2003). The evidence on concentration of ownership indicates that disclosure is expected to increase as free float increases. This expectation is also in line with the increased need of disclosure due to the conflicts of interests between majority and minority shareholders, especially in the presence of concentrated majority shareholders in Turkey. However, empirical evidence on the positive association between the need for external capital and disclosure may reverse the expectations relating to free float. Lower levels of free float may represent a higher potential for raising external capital, thus an incentive for higher disclosure. Considering the presence of concentrated ownership structure, public disclosure levels might be expected to increase as the share of free float increases, in order to resolve the conflict of interests between the majority and minority, which is the dominant issue in Turkey.

H3: PDI levels increase as the share of free float increases.

Share of Foreign Investors (FORSHARE): The share of foreign portfolio investors in total free float as disclosed by Takasbank (ISE Settlement and Custody Bank, Inc), the central depository for the ISE. Total shares owned by foreign portfolio investors are the sum of the balances, as of June 30, 2006, of two accounts that belong to custodian banks that serve foreign investors (Tükel, 2006)[1].

The share of foreign investors in free float is an ownership dimension specific to our context. The importance of corporate governance on attracting foreign portfolio investors is emphasized in the foreword of CGP, as the chairman of CMB states that "proper implementation of corporate governance principles is essential for the restructuring of Turkish capital markets and for attracting capital inflow into Turkey". Foreign portfolio investors have already a significant share on the ISE; their share of free float was 65,2 percent as of December 30, 2006 (Takasbank). Merton (1987) argues that "if an increase in the size of the firm's investor base is in the best interest of the current shareholders, then the management should expand resources of the firm to induce investors who are not currently shareholders to incur the necessary costs of becoming aware of the firm". In other words, in the context of ISE, where an expansion of the investor base can be achieved by attracting foreign investors, controlling shareholders should improve public disclosure. Kang and Stulz (1997), supporting Merton, mention information asymmetries as one of the two implicit barriers to international investment. Higher public disclosure is expected to reduce information asymmetries faced by foreign investors. Consequently, share of foreign investors in free float is expected to be influential on disclosure levels companies, especially in our context where firm-level corporate governance measures are expected to compensate for corporate governance weaknesses at the country-level and become differentiating factors for the companies to expand their investors base. Thus, the level of public disclosure is expected to be positively related to the share of foreign investors in free float.

[1] This reference can be accessed online at http://tez2.yok.gov.tr, Tez no. 188882.

H4: PDI levels increase as the share of foreign investors in free float increases.

3.1.3. Variables on Corporate Governance Characteristics

In investigating the relationship between disclosure performance and corporate governance attributes, two variables have been used in this study: presence of independent board members and presence of corporate governance committee.

Independent board member/s (INDMEMBER): In case the firms disclosed in their CGCR, annual reports or their websites that there are independent members in the board of directors, this variable is defined as 1, if not, then as 0.

Independent directors have come to be recognized as an important corporate governance mechanism in developed market contexts characterized by dispersed ownership structure. Under dispersed ownership structure, shareholders free ride on each other and do not have the incentives to monitor the management. Consequently, the dominant conflict is between shareholders and managers, as managers might be pursuing their self-interests at the expense of shareholders. In such a case, independent board members are expected to decrease conflicts of interests between shareholders and managers by improving the monitoring and supervisory role of the board. However, empirical evidence relating to the impact of independent board members is mixed and conflicting, even in developed markets. The role of independent board members is more confusing in developed markets characterized by concentrated ownership structure. Independence becomes questionable in the presence of a majority shareholder who actually dominates and controls the board, but at the same time it is essential for the protection of minority shareholders' rights. By enabling better governance, independent board members might be expected to improve disclosure performance of companies. However, independent board members and disclosure might also act as substitutes for each other. Overall, considering the theoretical framework and our contextual characteristics, independent board members might be expected to increase the disclosure performance of companies.

H5: Firms with independent board members have higher PDI levels.

Corporate governance committee (CGCOMM): In case the firms disclosed in their CGCR, annual reports or their websites that the board of directors has established a corporate governance committee, this variable is defined as 1, if not, then as 0.

Formation of corporate governance committee is recommended according to

CGP and few firms have established their corporate governance committees as of the end of period under analysis. Presence of a corporate governance committee might represent the firms' efforts to improve its corporate governance, by complying with the CGP. As such, disclosure performance of companies which have formed their corporate governance committees might be higher than others, as they are trying to improve in all aspects of corporate governance.

H6: Firms with corporate governance committees have higher PDI levels.

3.1.4. Control Variables

Firm size and industry as used as control variables in this study.

Firm Size (MARCAP): Market capitalizations of firms as of June 30, 2006 are taken as an indicator of firm size. The natural logarithm of market capitalization is used in the analysis.

Firm size is an influential variable that influences the public disclosure levels of companies since it determines the level of agency conflicts, information asymmetries and the level of relative benefits and costs of disclosure. Firm size can be expected to increase the level of disclosure using almost all the perspectives outlined above. Furthermore, empirical evidence on the impact of size is almost consistent, documenting the positive impact of size on the level of disclosure. Considering the facts of increasing information asymmetry and decreasing costs of disclosures as firm size increases, firm size is expected to be positively related to the level of disclosures.

H7: PDI levels increase as firm size increases.

Industry (INDUSTRY): While the ISE listed companies are subject to CMB regulations, financial companies are subject to additional rules by other regulatory authorities. Therefore the ISE-50 companies are categorized into two groups, financial and non financial; with the "industry" variable taking on a value of 1 if the firm is a financial firm and 0 if not.

The differences in the regulatory framework on corporate governance between financial and non-financial companies are expected to influence their level of disclosure. Financial companies are subject to more stringent regulations on matters of corporate governance, following the bank failures in the year 2001. Consequently, disclosure levels of financial companies are expected to be more as compared to non-financial companies, especially on required disclosure levels.

H8: Financial companies have higher PDI levels.

3.2. Methodology

The relationship between the variables related to firm characteristics and their levels of public disclosure is studied through multivariate regression analysis. After a discussion on university statistics, regression results are presented.

Two different model specifications were estimated using multivariate regression analysis, with all three PDI values, namely total, required and voluntary scores as dependent variables. Two models are specified according to different definition of the ownership variable.

Model 1.a.

$$PDI(Total)= \alpha + \beta_1 FAMILY + \beta_2 FREEFLOAT + \beta_3 FORSHARE + \beta_4 INDMEMBER + \beta_5 CGCOMM + \beta_6 SIZE + \beta_7 INDUSTRY + \varepsilon$$

Model 1.b.

$$PDI(Required) = \alpha + \beta_1 FAMILY + \beta_2 FREEFLOAT + \beta_3 FORSHARE + \beta_4 INDMEMBER + \beta_5 CGCOMM + \beta_6 SIZE + \beta_7 INDUSTRY + \varepsilon$$

Model 1.c.

$$PDI(Voluntary) = \alpha + \beta_1 FAMILY + \beta_2 FREEFLOAT + \beta_3 FORSHARE + \beta_4 INDMEMBER + \beta_5 CGCOMM + \beta_6 SIZE + \beta_7 INDUSTRY + \varepsilon$$

In this model, PDI represents the public disclosure index, FAMCONT family control, FRFLOAT the free float ratio, FORSHARE the share of foreign portfolio investors in free float, INDMEMBER independent board members, CGCOMM corporate governance committee, MARCAP the market capitalization of the firm and INDUSTRY whether the firm operates in the financial industry or not.

The second model specification is obtained by replacing the FAMCONT independent variable with FORECONT which represents foreign control. The second model was also estimated with all three PDI values, namely total, required and voluntary scores as dependent variables.

IV. Results

Average disclosure performance of ISE companies and the univariate and multivariate results on the impact of ownership and corporate governance characteristics on disclosure performance of companies are presented in this section.

4.1. Public Disclosure Index (PDI) Levels

Public disclosure levels of firms are measured by the PDI values that consist of 50 criteria developed according to CGP. Out of the fifty criteria, 17 are among the required disclosure through various communiqués of the CMB and 33 are voluntary, recommended only by CGP. The average total PDI value of the ISE-50 companies is 75.6%. The average required PDI value is 82.4%, while the average voluntary PDI value is 72.2 %. Required PDI level is higher than the voluntary PDI, however it is still less than the full score. It is interesting to note that companies in the ISE-50 do not fully disclose the seventeen items which are legally required disclosure. Furthermore, variation among companies is the highest in required disclosure. The PDI levels of the ISE-50 companies are provided in Table 1 below.

Table 1: Public Disclosure Index Scores

	No. Of Criteria	Mean	Standard Deviation
Total PDI	50	75,6%	14,2%
Required PDI	17	82,4%	18,1%
Voluntary PDI	33	72,2%	14,6%

The PDI values as of the end of 2006 show that the ISE-50 companies have made an effort to disclose the voluntary information that was recommended by the CMB in the CGP, which were finalized in 2005. Previous studies on Turkish companies (Aksu and Kösedağ, 2006; Ağca and Önder, 2007) have also documented medium level of public disclosure in ISE companies.

Among the required items, financial tables have the highest disclosure percentage. Almost all companies disclose their financial tables, notes to these tables and their annual reports. Members of the board of directors are also disclosed by a great majority of companies. The least disclosed items are the qualifications and experiences of senior management and recent changes to the articles of association. Voluntary items with the highest disclosure ratios are information pertaining to the board of directors, such as the mode of operation of the board of directors and board committees. The items with the lowest disclosure ratios are estimates/expectations about the future and circulars and prospectuses for stock issues. In particular, potential conflict of interest with independent auditors is disclosed by only one company in the ISE-50 Index.

4.2. Univariate Analysis Findings

Although companies listed on the ISE display a relatively high level of disclosure, there is considerable variation between companies. Ownership and corporate governance characteristics are investigated as sources of differences between company practices. Univariate differences are analyzed through ANOVA and correlation analysis and reported in order to present the descriptive results of variables under analysis. Univariate results on all the variables used along the dimensions of ownership characteristics, corporate governance characteristics and control variables are presented in Table 1, at the end of this section.

4.2.1. Impact of Ownership Characteristics on the PDI

Impact of ownership characteristics on disclosure levels of companies is investigated through the variables of ownership structure, the level of free float and the share of foreign investors in free float. At the univariate level, while ownership structure does not seem to influence the disclosure levels of companies, there seems to be a negative relationship between the level of free float and the PDI levels and a positive relationship between the share of foreign investors in free float and the PDI levels.

Ownership structure does not act as a source of differences in disclosure performance, defined either along family-control or foreign control dimensions. Of the ISE-50 companies, 26 are controlled by families. The average scores of family controlled firms for total as well as required and voluntary PDI are lower than the scores of the remaining ISE-50 companies, but the difference is not statistically significant. Family firms which have the highest potential for the conflict between majority and minority shareholders do not disclose more in order to alleviate this conflict. Of the ISE-50 companies, three are controlled by foreign companies and eight are under the joint control of foreign and domestic family-controlled companies. The average PDI scores of foreign controlled firms are higher than those of other firms in total, required and voluntary categories, but the difference is slightly significant (significant at 10% level) in only the required category. Firms controlled singly or jointly by foreign firms pay more attention to disclose required information, but do not differ from other firms in disclosing the voluntary information. In the required PDI, the average PDI level of foreign firms is 90.7 %, while it is 80,8% for the others. Higher level of compliance in the required disclosure may be related to the liability of foreignness and the resulting efforts to gain legitimacy in a foreign environment.

The free float ratio is negatively correlated with all PDI levels and this negative relationship is statistically significant for the total PDI, as well as the required and voluntary PDI levels (significant at 5% level for total and required PDI, at 10% for voluntary PDI). This univariate result is more in line with the expectation formed according to the potential to raise external capital, rather than expectation formed based on prevalent conflicts of interests. The lower levels of free float might be representing a higher potential for raising external capital and a higher level of disclosure. As the free float ratio increases, disclosure decreases due to decreasing potential of raising external capital. However, this impact might be due to firm size, as free float ratio decreases with firm size.

The share of foreign investors in free float is positively correlated with PDI levels. This positive relationship is statistically significant at 1% level for the total and required PDI scores and at 5% level for the voluntary PDI scores. As the share of foreign investors in free float increases, the PDI levels also increase. This might be due to increased disclosure by companies to attract foreign investors or due to preference by foreign investors for better disclosing firms. Whatever the direction of causality is, this univariate result is consistent with our expectation

of positive relation between foreign investors' share and PDI levels. However, this finding at the univariate level might also be due to the impact of firm size, as the share of foreign investors in free float increases with firm size.

4.2.2. Impact of Corporate Governance Characteristics on the PDI

Impact of corporate governance characteristics was analyzed in terms of the existence of independent board members and of the corporate governance committee. At the univariate level, there is no difference in the disclosure performance of companies that have independent members on their boards as opposed to those that do not. Presence of independent board members does not act as a source of difference in disclosure levels, in any of the PDI measures. On the other hand, the presence of a corporate governance committee seems to influence PDI performance slightly, only at the voluntary PDI level.

Of the ISE-50 companies, 17 disclose that they have an independent board member. The comparison between the PDI scores of these firms and the PDI scores of firms that do not have independent board members indicates a closely similar disclosure performance in these two different groups. In fact, there is no difference in the required PDI scores of the two categories. Firms with independent board members have a higher voluntary PDI score, but the difference is not statistically significant. The results contradict with the expectation of better disclosure performance in firms with independent directors, which improve the monitoring role of the board and the overall corporate governance of the company, while they might be supporting the argument that independent board members and disclosure are substitute mechanisms.

Of the ISE-50 companies, 21 have set up a Corporate Governance Committee. There is no difference in the total and required PDI scores of the companies that have corporate governance committee versus that do not. However, firms with corporate governance committees have a higher voluntary PDI levels and the difference is statistically significant at 10%. As the corporate governance committee is representative of the efforts of companies in improving their overall corporate governance, presence of a corporate governance committee is expected to improve the disclosure performance of companies, however it only influences disclosure performance slightly and only relating to voluntary PDI.

Table 2: Univariate Results

	Total PDI%		Required PDI%		Voluntary PDI%	
Ownership Structure	FAMILY	Others	FAMILY	Others	FAMILY	Others
Mean	74,2	77,3	79,6	85,3	71,3	73,1
F-Ratio	0,585		1,230		0,182	
Significance	0,448		0,273		0,672	
Ownership Structure	FOREIGN	Others	FOREIGN	Others	FOREIGN	Others
Mean	80,0	74,9	90,7	80,8	74,5	71,9
F-Ratio	1,217		3,138		0,283	
Significance	0,276		0,083		0,597	
Ownership Structure	FREEFLOAT		FREEFLOAT		FREEFLOAT	
Correlation Coef.	-0,326		-0,346		-0,261	
Sign.	0,021		0,014		0,068	
Ownership Structure	FORSHARE		FORSHARE		FORSHARE	
Correlation Coef.	0,430		0,355		0,409	
Sign.	0,002		0,011		0,003	
Corporate Governance	INDMEMBER	Others	INDMEMBER	Others	INDMEMBER	Others
Mean	78,6	74,1	82,3	82,3	76,7	69,9
F-Ratio	1,106		0,000		0,248	
Significance	0,298		1,000		0,122	
Corporate Governance	CGCOMM	Others	CGCOMM	Others	CGCOMM	Others
Mean	78,5	73,6	82,6	82,2	76,3	69,2
F-Ratio	1,449		0,009		3,052	
Significance	0,235		0,927		0,087	
Control Variable	SIZE		SIZE		SIZE	
Correlation Coef.	0,363		0,403		0,279	
Sign.	0,010		0,004		0,050	
Control Variable	FINANCIAL	Others	FINANCIAL	Others	FINANCIAL	Others
Mean	79,5	74,6	91,2	79,6	73,0	72,0
F-Ratio	1,012		4,273		0,440	
Significance	0,320		0,044		0,835	

Note: FAMILY denotes whether the firm is controlled by a family; FREEFLOAT is the ratio of free float to total shares; FORSHARE is the share of foreign investors in free float; INDMEMBER represents the existence of independent board member(s); CGCOMM indicates the existence of a corporate governance committee; SIZE is the market capitalization of the company; FINANCIAL indicates whether the company operates in financial industry.

4.2.3. Impact of Control Variables (Size and Industry) on the PDI

In line with theoretical expectations and empirical findings, firm size and PDI scores are positively correlated. This positive relationship is statistically significant at the 1% level for the total and required PDI scores and at the 5% level for the voluntary PDI scores. As firm size increases, the PDI levels also increase at the univariate level.

When the ISE-50 companies operating in the finance industry are compared with companies operating in non-finance industries, no difference is observed in the total and voluntary PDI scores. However, the required PDI score of the finance industry companies is higher than the non-finance industry companies and the difference is statistically significant at the 5% level. The fact that the finance industry is subject to not only the CMB as a regulatory authority, but also the Banking Regulation and Supervision Agency (BRSA) should be taken into account while interpreting this result.

4.3. Multivariate Analysis Findings

Estimation results of models 1a, 1b and 1c, which are described above in the Methodology section, are reported below. Of the three different specifications of Model 1, Model 1a with the total PDI score as the dependent variable is significant at the 10% level and Model 1c, with voluntary PDI score as the dependent variable is significant at the 5% level. Model 1b is not statistically significant; hence the firm-level differences in the required PDI scores cannot be explained with this model. The required PDI scores do not vary with firm characteristics; firms exhibit similar performances in terms of required public disclosure items. The difference in total disclosure performance of the companies arises from their differences along the voluntary disclosure dimension.

Interest of foreign portfolio investors is the only statistically significant explanatory variable in explaining both the voluntary and total PDI scores. Thus, hypothesis 4 (H4) is supported as PDI levels are found to be positively related, controlling for the effects of size and industry. As the share of foreign portfolio investors increases, total and especially voluntary PDI scores increase. Another variable that influences only the voluntary PDI levels is the presence of a corporate governance committee. In explaining voluntary PDI scores, the existence of corporate governance committee is also statistically significant, but at 10% level of significance. Formation of corporate governance committee might reveal a genuine interest in improving the governance of the company.

Model 1 results reveal that ownership structure of firms is not related to their public disclosure values, which is in line with findings of univariate analysis. Whether or not firms are controlled by families does not seem to have an impact on their public disclosure levels.

Impact of free float on PDI levels which is observed at the univariate level disappears in multivariate analysis. The negative relationship between free float ratio and PDI scores found in univariate analysis can be explained by the higher free float ratio of small cap companies. In order to include this factor in the analysis, the multivariate models above are also estimated by replacing the "free float ratio" and "firm size" variables with "free float market cap" variable that is obtained by multiplying the former two variables. The results are the same as the previous estimations, hence not reported here.

In addition Model 2, described above in the Methodology section, is also estimated. However, when the ownership structure is defined as foreign control, it does not have an impact on the public disclosure level of companies. The results are not reported here as this model gives the same results. The results of Model 1 are reported in Table 3.

Table 3: Multivariate Analysis Results

		Dependent Variables	
Independent Variables	Total PDI	Required PDI	Voluntary PDI
Constant	0,832**	0,633	0,934**
	(0,344)	(0,448)	(0,351)
FAMILY	-0,026	-0,019	-0,03
	(0,041)	(0,054)	(0,042)
FREEFLOAT	-0,002	-0,002	-0,002
	(0,001)	(0,002)	(0,001)
FORSHARE	0,19*	0,116	0,228**
	(0,102)	(0,133)	(0,104)
INDMEMBER	0,02	-0,019	0,04
	(0,044)	(0,057)	(0,045)
CGCOMM	0,056	0,027	0,070*
	(0,041)	(0,053)	(0,041)
SIZE	-0,009	0,013	-0,021
	(0,025)	(0,033)	(0,026)
INDUSTRY	0,02	0,116	-0,009
	(0,053)	(0,133)	(0,054)
R2	0,146	0,102	0,158
F	2,197	1,796	2,312
Significance of F	0,054	0,114	0,043

Note: FAMILY denotes whether the firm is controlled by a family; FREEFLOAT is the ratio of free float to total shares; FORSHARE is the share of foreign investors in free float; INDMEMBER represents the existence of independent board member(s); CGCOMM indicates the existence of a corporate governance committee; SIZE is the market capitalization of the company; INDUSTRY indicates whether the company operates in finance or non-finance industry.

***, **, * denote 1%, 5% and 10% level of significance, respectively.

Numbers in parenthesis are standard errors.

V. Conclusions

As an emerging market, Turkey is characterized by both concentrated ownership structure, mostly controlled by families, and a high share of foreign portfolio investors. In such a market, disclosure performance of companies is measured and analyzed as an important dimension of corporate governance. Ownership characteristics of companies are investigated as sources of differences in their disclosure performance, in addition to two corporate governance mechanisms. Ownership characteristics used in the study include family versus institutional control; domestic versus foreign control, share of free float and share of foreign portfolio investors. This is the first study to examine the influence of the share of foreign portfolio investors on public disclosure.

Our univariate analysis results reveal that only three independent variables have a significant relationship with all three PDI scores. Share of foreign portfolio investors and firm size are positively related to PDI scores, while free float ratio is negatively related. In addition, existence of a corporate governance committee has a positive impact on voluntary PDI scores. In multivariate analysis results however, number of significant relationships between PDI scores and firm characteristics decline to one: only the share of foreign portfolio investors has an explanatory role in the public disclosure level. The impacts of free float ratio and firm size are eliminated in multivariate analysis. In our opinion, the most contribution of this study is the positive relationship documented between the share of foreign portfolio investors and the level of public disclosure. This relationship is stronger when only the voluntary dimension of public disclosure is taken into account. Public disclosure is better in companies where foreign portfolio investment is higher rather than in companies with higher free float and greater market capitalization. At this stage, it is not possible to say anything on the direction of this relationship, in other works, whether foreign investors prefer firms that disclose more information to the public or it is higher foreign interest that lead companies to pay more attention to disclosure. Additionally, the positive impact of the corporate governance committee on voluntary public disclosure continues in multivariate analysis.

Our findings support the argument that foreign portfolio investors suffer from information asymmetries and these asymmetries can be reduced by increased disclosure, leading foreign investors to invest in securities that they are best informed about. The findings also support the argument of the CMB of Turkey that improved corporate governance is influential on attracting foreign capital.

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Appendix 1:

PDI Criteria

		CMB Communiqué		CMB CGP		
	Attributes	Annual Report	Public Disclosure	Annual Report	Compl. Report	Internet
1	Balance sheet (current and past year)	x		x		x
2	Income statement (current and past year)	x		x		x
3	Cash flow statement	x		x		x
4	Statement of changes in stockholders equity	x		x		x
5	Notes to financial statements	x		x		x
6	Auditor's report	x		x		x
7	Interim financial statements		x			x
8	Publicly disclosed material information		x			x
9	Annual report (current year)		x			x
10	Ownership structure - identity and %share	x				x
11	Amendments to articles of association	x				x
12	Management report/analysis of current year	x		x		
13	Market share or industry information	x		x		
14	Summary of key ratios	x				
15	List of board members and duties	x			x	
16	List of top managers - executives	x				
17	Experience and qualifications of senior management	x				
18	Disclosure about internal control system			x	x	
19	Experience and qualifications of board members			x		
20	Ultimate controlling shareholders			x	x	
21	Information on privileged shares			x	x	x
22	Dividend policy			x	x	
23	Conflicts of interest with auditors			x		

PDI Criteria (Continued)

24	Basic performance forecasts			x		
25	Corporate governance principles compliance report			x		x
26	Internet reporting and internet address				x	x
27	Updating of internet information					
28	Investor relations department and personnel				x	
29	Access information to investor relations				x	
30	Notice of Meetings and agenda to General Assembly				x	x
31	Minutes of General Assembly				x	x
32	Status of board members (directors)				x	
33	Directors' potential conflicts of interests				x	
34	Directors' salaries, bonuses and other benefits				x	
35	List of potential inside traders				x	
36	Statement on how board operates				x	
37	Qualifications of board membership				x	
38	Information on board committees				x	
39	Disclosure policy				x	
40	Code of ethics				x	
41	Policies for other stakeholders				x	
42	Human resource policies				x	
43	Corporate social responsibility activities				x	
44	Annual report – past					x
45	English version of website					x
46	Articles of Association					x
47	Prospectuses and circulars					x
48	Trade registration information					x
49	Proxy forms					x
50	Frequently asked questions					x

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GOOD CORPORATE GOVERNANCE STRUCTURES WITH THREE BETTERS: INTERNAL CONTROL, RISK MANAGEMENT AND ACCOUNTING PRACTICES

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Abstract
This paper examines the research body of corporate governance which is one of the hot issues in the financial arena nowadays. Discussing salient and current theoretical and empirical works in the stream, paper devotes a special emphasis to financial services industries. Paper implies that there is no perfection in governance theories, *per se*. Instead, all the theoretical approaches have pros over the others, therefore, should rather be considered to complement each other, when talking about the identification and the quality of the governance style. Paper suggests that, a good corporate governance state results in a better internal control and risk management particularly for corporations. As good corporate governance structure refers to the full recognition of transparency or disclosure, more quality accounting practices will be, *de facto*, in place as well.

I. Introduction

The last decade has become a destination where corporate governance has been realized to be of great importance to the essence and enhancement of competition power. In particular, some developed countries and international financial institutions have started to ask for the quality of the corporate governance practices of the organizations (even nations) that request loans or intend to make an investment, in consultation with their assessments about the financial performances of those demanding organizations. It is probably because corporate

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governance is acknowledged to apply not only to private or public organizations but to the government-based enterprises and eventually to the sovereigns.

Having a rich theoretical root, corporate governance has been one of the most influential debates worldwide. In the literature, corporate governance is frequently theorized on three venues: agency, stakeholder and shareholder theories. Since this paper will follow the literature, agency, stakeholder and shareholder theories will be discussed in detail. However, there is another approach scholars often forget to stress or ignore when discussing the early background of corporate governance: incomplete contracts, or literally, transaction costs.

It could be argued that today's governance discussions trace back to the incomplete contracting problem. Coase (1937,1960) has suggested that it is the transaction costs that made the firms come into existence. The reason is the incompleteness of the contracts. When the main covenants of the contracts are not drafted in duly or are not well respected, we would have incomplete contracting problem that raises not only economic but organizational (governance) issues. Within this context, transaction costs include any costs inducing the persistence of firms. Accordingly, contractual costs, costs of sub-optimality or costs of source (capital) are all transaction costs.

Respection of the provisions or terms the contracts stipulate is meant to be the absence of any pre-contractual or post-contractual asymmetries. Pre-contractual asymmetries are such that at least one of the contractual parties' intentions is ex ante or a priori bad. Adverse selection may set an example in this. Post-contractual asymmetries are the ones where at least one of the contractual parties cheats on the procedures or fullfillment of the contractual obligations. Moral hazard, hold-up or shirking are a few examples in this. Therefore, in the post-contractual asymmetries, at least one of the contractual parties has ex post bad intention.

Before going into any definition of corporate governance, it should be noticed that corporate governance recalls a broad parlance. It is often used interchangeably with the corporate control concept. Hawley and Williams (1996) recognize four corporate control models to proxy for corporate governance such as simple finance model, stewardship model, stakeholder model and political model.[1] Further, corporate governance includes a room for market for corporate control in order to reflect the impact of market forces and

[1] Turnbull (1997).

circumstances on the governance behavior of a given organization; or a space for the impacts of financial institutions' corporate control as well (e.g. Santos and Wilson, 2006).

It is possible to define corporate governance as a "system or chain of relations between the shareholders, board of directors and management of a company, as defined by the corporate charter, by-laws, formal policy and rule of law".[2] OECD considers corporate governance as being a notion involving a set of relationships among a company's management, its board, its shareholders and other stakeholders.[3] This implies that, corporate governance provides us with a certain structure or cluster, through which objectives of the companies are set, and the means of attaining those objectives and monitoring performances are predetermined.[4] Corporate governance is also seen one of the key determinant factors in improving economic efficiency and growth, which in turn would suggest for instance increase in economic development.

People who face corporate governance issues have considered certain frames, principles and guidelines as a main stream in the table. As a regulatory body concerning several cross border economic issues (e.g. international transfer pricing regimes, anti-money laundering policies, anti-tax avoidance/evasion schemes etc.), OECD is the major benchmarking institution to set comprehensive principles corporate governance leans on. OECD has framed rules of corporate governance significantly in the year of 1999 with a wide acknowledgement around the globe. In view of 1999 Principles, some rigor basis for an effective corporate governance framework has been established. Such a formation has been stated to deliver transparent and efficient markets with consistency in terms of law or legal issues and to lead certain cascades of the responsibilities among supervisory, regulatory and enforcement authorities.[5] 1999 OECD governing rules also suggest that fundamental principles are expected to hold mainly for publicly-held companies, however, application of these reference proposals to the other types of entities (e.g. non-publicly held/closed, financial or non-financial etc.)

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[2] "Corporate Governance in Russia" at http://www.corp-gov.org/glossary.php3?glossary_id=34, [W.date], (14.06.2006).

[3] "Corporate Governance Principles 2004 [1999]-OECD: OECD Principles of Corporate Governance –Introduction-", http://www.valuebasedmanagement.net/articles_oecd_corporate_governance_principles_2004. htm, [W. date], (14.06.2006).

[4] Ibid.

[5] Ibid.

may be possible as well.[6] OECD principles include four main sections therein, such as (a) shareholders, (b) stakeholders, (c) disclosure and transparency, and (d) board, de facto. In other words, principles postulate to direct focus on the claims of shareholders, an equitable treatment of shareholders, the treatment of stakeholders, a sufficient level of disclosure, transparency and on the duties of board members.

As another influential international lobby, Worldbank (WB) has declared its mission to help its clients (sovereigns) in the evaluation of their institutional corporate governance frameworks and practices, by issuing country-based corporate governance assessments using the principles of OECD as a guide. The assessments WB has made about some of the countries like Brasilia, Turkey, Poland have been carried out under the auspices of the joint bank-fund initiatives on the Financial Sector Assessment Program (FSAP) and the Reports on the Observance of Standards and Codes (ROSC).[7] According to WB, corporate governance entails an extensive range of issues of allocation of control rights within a firm.[8]

IMF suggests that a promising corporate governance mechanism will exist, depending on some parameters that the OECD has stressed several times. In particular, as long as the extent of disclosure [e.g. transparency] is increased, power of large insider shareholders is curbed [e.g. through strengthening minority shareholder rights], sizeable outside shareholders are present, and financial system is private and competitive [e.g. broader capital markets with sound and efficient financial systems], foundations for a good governance structure will be embodied.[9] In other words, for a decent corporate governance structure to be accomplished on an arm's-length basis, in addition to transparent relations among corporations, governments and banks, fundamental cultural and institutional changes are required as well.[10] This suggests, that corporate

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6 Ibid.

7 "Private Sector Development: About Corporate Governance ", http://www.worldbank.org, (15.06.2006).

8 Governance here implies how the authority is exercised and the way the quasi-rents generated by firm are allocated/aligned along different classes of stakeholders. For that, see Klapper and Love [resource persons], "Finance Research: Corporate Governance" at http://www.econ.worldbank.org/programs/finance/topic/governance, [W.date], (02.11.2004).

9 See for instance Iskender *et al.* (1999).

10 Ibid.

governance has one-to-one association with economic development. IMF further refers that, as long as well-functioning laws, regulations, and business traditions and practices lead the relationships between companies and their investors, productivity and growth are expected to increase.[11] This is because countries with poor corporate governance skills are more vulnerable to financial crises than those with better governance skills.[12]

Recent events starting with Enron scandal and following series of companies misrepresenting their financial statements and making other frauds highlighted the importance of corporate governance even in countries that are used to be considered to have "close to perfect" capital markets.[13] In developing countries, corporate governance issue is indeed even more important because of (a) the weak legal system which cannot effectively enforce contracts and resolve disputes, (b) poor quality of information which prevents effective monitoring and (c) huge corruption and mistrust involved.[14] Recently, emerging law and finance literature has highlighted the importance of investor protection for development of financial markets and firms' access to finance.[15] According to another definition suggested by WB, corporate governance stands for the main frameworks and processes for the direction and control of companies such that, it regards the relationships among the management, the board of directors, the controlling shareholders, minority shareholders and other stakeholders (Lubrano, 2003).[16]

Aktaş et al. (2007) suggest that, accounting helps achieve transparency and public disclosure that are both in the domain of corporate governance. True, fair, comprehensive financial statements that are in line with international

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[11] This is an argument similar to those of WB and OECD.

[12] Some empirical studies document that better corporate governance increases the likelihood that organizations will satisfy the legitimate claims of all stakeholders and carry on fulfilling its environmental and social responsibilities smoothly. This then secures a long-term and sustainable growth of companies which is immensely important to economic growth. See Klapper *et al.* (2002).

[13] Ibid.

[14] Ibid.

[15] Ibid. For this, see the discussions in empirical documentations.

[16] This implies that controlling is not a unilateral matter as acclaimed by pure shareholder theorists but of a multi-lateral-perspective instead. This is probably because the potential misconduct of the claims of minority shareholders by the larger shareholders is disfavoured by WB. Therefore it could be argued that OECD lends more credit to stakeholder framework than shareholder view and hence than agency approach, given other required terms and conditions are fulfilled.

accounting standards could well lead decision makers to make more rational decisions, when dealing with a transaction or making an investment.

Corporate governance is spread over a huge territory. This paper investigates the research body of corporate governance which is becoming tremendously important issue for any type of organizations in the globe. Hence, the remainder of this paper is organized as follows. Section 2 investigates works on corporate governance with a special emphasis in financial services industries. The link between agency and shareholder theories is also presented out there. Section 3 concludes with policy recommendations.

II. Hot Debate of the New Age: Corporate Governance

2.1. Major Foundations

2.1.1. Profit Maximization Venue, Given the Constraints: The Agency Problem

The agency problem is one of the well-known and recognized discussions in economics. There is a huge amount of literature in this. What is usually touched in those is that: when we have agency problem, it is quite likely to have not a first best solution in a deal (contract) promised (drafted) by the contractual parties (economic agents). We would probably have a second best solution at best. Namely, agency problems or such will induce the equilibrium to be set in a sub-optimal point.

Technically speaking, if the contractual parties have different goals (goal incongruence) and division of labour or specialization, we might have an agency problem since the covenants of the contract are intended to be violated. In particular, agency problem arises when the desires or goals of the principal and agent conflict and when it is hard or significantly costly to monitor how the agent is performing. Further, problem may also arise since risk preferences of principal and agents are different and indeed opposite, which is often referred to as risk-sharing incongruence in the literature.[17] The analysis unit is given as a contract between principal and agent while information is assumed to be a

[17] This issue is known as principal-agent problem.

purchasable commodity (Eisenhardt, 1989).[18]

Agency theory looks back to Williamson (e.g. 1964, 1967, 1979, 1981, 1985, 1987) or even to Coase (1937). The literature has a very rich body in terms of studying agency problem and its impacts. The main themes in these papers have basically focused on the nature of the firm, separation of ownership and control, costs of production and on information and transaction costs. Known as Coase theorem (1960), Coase argued that, regardless of what law says about who is liable, the economic outcome entailing state of the distribution of wealth would be stationary if transaction costs read zero. He argued, that firms should be realized as entities which are endogenous to any economic system. This in turn makes property rights not affect the efficiency of the allocation of resources, given its initially aligned position. Later on, Demsetz (e.g. 1967, 1968, 1969, 1972, 1973 and 1979) and Alchian (e.g. 1958, 1959, 1962, 1964, 1965, 1969, 1972 and 1978) were the early two who tried to elaborate on what Coase said. An affiliated name with Coase, Williamson (1985) argued that, not only production but transaction costs should be considered in this since firms are profit maximizers. He meant that minimizing total costs would also mean to minimize transaction costs, the latter of which is borne owing to opportunism and bounded rationality. Fundamental variables therefore are given to be frequency, uncertainty and asset specificity. In particular, Alchian and Demsetz (1972) argue that, long-term contracts between employer and employee are not fundamental to the organizations and that, firms came out as efficient economic organizations to advance and control the production of the team that introduced

[18] Following Jensen (1983), agent theory could be segregated into two parts, a-) Positivist Agency Theory, b-) Principal-Agent. In the former, research mainly focused on the special case of the principal-agent relationship between owners and managers of large public corporations, adopting less mathematical approaches to the establishment and advancement of agency theory. In this context, agency theory conjectures that agent is more likely to behave in the interests of the principal when *(a)* his contract is outcome based and *(b)* the principal has information to verify the agent's behaviour. On the other hand, in the latter, research has been concerned about an overall theory that would better explain principal-agent relationships (e.g. employer-employee, lawyer-client, buyer-supplier and so on and so forth). This approach is however about abstract expositions and works with mathematical justifications unlike the previous approach. Thus it involves a careful specification of assumptions to be followed by logical deductions and proofs. Nonetheless, both the approaches are not conflicting with each other but rather complementary since both explain (pre/post-) contractual asymmetries.

metering, monitoring and problem of organization. In the paper, market competition among potential team members is said to guide membership of team and rewards on individual basis. The specialist getting the residual rewards will be the monitor of the team members. Within this framework, the residual claimant should be assigned the power to revise the terms of the contract in order to discipline team members and hence reduce potential shirking. Moreover, it is argued that the lower the costs of managing, the greater will be the comparative advantage of organizing resources within the firm. And transaction costs can be shrunk, should the property rights efficiently characterized.[19]

Jensen and Meckling (1976) develop a theory of ownership structure based on property rights, agency (principal-agent) relationships and finance. They examine agency costs, relate it to separation and control, debt and outside equity. In particular, the analysis of the factors affecting issuance of debt and equity claims is given to be a special case of the supply side of the completeness of markets problem. Jensen and Meckling imply that, an entrepreneur or manager in a firm with a hybrid form of financial composition (i.e. both debt and equity) tends to select a set of activities for the firm such that the total value of the firm would be less than it would be if that entrepreneur or manager were the sole owner.[20] Fama and Jensen (1983) analyze the survival of organizations in which important decision agents do not bear a major share

[19] As to profit-sharing firms, paper states that an equal division of profits and losses between owners of the inputs will leave each with stronger incentives to reduce shirking if the optimal team size includes only two owners of inputs (as opposed to the case where optimal team size is larger than that). So, incentives to shirk are positively related to the optimal size of the team under an equal profit-sharing scheme.

[20] The notion of 'residual loss' which is given as a divergence between agent's decisions and decisions expected to be maximizing the welfare of the principal is embodied in the paper. Thus, agency costs are given as the aggregate value of monitoring costs incurred by the principal, the bonding expenditures and the residual loss. For one thing, the firm is articulated as not an individual in Jensen and Meckling, instead rather, as a legal fiction serving as a *nexus* of a set of contracting relationships among individuals. Within this viewpoint, firm behavior is expected to explain the market behavior. For another thing, civil law and common law as well as human ingenuity (ability to create or generate) have important effects on the determination of the augmentation of the agency costs. Jensen and Meckling also argues that benefits generated from specialization would outweigh the costs of agency incurred. Therefore, in terms of corporate governance, it could be argued that the lower the agency costs and/or the higher the benefits from specialization, the more decent the corporate governance system in an organization will be, ceteris paribus.

of the wealth effects of their decisions. Their analysis shows that survival of the organizations is characterized by the separation of ownership (risk-bearing) from control (decision) mechanism.[21] Further, organization is given to be the nexus of contracts, both written and unwritten, among owners of factors of production and customers. Fama and Jensen call these contracts as internal rules of the game. Accordingly, those who bear residual risks would be residual risk bearers and therefore residual claimants.

As another seminal paper, Alchian and Woodward (1988) consider transactions as exchanges which are transfer of property rights to resources with no promises or latent future responsibility. They view the contracts as promises to the future performance –vs. exchange. Thus, transaction costs might be decomposed in to costs of ensuring an efficient or productive teamwork and to costs of the quality of the contractual agreement which is expected to serve for opportunism minimization, if any. Alchian and Woodward argue that hold-up and moral hazard problems should cautiously be separated from each other. Coupling moral hazard with plasticity, they conjecture that, the higher the level of the plasticity, the higher the susceptibility to moral hazard. Concerning financing choice of the firm, Alchian and Woodward argue that firms with more plastic assets will have lower debt/equity ratios than firms with less plastic or relatively more implastic assets. Therefore, in contrast to Jensen and Meckling (loc.cit.) and Fama and Jensen (loc.cit.), Alchian and Woodward does not adopt the view that firms should be regarded as a nexus of (long-term) contracts. This is because, such a description may weaken or even prevent an efficient use of firms as basic units in the analyses.[22]

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[21] In addition to large corporations, separation is also meant to be applicable to financial mutuals, large professional partnerships, even to non-profit organizations as well.

[22] Bounded rationality and opportunism are given as sources of transaction costs (both across markets and within firms). By bounded rationality, Williamson means people with limited information and limited ability to process it, implying (i) incomplete information regarding market opportunities and (ii) limited ability to predict the future. By opportunism, he means that when a conflict arises between what people want and what they have agreed to do for others, they will act in their own interest insofar as it is costly for others to know their behaviour. He argues that opportunism derives from bounded rationality plus self-interest. Within this view, opportunism is seen as a concept covering honest disagreements (rather than dishonest agreements). For this, see Williamson (1985).

2.1.2. Simultaneous Consideration of the Claims of Each and Every Person: The Stakeholder Approaches as Corporate Social Responsibility Venue

In agency problem, the main issue is either goal incongruence or risk-sharing incongruence. Unlike agency problem, the perspective of the stakeholder theory, by definition, is much more broader. Besides, there is more than one stakeholder approach, in contrary to the agency framework or to the shareholder theory. Each approach has its own definition about who a stakeholder is, how a stakeholder should be identified or what stakeholder right means. Jawahar and Mclaughlin (2001) define stakeholders as any group or individual to influence or to be influenced through the realization of organization's goals. Notice that in such a definition, stakeholders are not only characterized to adopt a passive role, but also to undertake an active engagement. This is a definition, in which the common point is the need for an interaction so as to dub group or individual as a stakeholder.

Freeman (1984) argues that, the organization has interactions with different stakeholders (constituents) to affect or to be affected by the actions of that organization. Clarkson (1995) and Donaldson and Preston (1995) argue that, the interests of all the legitimate stakeholders have intrinsic value and no set of interests is assumed to dominate the others. Jones and Wicks (1999) suggest that, stakeholder theory puts a special emphasis to the managerial decision makings.

Donaldson and Preston (loc.cit.) develop a stakeholder approach that considers property rights, where the approach indicates the normative base as a corner stone of all but for a robust stakeholder theory. Particularly, model by Donaldson and Preston proposes that: (a) the stakeholder theory is unarguably descriptive, instrumental but fundamentally normative as well, (b) stakeholders are persons or groups with legitimate interests and are identified by their interests in the corporation, (c) the interests of all the stakeholders are of intrinsic values and (d) stakeholder management requires a simultaneous attention to the legitimate interests of all appropriate stakeholders. On the other hand, stakeholder approach (known as relationship attributes-based stakeholder theory) adopted by Mitchell et al. (1997) conjectures that (a) stakeholder attributes are variable, not steady state, (b) stakeholder attributes

are socially constructed, but not objective realities[23] and (iii) consciousness and wilful exercise may or may not be present. Relationship attributes-based stakeholder theory stipulates that, stakeholder salience will be positively related to the cumulative number of stakeholder attributes [i.e. power, legitimacy, and urgency] which are perceived by managers. More specifically, stakeholder salience is low, where only one of the stakeholder attributes is perceived by managers; it is moderate, where two of the three aforementioned attributes are perceived by the managers and it reads high, where all the three said stakeholder attributes are perceived by the managers. Hence, managers as practitioners are expected to enrich the management techniques in dealing with multiple stakeholders or stakeholder groups simultaneously.

Jones and Wicks (loc.cit.) mainly hypothesize the followings: (a) the more integrated the normative basis with the instrumental grounds at the same time, the more complete the stakeholder theory and (b) the richer the mix (match) and composition of the constituents of the social sciences and ethics, the better/stronger the stakeholder theory one may have in hand.[24] Stakeholder approach (known as convergent stakeholder theory) by Jones and Wicks suggests then the followings: (i) relationships shaped by mutual trust and cooperation are morally desirable, (ii) organizations, whose managers establish and keep relationships with their stakeholders on mutual and cooperative basis, will realize competitive advantage over the ones whose managers do simply not, (iii) mutual trust and cooperation are socially beneficial beside to adding economic value to the organizations, (iv) the behavioral contingency is automatically to be adopted and (v) human behaviour is malleable.

In particular, Jawahar and Mclaughlin (loc.cit.), in the light of organizational life cycle treatment, argue that, at any given organizational life cycle stage, certain stakeholders, because of their potentiality to satisfy critical organizational needs, will be more important than the others. This means that, the more critical the stakeholders to the organizations, the higher the prima facie priority of one set of interests and benefits over another. Scholars also suggest that, a strategy an organization would use to cope or deal with each and every

[23] Existence of each attribute is a matter of multiple perceptions.

[24] This is because shared values as well as shared understandings driving stakeholder research may deliver better or more accurate consequences.

stakeholder's concerns, may be developed, depending on the importance of the given stakeholder to the organization, relative to the other stakeholders. Using this model, it seems possible first to describe the corporate social performance of the strategic business units as they evolve from one stage to another, to focus on threats which are intrinsic to the life cycle stages and eventually to establish such strategies as proaction, accommodation, defense and reaction to the interactions with the stakeholders.

2.1.3. A Relevant Approach to the Agency Framework: Shareholder Theory as a Shareholder Value Maximization Venue

It could be reasonably argued that there is a kinship between agency and shareholder theories. The reason is that in both the theories, the main idea is to obtain a maximum firm value (profit maximization), given the constraints on the contractual parties. What changes is the technical way to go for it. In shareholder theory, it is important to know how to measure the shareholder value and what types of indicators may be used in metering. Similiar to the agency view, in shareholder theory, shareholders are the bosses [principles] who are therefore eligible to control their managers [agents].

In shareholder approach, shareholders are the only stakeholders or at least the biggest claimants with the sole priorities over the other claimants.[25] A basic principle there is that, maximizing shareholder value will result in maximizing firm or enterprise value, both over the short and long runs. Namely, in governance terms, maximizing shareholder value would also mean to enhance the quality of corporate governance in an organization. That is because corporate governance might prove better under an optimized corporate value that some agency theorists suggested a couple of decades ago.

Shareholder theory considers shareholders as the biggest residual claimants from an agency viewpoint, and equivalently, considers shareholders as the major stakeholders from stakeholder viewpoint. On the other side, a stakeholder theory in its substance would not only entail shareholders but all the other stakeholders as well because of its parlance. Stakeholder approaches have been argued to differ in terms of criteria chosen to name the stakeholders

[25] It should be noticed that weights attributed to the stakeholders under both shareholder theory and stakeholder approaches vary depending on the assumptions.

involved. Therefore, depending on the model, it has been seen that, there may be different types of stakeholders, given the different organizations. One can argue that stakeholder theory is more extensive than shareholder in its scope, which might be true. Further, stakeholder theory suggests that all the stakeholders be treated in the same way without making any discrepancies among them. This is because of the fundamental assumption that there is no *prima facie* priority of one set of interests and benefits over another, i.e; not any sets of interests of the stakeholders may dominate another one or rank higher. This is not true for shareholder theory, where shareholders have an absolute prima facie priority.

Some weaknesses of stakeholder approaches might be found in their natures [i.e. descriptive, instrumental and normative or moral walls]. For one thing, should managers pay a simultaneous attention to the interests of various stakeholders, it will not be clear how those stakeholders are to be identified. For another thing, it is arguable that addressing to the interests of all the stakeholders will lead to an increased corporate performance. Or, even if all the stakeholders' claims were legitimate so that managers could approach to all of them, it seems that it is not easy to do so in the real complex life. Therefore, there are at least three main problems: (a) accuracy problem (e.g. descriptive bonds), (b) falsifiability problem (e.g. instrumental bonds) and (c) impracticality problem (e.g. normative or ethic-concentrated bonds).[26]

Continuous enlargement of the enterprise (shareholder) value, optimal resource allocation, hedging of risks [risk dispersion], decentralized management of organization, prevention of hostile takeovers, harmonization of the interests of managers and shareholders, identification of value-generations are sometimes pronounced among the merits of shareholder-value-management.[27] However, there are some problems associated with shareholder theory as well. These problems mainly stem from the assumptions of the model. First, shareholder theory assumes that financial markets do always good job of estimating the true/intrinsic values of the assets, especially those of shares. This is not always true because in reality, stock markets, informational asymmetries, speculative

[26] See Brink (2004)

[27] On the other hand, a balanced structure of different legitimate stakeholder groups may be said to be premier merit of the stakeholder management. For a concrete summary, see Brink (ibid.)

attacks or herd behaviour may be possible to observe, therefore, a perfectly efficient market hypothesis can not be expected to hold all the time. Second, managers are assumed to have a sole metric to measure their performance and to make them responsible for what is happening inside their firms. This may mean that managers will exclusively focus on stock prices and not really care about any other event in the organization. This further makes them lazy and may induce them to go for manipulations or fraud attempts. Third, it is assumed that should managers be granted high-powered incentives [i.e. compensation packages tied to the performance of the price of the stock], they will do a better job to increase the shareholder value. This is arguable since managers with stock option compensation packages will sort of win if the stock price increases but not will lose if it falls down. This is because managers may manipulate over the price behaviors of the stocks [i.e. earnings management and outright fraud]. [28]

2.2. Empirical Documentations

To date, a number of studies building in understanding the behaviour of corporate governance has been delivered. But there is not much body of literature available about the potential interactions of particular types of financial services firms (i.e. banks, investment houses, insurance undertakings, mutual funds etc.) coupled with various governance mechanisms involved. Being aware of this niche and observing the period between 1990 and 2003 on which some corporate scandals have come to immediate public attention, article by Altınkılıç et al. (2006) investigates governance in investment banks. The scholars perform a number of tests in order to understand if governance were of a nature of suboptimal (inefficient/low performing) one rather than an optimal one. Being therefore one of the early studies that gauges governance patterns particularly in investment banks, in contrary to the wisdom according to which banks are driven suboptimally for the said sampling period, scholars present some arguments and reports with the opposing results. They conjecture that, CEO remuneration (i.e. pay, bonus) is huge and substantially elastic to the performance in stock prices. They also conjecture that, directors of investment banks under review are independent and mostly renowned for their

[28] Blair *et al.* (2003).

particularly outbound engagements (e.g. regular off-bank activities). Scholars further suggest that competitive market forces and market for bank control help discipline management of the bank. There is no evidence that governance qualities investment banks might have refers to poor governance performance. Yet, it is documented that investment banks opt for an optimal level of governance, unlike the upholding view in dispute.

Some argue that cost of capital for firms with good corporate governance would be lower when a given corporate governance structure is more favourable. The reason is that investors in those jurisdictions would be better able to price the risks involved in their investments.[29] Likewise, Claessens (2003) reports that (a) the stronger the creditor rights, the greater the depth of the financial system, (b) the better the quality of shareholder protection, the larger the country's stock markets, (c) the weaker the corporate governance, the higher the costs of capital associated with the respective entities and (d) the better the corporate governance, the higher the returns on assets will be.[30]

Sampling 49 countries, Porta et al. (1997) document that, countries that have poorer investor protections in comparison to the richer ones tend to have smaller and narrower capital markets. Scholars derive this important result based on the variables (e.g. legal origin, external cap/GNP, domestic firms/Pop, IPOs/Pop, Debt/GNP, GDP growth) quantified as to peculiarity of dominating legal rules and to the quality of the enforcement of law. Regarding the debt markets, in opposition to some possible expectations, when the investor protection is getting more decent, the level of debt financing would rise up. The reason is because those countries have adopted a common law system versus a civil law framework. Therefore, it is suggested that, legal systems of countries play an effective role on financial choices of the companies.

Similar to the 1997 paper and sampling 49 countries once again, same scholars (1998) investigate the legal frameworks which stipulate the enforcement for the protection of corporate stockholders. Besides, scholars consider those legal frameworks' origins and qualities. The findings report very similar results to those in 1997 paper and hence document that, countries under common law regime, on the whole, tend to have the strongest investor protections unlike

[29] Gordon (2002)
[30] Claessens (2003)

the countries with French-civil-law that have the opposite situation. In 1998 paper, it is also documented that, there is a negative association between investor protection and concentration of share ownership in the largest public companies. This is because small, diversified shareholders probably may not be recognized that important in the countries with relatively bad legal protection systems. Put it differently, investors in different legal jurisdictions are entitled to exploit different sets of rights. Findings also suggest that, when national income increases, the quality of law enforcement increases as well. Further, when there is poor investor protection, ownership structure is found to get more concentrated rather than in the form of dispersed one. Ownership concentration is also suggested to shrink if accounting standards and practices as well as shareholder protection are relatively decent.[31]

Beck et al. (2003) document that, legal origin plays an important role in financial development because legal practices bring about mechanisms to efficiently adjust to the uprising economic circumstances. In the paper, two approaches are adopted, namely political channel [i.e. tenure of supreme court judges and supreme court power] and adaptability channel [i.e. case law or legal justification]. The former is said to work, when civil law systems support the development of the institutions furthering the power of the State. That is because of the rationale that says, that legal traditions would be different depending on the priority they attribute to private property rights –compared to the rights of the State. The latter is said to be the case highlighting, that legal traditions would be different or matter as regards to their responsiveness to the changing socio-economic circumstances.

Controlling for firm-fixed effects and time-varying firm characteristics, Bertrand and Schoar (2003) document that, manager fixed effects impact on a number of corporate decisions from heterogeneity in investment to financial or organizational practices of firms. In doing so, there establishes a close link between manager fixed effects and management style. Scholars argue that, the

[31] In another paper, Porta et al. (2002) provide a model through which it would be possible to see how legal protection of minority shareholders and cash-flow ownership affect the value of a firm. In so doing, the said scholars use Tobin's q to measure the valuation with the data from 27 wealthy economies on a firm-basis. They find that the better the protection of minority shareholders and the higher the cash-flow by the controlling ownership shareholder, the higher the corporate value will be.

better the corporate governance in a given firm, the higher the compensation committed to managers with higher performance fixed effects would be. More recently, Cremers and Nair (2004) study the inter-relationship between external governance [market for corporate control] and internal governance [shareholder activism] mechanisms in terms of equity returns. It is argued that, there is a complementarity effect for the firms with lower industry-adjusted leverage and this effect is even getting stronger for smaller firms.[32] Running two-step weighted least squares regression, scholars document that, external governance is more effective for small firms –the larger the firm size, the less the quality of the external governance will be.

Macey and O'Hara (2001) argue that, commercial banks pose unique corporate governance problems for managers and regulators, as well as for claimants on the banks' cash flows (e.g. investors and depositors). Paper by Macey and O'Hara suggests that fiduciary duties should be owed exclusively to shareholders. However, it is argued that in the special case of banks, the scope of the fiduciary duties and obligations of officers and directors need to be broadened to include creditors. Using standard theories of corporate governance, Caprio and Levine (2002) argue that, financial intermediaries in general, and banks in particular, have special attributes that aggravate corporate governance problems. Further, involvement of pervasive government induces additional hardships to effective corporate control. Scholars suggest that, governance problems in banks may be resolved through concentrating on the role of governmental authorities. In another relevant study, Levine (2004) argues that, as long as banks efficiently mobilize and allocate their funds, capital formation accelerates so does productivity growth. This is because cost of capital to firms will be shrunk as a result of efficient mobilization and an efficient alignment of funds. He also argues that, banks are special for at least their two attributes that disturb several traditional governance mechanisms, that is, (i) greater opaqueness than other industries and (ii) more government regulation. This implies that, ability and incentives of private investors to exert governance over banks be strengthened rather than to rely heavily on government regulators.

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[32] This is because internal governance mechanism is seen as a must for the external mechanism to work out when for example large shareholders may activate takeovers since they have strong incentives to monitor the management.

2.3. International Financial Arrangements

We know that economic agents may not always perform a full rational conduct. For one thing, rationality of the agents is bounded. That is, they can not perfectly foresee the future that means uncertainty. It is hard to price the risk and gets even harder when the risk is coupled with uncertainty. That is the problem; i.e. pricing. If one can not price an economic asset, it will be a messy task to make valuation. Further, even though there is not any uncertainty, economic agents may not be expected to continuously give very smart decisions. For another, markets are not perfectly efficient. Insider trading, informational asymmetries, mass psychology, irrational exuberance, speculative attacks or such are a few market anomalies that the theories with the efficiency thesis fall to explain.

Financial regulations and practices may relieve the burden the upper passage concisely mentioned. It has been argued that accounting is one of the tools to go for transparency and public disclosure. Representation of true, fair and comprehensive financial statements will induce people (economic agents) to give right investment decisions, as long as those statements or such reports are drafted in compliance with international accounting arrangements.[33] Basel II or institutions that make credit ratings stipulate that, firms (banks' potential corporate clients) asking for loans to the banks have to satisfy certain criteria. Corporations that report their financial statements in accordance with the IAS, IFRS or GAAP have to have the assurance of the independent audit firms. Furthermore, these two may be connected as well. For instance, firms that request a loan to a bank might have to prove them with the financial statements audited and approved by the independent audit firms. Bank analysts will investigate the content of the documents (applications) of the firms anyway, but will also consider the opinions of the audit firms. Role of corporate governance will appear and indeed be decisive at this point. Firms or corporations with more decent corporate governance structures [through better internal control, risk management and accounting practice skills] will have more chances: to receive the bank loans at reasonable terms, obtain higher credit ratings, or, to get the approval of the independent audit firms. This interplay (interdependence) between banking and accounting regulations, undoubtedly, applies to many other financial areas.

On the governance of banks that are the most crucial financial

[33] See Aktaş et al. (2007)

institutions available and the major global players in the World's economic league, BIS (Bank for International Settlements) makes notable contributions particularly regarding the incorporation of corporate governance concept to the banking system. Among these are the principles for the management of interest rate risk (September 1997), framework for internal control systems in banking organisations (September 1998), enhancing bank transparency (September 1998), and principles for the management of credit risk (issues as a consultative document in July 1999). These papers mainly aim at highlighting the strategies and techniques that are not only available, but rather, fundamental to sound corporate governance mechanisms. Particularly, papers suggest that, these mechanisms had better include: (i) corporate values, codes of conduct and other standards of appropriate behavior and the system used to ensure compliance with them, (ii) a well-articulated corporate strategy against which success of the overall enterprise and of the contribution of individuals can be measured, (iii) the clear assignment/alignment of responsibilities and decision-making authorities, incorporating a hierarchy of required approvals from individuals to the board of directors, (iv) establishment of a mechanism for a simultaneous interaction and cooperation among the board of directors, senior management and the auditors, (v) strong internal control systems, including internal and external audit functions, feasible risk management functions, irrespective of business lines, and other checks and balances, (vi) special monitoring of risk exposures, where, conflicts of interest are likely to be huge, including business relationships with borrowers affiliated with the bank, large shareholders, senior management, or key decision-makers within the firm (e.g. traders), (vii) sufficient financial and managerial incentives to act in an appropriate manner offered to senior management, business line management and employees in the form of compensation, promotion and any other recognition, and (viii) appropriate information flows delivered internally and to the public.[34]

According to Basel Committee which makes regular publications for the betterment of the corporate governance systems of banks, corporate governance is of critical importance to the banks, in that, it stipulates them to (a) establish corporate objectives (e.g. economic returns to owners), (b) run

[34] See Basel Committee on Banking Supervision, "Enhancing Corporate Governance for Banking Organizations", http://www.bis.org/publ/bcbs56.pdf, September 1999/Basel, (15.06.2006).

the day-to-day operations of the business, (c) take into account the interests of recognized stakeholders, (d) align corporate activities and behaviors with the expectation that banks will operate in a safe and sound manner, and in compliance with applicable laws and regulations, and (e) protect the interests of depositors as much as possible.[35] Basel Committee - as with the case of OECD among the others - sees the board of directors and senior management as responsible bodies to secure good corporate governance. This might be misleading or confounding. For a decent level of corporate governance to come into existence and to be promoted thereafter, it is needed that a substantial support from governments, securities regulators, stock exchanges, auditors and in particular from banking industry associations be facilitated.[36] As suggested early on, from the viewpoint of BIS, corporate governance is expressly recognized to be of an indispensable asset, not just at the skin of corporations but also for the entire financial system and economy. In other words, a sound corporate governance should not merely be restricted to and considered as something needed in view of individual organizations, but instead, should be perceived as a critical ingredient in maintaining a good macro financial system and therefore a robust economy as well.[37] In other words, corporate governance is one of the key factors determining health of the financial system and transcending its ability to stand against harsh economic shocks and to survive under steady market pressures, which in return may promote financial stability.[38]

III. Conclusion

Corporate governance is one of the hot debates of the contemporary business, in both academic and professional terms. It has a strong and extensive theoretical infrastructure. It has been argued that corporate governance dates back to incomplete contracts issues. As long as fundamental covenants of the contracts are not appropriately drafted, or are not respected, we will have incomplete

[35] Ibid.
[36] Ibid.
[37] Bollard, "Corporate Governance in The Financial Sector" at http://www.bis.org/review/r030416b.pdf, [W.date], (15.06.2006).
[38] Ibid.

contracting problem to bring up not only financial but also strategic/managerial problems. Full respection of the provisions or terms the contracts stipulate means that there is not any pre-contractual (e.g. asymmetric information) nor post-contractual asymmetries (e.g. moral hazard).

In the literature, corporate governance is mainly theorized on three foundations: agency, stakeholder and shareholder approaches. It has been said that goal and risk-sharing incongruences may induce agency problem. Goal incongruence arises when objectives economic agents (contractual parties) want to achieve are different or monitoring the agent's performance is costly. Division of labor or specialization may play a role in this as well. Risk-sharing incongruence happens if the risk preferences of the parties are incompatible or inconsistent. That is, one of the parties might be risk averse while the other one is a risk taker for instance. Unlike agency problem, there is more than one stakeholder approach. Each approach has a unique definition and methodology about who a stakeholder is, how a stakeholder should be recognized or what a stakeholder claim refers to. On the other side, in shareholder theory, shareholders are the bosses who are therefore eligible to control (to watch out actions and performances of) their managers. Since shareholders are the principals and managers are the agents, shareholder theory is quite relevant to the agency theory. For it has been built on agency theory, shareholder theory could be said to reformat it.

Shareholder theory adopts the superiority of profitability over responsibility, unlike the stakeholder theory where responsibilities outweigh profitability. Shareholder theory sees the organizations as owners' instruments, unlike the stakeholder theory where organizations are recognized to be the entities or coalitions to serve for all the parties (stakeholders) involved. Shareholder theory measures the success of the organizations with the help of share prices, dividends or economic profits, whereas the stakeholder theory meters the success of the organizations using satisfaction scales among the stakeholders.[39]

There are some questionable issues with the above theories. On the one hand, main problem with shareholder-oriented approach is that, shareholders

[39] Kochan and Rubinstein (2000)

should be paid an exclusive attention and therefore be attributed priorities over the other stakeholders. On the other hand, in stakeholder theory or approaches, every stakeholder should be given the same treatment in order to preserve their claims, therefore there should not be any cascade among the stakeholders. This is a problem. For one thing, it is not an easy task to identify every single stakeholder. For another, in the real life, it is hard and indeed impossible to equitably satisfy all the stakeholders' outstanding claims. Corporate governance for international service industry brands (e.g. Starbucks, Gloria Jeans etc.) for instance may work out better if they pay special attention to their customers, suppliers or shareholders in first place. Likewise, naturally, performance of corporate governance for a commercial bank whose shares are publicly traded in the stock markets would rely on whether it gives more emphasis to the enforcement of the claims of creditors (depositors), stockholders or official authorities than to other stakeholders of the bank.

In financial services industry, particularly for banks, principles suggesting a sound mode of corporate governance structures are provided by BIS among the others. This holds similar to other financial institutions and to non-financials as well. As said early on, this is because corporate governance inhibits a plenty of dimensions. Decent corporate governance implies that, organizations set more efficient internal control mechanisms and therefore achieve higher risk management standards for the healthy conduct of their operations and sound maintenance of their intrinsic structures. Remember that international accounting setters are willing to make practitioners adopt the rules, regulations and practices that have profoundly been established in the very recent years. In particular, with transparency (high level of disclosure) leg of good corporate governance regime, organizations, unarguably, are expected to have a wisdom of more quality accounting standards and practices.

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PORTFOLIO SELECTION: APPLICATION ON INTERNATIONAL STOCK PORTFOLIOS

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Abstract
In this study, despite the increasing economic integration because of the globalization and technological improvement, whether emerging markets provides international diversification benefits to investors is examined. International diversified portfolios are created according to Markowitz's Mean-Variance Model. These portfolios consist of equity indices returns of developed markets, emerging markets and SMEs (Small and Medium Sized Enterprises) in developed markets. Also, portfolios consisting of ADR and equity indices returns of developed markets, emerging markets and SMEs are created. International diversified portfolios created with Markowitz's Mean-Variance Model are evaluated according to performance evaluation criterions and VaR of these portfolios are calculated so that benefits of diversification are expressed quantitatively.

I. Introduction

Investors utilize from international portfolio diversification investing in international capital markets. Securities in portfolios from different countries can increase portfolios' expected return without increasing portfolios' risk or decrease portfolios' risk without decreasing portfolios' expected return. Such an advantage of diversification can be explained with weak relations among international capital markets. Trade volumes, geographic locations, specialized industries, economic growth rates, demographic characteristics, economic and

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political executions, and liberalization levels of countries are the causes of differences among international capital markets.

Many emerging countries did not offer substantial investment opportunities for foreign investors until the middle of eighties. Analysts who researched in these years, focused on developed countries while investigating advantages of international diversification. At the beginning of nineties, the issue of international diversification comprises emerging countries with liberalization of these countries. Because of globalization, regional and economic integrations, liberalization, technologic improvements, economic growth of emerging markets, electronic communication in fast chancing world and improvement of computers information starts to cause information usage extend quickly. Due to the fast extending of information and technologic improvements, markets affect each other that cause more global structure. The subject of this study is to test whether opportunities of international diversification is still exist and international diversification provides advantageous or not in emerging capital markets.

The aim of this study is to investigate the benefits of international diversification effects while creating and comparing alternative portfolios with Markowitz's mean variance model. In this sense, despite of integration in capital markets international portfolio diversification in emerging markets either causes a decrease portfolios' risk or not is examined.

II. Literature

The current theory of international diversification, first elaborated in 1968 by H. Grubel, was developed from modern portfolio theory (Cohen, Zinbarg and Zeikel; 1987). Grubel examines that the international diversification of portfolios is the source of an entirely new kind of world welfare gains from international economic relations, different from both the traditional "gains from trade" and increased productivity flowing from the migration of the factors of production (Grubel, 1968). Grubel demonstrated theoretically and empirically that benefits could be realized from international portfolio diversification (Raymond and Weil, 1989).

It is not possible for investors to avoid the country risk by only investing in securities in their home country. They increase the utilities from

stock diversification by investing in securities in different countries (Evrim, 1999). An internationally diversified portfolio is likely to carry a much smaller risk than a typical domestic portfolio (Solnik, 1995). Since the fortunes of different nations do not always move together, investors can diversify their portfolios by holding assets in several countries (French and Poterba, 1991).

The basic factor that motives creating a diversified portfolio is decreasing risk by diversifying that portfolio. The risk in terms of the volatility of returns of a portfolio is smaller than the separate securities' risks that generate the portfolio. As increasing the number of stocks in a portfolio, the possibility of losing of that portfolio is decreasing. Total risk of a portfolio is not only depending on the number of securities but also the risks of every securities and independence level of these risks.

2.1. International Portfolio Investments in Developed Countries

A major argument for investing internationally is that it increases profit opportunities while providing risk diversification. Several studies established a strong case for international diversification, arguing that global diversification could reduce total portfolio risk while enhancing performance opportunities (Odier and Solnik, 1993). Levy and Sarnat generate the efficient portfolio set and find that it contains foreign assets (Raymond and Weil, 1989). Levy and Sarnat, determine an efficient portfolio set that contains the combinations of investments in 28 countries by using stocks indices returns of these countries for the time period 1951 to 1967 in terms of dollar. They observe that internationally diversified portfolios have higher returns and lower risks than domestic portfolios and thus express that international diversification is beneficial (Levy and Sarnat, 1970).

Solnik examines a sample of 300 stocks drawn from U.S and seven other developed countries (U.K., France, Germany, Italy, Belgium, Netherlands, and Switzerland) to illustrate the benefits of international diversification. U.S. portfolio reduces systematic risk at about 27% while international portfolio reduces systematic risk at about 12%. This reveals that an international portfolio carries less risk than portfolio with only U.S. stocks (Solnik, 1974).

The simplest and most straightforward method for showing that international diversification benefits exist is to correlate national asset indices.

If the correlations are less than one international diversification is beneficial. If one country's returns are low then the overall portfolio's return will probably be protected by off-setting returns in other countries. Grubel and Fadner (1971); Joy, Panton, Reilly and Martin (1976); Schneeweis (1979); Allan (1982); Finnerty and Ibbotson, Carr and Robinson (1982); Errunza (1983); Adler and Dumas (1983) have calculated correlations between various countries for various indices of assets and found these correlations generally to be low. This consistency in empirical findings determines that the advantages of international diversification exist (Raymond and Weil, 1989).

Meric and Meric conclude that the correlation among countries has a significant affect on asset allocation. The high returns combined with low correlation between emerging and developed markets are presumed to create better diversification opportunities for U.S. investors (Meric and Meric, 1989).

Bailey and Stulz examine the Pacific Basin stock market indexes (Australia, Hong Kong, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand) for the time period January 1977 to December 1985. Using monthly data, Bailey and Stulz show that a U.S. investor holding the S&P 500 index could have reduced the risk of a portfolio by a third by also investing in Pacific Basin stocks (Bailey and Stulz, 1990).

Odier and Solnik calculate the risk of U.S. stock markets and international stock indexes that are MSCI (Morgan Stanley Capital International) and EAFE (Europe, Australia, Far East) for the period 1970 to 1990 and 1970 to 1980. The volatility of U.S. market (16.1%) is higher than that of a well diversified world portfolio (14.9%) for the period 1970 to 1990 despite the fact that the world portfolio includes investments in some very volatile markets such as Hong Kong and Italy. This shows that international diversification reduces portfolio's risk (Odier and Solnik, 1993).

Solnik, Boucrella, and Fur use the monthly stock returns data from December 1958 to November 1995 for U.S., Germany, France, U.K., Switzerland, Japan and EAFE as a region to test the relationship between volatility and correlation. It is observed that as the volatility is high, the correlation between markets is increasing which justifies the diminishing benefit of international diversification (Solnik, Boucrelle and Fur, 1996).

Goetzmann, Li and Rouwenhorst examine how correlations are chancing in long period of time and consider capital market history for international diversification strategies in the future. The period from 1875 to 2000 is divided into sub-periods. They consider the markets of East and West Europe, North and South America, South and East Asia, Africa and all islands in the southeast of Asia for these sub-periods of time. They found that international equity correlations change dramatically through time and thus the diversification benefits to global investing are not constant. They expressed that through the increasing number of markets in the world and low correlations among these markets, international diversification benefits still exist for global investors (Goetzmann, Li and Rouwenhorst, 2005).

Solnik finds that all stocks within a given market tend to move up and down together, whereas stocks in different national markets as a rule do not. In some periods such as oil shock of 1974, all stock markets are affected by the same worldwide factors (Solnik, 1996). Latin America crisis in the period from 1994 to 1995, Asian crisis in the period from 1996 to 1998 (Tokat, 2004), Mexico crisis in the period from 1994-1995 (Güloğlu and Altınoğlu, 2002), decreasing oil prices by OPEC in 1983, financial crisis in October 1987 and gulf crisis in 1990 (Evrim, 1999) can be examples of these periods. In other periods all markets tend to move independently and even in opposite directions. The international correlation increases when global factors dominate domestic ones and affect all financial markets. Several studies have found that international correlation tends to increase in periods of high turbulence (Solnik, 1996). Longin and Solnik, look at monthly data for the period 1960-1990, which covers several business cycles and crises, and confirm that international correlation tends to increase in periods of high stock market volatility (Longin and Solnik, 1995). Tuluca, Zwick and Seiler, study on global effects of Asian crises and influence of this crisis on U.S. equity markets. They examine how correlations move in these periods. They evaluate pre- (January 1996-June 1997) and post-Asian (July 1997-December 1999) crisis by using Asian, American and European markets including equity indexes in U.S., Canada, Mexico, Brazil, U.K., Japan, Hong Kong, Singapore, Korea, Taiwan, Thailand and Indonesia. They find that volatility in markets was increasing in the period of Asian crisis and the correlations of equity returns increased dramatically following the crisis. The

study concludes that domestic diversification would have been more beneficial than international diversification following the Asian crisis (Tuluca, Zwick and Seiler, 2003). Another research having the same results with the previous one is made by Bekaert, Harvey and Ng in 2005. Bekaert, Harvey and Ng examine the correlations among countries in the period of Mexico and Asian crisis and find that correlations increase significantly in these periods especially in the period of Asian crisis (Bekaert, Harvey and Ng, 2005).

2.2. International Portfolio Investments in Emerging Countries

Traditionally investors consider only developed markets in their international diversification strategy. These are markets that have been operation for along time and whose economies are already in a developed stage. However investors come to realize the stock market development and economic growth potential of many emerging countries (Solnik, 1996). In the light of the evidence on the greater integration of developed stock markets, portfolio managers should consider investing in non-developed markets (Cosset and Suret, 1995). Investing in developing market is appealing because the benefits of international diversification into these markets can be substantial (Errunza, 1977).

The size of emerging stock markets varies country to country. The growth of emerging capital markets has received much attention anymore. Investors have been attracted to the potential for high returns along with diversification benefits of such markets. The unique characteristics of emerging markets, the development of financial markets and their role in broader economic development start to take attention much more (Barry, Peavy III and Rodriguez 1998).

The emerging markets attract international investors with high growth rate potential and low correlation coefficients. These features provide a better risk-return trade-off for global investors through more efficient stock diversification within an expanded portfolio (Hauser, Marcus and Yaari 1994). Each emerging market looks like quite volatile and risky. However, the case for diversifying into emerging stock markets stems from the high growth potential of emerging markets, together with their low correlation with developed markets. Many emerging countries follow active programs of privatization and more local firms are attracted by the financing potential of stock markets. Under

pressure from international investors, emerging markets are becoming more efficient, providing more rigorous research on companies, and progressively applying stricter standards of market supervision (Solnik, 1996).

Lessard studies four emerging countries (Argentina, Brazil, Chile, and Colombia) in Latin America to evaluate the potential benefits from diversification in emerging markets. He examines a sample of 110 stocks between 1958 and 1968 and uses factor analysis to determine the common elements among these stocks returns. He concludes that investing internationally provides more diversification benefits than investing in single countries (Lessard, 1973).

In a study which covers the period of 1976 to 1980 by Errunza, he expresses that emerging markets provide high returns and these returns in these markets have low correlations with returns on markets in developed countries. He emphasizes that emerging markets are good opportunities for increasing global portfolio performance (Errunza, 1983).

Divecha, Drach and Stefek prove that correlations between developed markets and between developed and emerging markets are low in their study that covers the period of 1986 to 1991. They emphasis that despite of co-movement of some emerging markets such as Malaysia, Hong Kong and Singapore, many emerging countries have low correlations with each other. They calculate the average correlations between emerging markets and between developed markets and find respectively 0.07 and 0.49. So this is clear that developed markets are in connection with each other more than emerging markets. They determine that a reasonable investment in emerging markets cause less portfolio risk for global investor. A global investor who put 20% in an emerging markets reduces overall annual portfolio risk from 18.3% to 17.5% while increasing annual return from 12.6% to 14.7% (Divecha, Drach and Stefek, 1992).

Harvey uses Emerging Markets Data Base (EMDB) to retrieve data on twenty emerging markets. He observes lower diversification among the emerging markets than the developed markets and large differences in volatility across emerging markets. Finding reveals that the inclusion of emerging markets to mean variance efficient portfolio of developed markets will mitigate the portfolio volatility and increase the portfolio expected returns (Harvey, 1993).

Harvey studies the returns of twenty developed markets and twenty-one emerging markets. Based on the regressions on global and country-specific

information variables, he forecasts the future returns in emerging markets. The results show that the forecasting regressions are significant in twelve out of twenty of the emerging markets. This implies that emerging markets' returns are predictable. He further evaluates the impact of emerging stock markets on global investments strategies and concludes that it is important to combine emerging markets assets in a globally diversified portfolio. Based on the test results on the performance of three portfolios (developed market portfolio, developed and emerging market portfolio, developed and emerging market portfolio with a 20% cap on emerging markets) during 1980-1992 time period, Harvey finds that the investment strategies including emerging markets have outperformed the strategies that are limited to developed markets (Harvey, 1994).

Bekaert and Harvey say that many foreign investors are attracted to emerging markets for diversification benefits. Although correlations increase after markets open up, the magnitude of the increase is unlikely to deter investors seeking diversifications (Bekaert and Harvey, 2000).

In their study, Dunis and Shannon aim at checking whether, despite the growing world economic integration and progressive lifting of capital controls, emerging markets still offer international investors a valuable diversification benefit. The study covers emerging markets Indonesia, Philippines and Malaysia from South-East Asia; Korea, Taiwan, China and India from Central Asia over the period 31st August, 1999 to 29th August, 2003, with the US, UK and Japan as the established markets. They show that in contrast to the correlation results for the US and UK, all emerging markets have become more closely integrated with the Japanese market. They indicate that international diversification is still beneficial for a US investor during that period. It is shown that a portfolio containing emerging market stocks outperformed a portfolio consisting purely of US stocks over the period of 1st September, 2003 to 5th July, 2004 (Dunis and Shannon, 2005).

2.3. International Portfolio Investments in Small Caps

An important issue for both individual and institutional investors concerns the existence and the magnitude of the benefits from diversifying over small capitalization stocks. A number of studies show that a difference in return

behavior between small and large capitalization stocks exists. These studies suggest that diversifying into small cap stocks might improve portfolio performance (Petrella, 2005).

Banz examines the empirical relationship between the return and the total market value of NYSE (New York Stock Exchange) common stocks. He report that over long investment horizons, small cap stocks have substantially higher returns compared to large cap stocks (Banz, 1981).

Stoll and Whaley find that small stocks earn lower returns than large stocks if buy and hold for two months or less. As the investment horizon increases return for small caps become positive. This means that investor holding period plays a central role in determining the profitability of a portfolio strategy based on small cap stocks (Stoll and Whaley, 1983).

Horowitz, Loughran and Savin investigate the relationship between stock returns and firm size for data from NYSE, AMEX (American Stock and Options Exchange) and NASDAQ in the period 1980-1996, and find no evidence of size premium (the difference in returns between a portfolio of small cap stocks and a portfolio of large cap stocks). There appears to be, on the sample period, a negative size premium; that is large firms have slightly higher returns than small firms do (Horowitz, Loughran and Savin, 2000).

Petrella investigates whether an investor can enhance the mean-variance characteristics of his/her portfolio by investing in France, Germany, Italy and Spain called Euro area small cap stocks. He finds that to create an efficient portfolio investing in Euro area small and mid cap stocks is required (Petrella, 2005).

2.4. International Portfolio Investments with ADRs

International Market Depositary Receipts are called ADRs (American Depository Receipt) in the United States of America (Ceylan and Korkmaz, 2006). One of the easiest ways for US based investors to acquire foreign shares is through ADRs. ADRs are certificates of ownership issued by a US bank that represent indirect ownership of a certain number of shares of a specific foreign firm. ADRs provide investors utilize international diversification without going abroad and trading shares on foreign exchanges (Suh, 2003). Since they are traded in American exchanges dividends are paid in US dollars (Karolyi, 2004).

Officer and Hoffmeister examine the investment characteristics of ADRs as an alternative to direct investment in foreign equities. They find that ADRs allow investors to avoid many problems associated with direct investment in foreign equities while providing the major benefits of international diversification (Officer and Hoffmeister, 1987).

Webb, Officer and Boyd estimate the structure of the relationship between US market and ADRs returns and test whether the relationship varies according to the ADRs country or region. They find a strong significant relationship between ADRs and US market daily returns. Thus, ADRs can be good investment alternatives like equities (Webb, Officer and Boyd, 1995).

Jiang examines 113 ADRs from eight countries over the period 1980-1994 to explore how effective are ADRs in international diversification and the dynamic relationships between ADRs and local market portfolios. He finds that the portfolio with investment in the ADRs portfolios performs much better than the portfolio with the investment in the US market and foreign stocks portfolios (Jiang, 1998).

Choi and Kim (2000) examine several major determinants of ADRs and their underlying stock returns for the period of 1990-1996 and discuss implications for international diversification and market segmentation. They conclude that ADRs, especially those of the emerging markets, provide US investors with an effective way to internationally diversify (Choi and Kim, 2000).

Schaub's paper examines the short and long term performance of Mexican ADRs issued on the NYSE from 1991 to mid-1996. The results show that Mexican ADRs are considered as an underperformed investment. Among 18 ADRs only three of them enjoy significant gains (Schaub, 2002).

Wang and Yang concludes in their study that when international investors purchase ADRs issued by Taiwanese firms in the US markets, these ADRs help investors diversifies globally and compensate investors for the risk taking of the foreign exchange risk between US dollar and New Taiwan dollar. These findings suggest that Taiwanese ADRs are valid investment tools for US investors who seek international diversifications (Wang and Yang, 2004).

Karolyi finds that the growth and expansion of ADRs programs in emerging markets facilitated an expansion of cross-border equity flows and overall development of the stock market in those countries (Karolyi, 2004).

III. Methodology

In this study international diversified portfolios are created according to Markowitz's mean-variance model. Markowitz mentions that there is a rule which implies both that the investor should diversify and that he/she maximizes expected return. The rule states that the investor should diversify his/her fund among all those securities which give maximum expected return or minimum variance (Markowitz, 1952). Diversification is a common and reasonable investment practice to reduce uncertainty (Markowitz, 1991). According to Markowitz, the expected return on the portfolio is a weighted average of the expected returns on individual securities and the variance on the portfolio is a function of variances of and the covariance among securities. Effective diversification requires avoiding securities with high covariance (Markowitz, 1999).

The returns and risks of portfolios that are created according to Markowitz's Mean-Variance Model are calculated in this frame with matrix method.

In a portfolio that consist of N assets, suppose that the proportion of asset i is denoted by w_i, the portfolio proportions as a column vector (Benninga, 2000):

$$W = \begin{bmatrix} w_1 \\ w_2 \\ w_3 \\ \vdots \\ w_N \end{bmatrix} \tag{1}$$

The transpose (W^T) of the securities' weights matrix (W) (Benninga, 2000):

$$W^T = \begin{bmatrix} w_1, w_2, w_3, \ldots, w_N \end{bmatrix} \tag{2}$$

Suppose the expected return of asset i in a portfolio that consist of N assets is denoted by $E(r_i)$, then vector of asset returns and transpose $E(r)^T$ of this vector (Benninga, 2000):

$$E(r) = \begin{bmatrix} E(r_1) \\ E(r_2) \\ E(r_3) \\ \vdots \\ E(r_N) \end{bmatrix} \quad E(r)^T = \left[E(r_1), E(r_2), E(r_3), \ldots, E(r_N)\right] \quad (3)$$

Restrictions for internationally diversified portfolios are no investment in credit and no short sales. The aim is maximization of the expected return of internationally diversified portfolio in the frame of restrictions (Benninga, 2000):

$$Max\Theta = \frac{E(r_p) - c}{\sigma_p} \quad (4)$$

Deciding which assets will be in the portfolio is an important issue. While deciding this issue maximizing expected return with optimization is aimed in this study. For determining the optimal portfolio that provides the highest expected return, Sharpe ratio (can be symbolized as Theta) should be generated. Calculating Theta is reference for determining the optimal portfolio subject to short sales constraints (Korkmaz and Pekkaya, 2005).

Such that

$$\sum_{i=1}^{N} w_i = 1$$

$$w_i \geq 0, i = 1,..., N$$

Where

Portfolio return; $E(r_p) = W^T.E(r) = \sum_{i=1}^{N} w_i E(r_i)$ (5)

Portfolio standard deviation; $\sigma_p = \sqrt{W^T SW} = \sqrt{\sum_{i=1}^{N}\sum_{j=1}^{N} w_i w_j \sigma_{ij}}$ (6)

"S" identifies the variance-covariance matrices;

$$S = \begin{bmatrix} \sigma_{11} & \sigma_{12} & \sigma_{13} & . & . & . & \sigma_{1N} \\ \sigma_{21} & \sigma_{22} & \sigma_{23} & . & . & . & \sigma_{2N} \\ \sigma_{31} & \sigma_{32} & \sigma_{33} & . & . & . & \sigma_{3N} \\ . & . & . & . & . & . & . \\ . & . & . & . & . & . & . \\ . & . & . & . & . & . & . \\ \sigma_{N1} & \sigma_{N2} & \sigma_{N3} & . & . & . & \sigma_{NN} \end{bmatrix} \quad (7)$$

For evaluating and comparing portfolios performance most known and common performance measurements such as Sharpe ratio, M^2 measure, Treynor index, Jensen measure (Jensen's alpha) and Sortino ratio are used in the study.

Sharpe ratio is calculated as (Chunhachinda etc., 1994):

$$S_p = \frac{r_p - r_f}{\sigma_p} \quad (8)$$

r_p = Portfolio return

r_f = Risk free rate

σ_p = Portfolio standard deviation.

M^2 measure is formulated (Bodie, Kane and Marcus, 2005):

$$M^2 = r_{p^*} - r_m \tag{9}$$

r_{p^*}: Portfolio return added Treasury bond

r_m = Market return.

The formula can be rewrite as follows (Kılıç, 2002):

$$M^2 = r_f + \frac{r_p - r_f}{\sigma_p}\sigma_m = r_f + (\text{Sharpe ratio} * \sigma_m) \tag{10}$$

Treynor index is calculated as (Chen and Lee, 1986):

$$T_p = \frac{r_p - r_f}{\beta_p} \tag{11}$$

β_p = Portfolio beta (risk).

Beta coefficient is developed as a method for measuring risk. It associates one single asset's volatility to market volatility as a whole (Cohen, Zinbarg ve Zeikel, 1987).

Jensen's alpha can be formulated as (Jensen, 1968):

$$r_p - r_f = \alpha + \beta_p (r_m - r_f) + u_p \quad (12)$$

u_p = Error term

α = Alpha is a characteristic breakpoint in this regression model. It is an average of corrected returns that are estimated during the period for calculating regression. It is a regression estimation of excess return that is obtained from the portfolio (Karan, 2004).

Sortino ratio is calculated as (Pedersen and Satchell, 2002):

$$S = \frac{r_p - r_f}{\sigma_d} \quad (13)$$

σ_d = Semi-standard deviation.

IV. Data

In this study, six different internationally diversified portfolios are created according to Markowitz's Mean-Variance Model: (1) equity indices returns of developed markets, (2) equity indices returns of emerging markets, (3) equity indices returns of SMEs (Small and Medium Sized Enterprises) in developed markets, (4) equity indices returns of developed markets and emerging markets, (5) equity indices returns of developed markets and SMEs in developed markets, (6) equity indices returns of emerging markets and SMEs in developed markets. Also, portfolios consisting of ADRs and equity indices returns of developed markets, emerging markets and SMEs are created for the period of January 30, 1998 to March 31, 2005. The aim of creating portfolios consisting ADRs is to compare US investors' benefits with ADRs when they invest in home country and in the other countries. Countries and equity indices returns of developed markets and SMEs in developed markets are classified according to Morgan Stanley Capital International (MSCI) index. There are 17 equity indices of developed countries, 23 equity indices of emerging countries and 17 equity indices of SMEs in developed markets in the study. Equity indices are

calculated monthly with continuous return for the period of December 31, 1998 to September 30, 2005 and taken from the official web site of MSCI (MSCI, 2005). Equity indices for ADRs are taken from Standard & Poor's (Standard & Poor's, 2006) and monthly risk free rate (interest rate of US Treasury bill) used in the study is taken from Yahoo Finance. In order to obtain better estimates of equity indices returns, the study utilizes monthly data consistent with the many studies in the literature in international portfolio investments. The study covers the period from December 1998 to September 2005. This time period was chosen because it is characterized by intense return volatility with historically high and low returns for the both emerging and developed markets. This period is long enough to cover lots of economic and financial events such as Turkish crises in 1994, Asian crises in 1997, Russian crises in 1998, again Turkish crises in 2001 and development of world conjuncture after 2001.

V. Implementation Results

Descriptive statistics of equity returns of developed countries are in Table 1 and of emerging countries in Table 2. Average monthly return of equities in developed countries range from 0.13% (Japan) to 1.59% (Finland). Average monthly returns of equities in emerging countries range from 0.80% (China) to 1.70% (Hungary). Monthly standard deviation of equity indices returns change between 3.90% (England) and 10.30% (Finland) for developed countries and 4.90% (Jordan) and 19% (Russia) for emerging countries. Comparing with developed countries, standard deviation in emerging countries is higher than standard deviation in developed countries. In other words, monthly equity returns in emerging countries are much more volatile than in developed countries as seen in the tables the highest return belong to Poland with 78.87% and the least return belongs to Russia with -93.07%. The highest return among emerging countries is in Hong Kong with 28.37% and the least one is in Finland with -38.23%.

Correlation coefficients between monthly equity indices returns of developed markets can be seen in Table 3. It is understood that all correlations between equity indices returns of developed markets are positive and high. This is not preferable for investors who want to diversify internationally. As seen in Table 4, correlation coefficients between monthly equity indices

returns of emerging markets are lower than developed markets and some of them have negative values. Correlation coefficients between monthly equity indices returns of developed markets are high means that these countries' economies are integrated substantially. This result limits the investors' benefits from diversification. For utilizing from international diversification, investors look for new alternatives. Portfolio managers suggest investors to invest in emerging countries that also include Turkey (Ceylan and Korkmaz, 2006). The most important reason for diversifying in emerging markets is low correlation coefficients between emerging countries.

The descriptive statistics of six portfolios which are customized for different investment purposes are illustrated in Table 5. Average, maximum and minimum returns, standard deviations and coefficients of variation are given. The highest average return belongs to Portfolio 5 with 1.41%. Portfolio 6 has the highest maximum return with 29.56%. Also Portfolio 6 has the lowest minimum return among minimum returns with -8.88%. The most risky portfolio is Portfolio 5 with 4.82% standard deviation. The highest coefficient of variation belongs to Portfolio 1 (4.5780) and the lowest one belongs to Portfolio 6 (3.0376).

Efficient frontiers of all portfolios created in the study can be seen in Graph 1. When comparing efficient frontier lines Portfolio 6 has the highest return at the same risk level as seen in the graph. This portfolio's efficient frontier line is over the other portfolios' efficient frontier lines. Portfolio 1 has about at 1.10%, portfolio 2 has about at 1.25%, portfolio 3 has about at 1.45%, portfolio 4 has about at 1.38%, portfolio 5 has about at 1.45%, and portfolio 6 has about at 1.80% return grade at the 4.90% standard deviation level. Efficient portfolio is providing the highest return among the portfolios having the same risk. Efficient portfolios come out when maximizing returns at a certain level of risk or minimizing risk at a certain level of return.

Portfolio 6 is determined as an optimal portfolio with optimization. Investors who want to diversify internationally get the portfolio that provide the highest return if they invest in emerging markets and SMEs in developed markets. The coefficient of variation of this portfolio is the smallest one among the other portfolios.

When examined the portfolios including ADRs there are no ADRs in the portfolios derived from optimization. This can be explained that ADRs do not replace with investing in other countries markets when internationally diversified. Investing in international markets rather than ADRs is needed to obtain the benefits of international diversification.

Table 6 shows the comparison of the results of performance measurements. The highest Sharpe ratio belongs to Portfolio 6. Since the definition of Sharpe ratio determines the return per unit of risk, Portfolio 6 provides the highest Sharpe ratio. Portfolio 6 shows the best performance according to M^2 measure. So that can be seen that Portfolio 6 has the best performance according to Sharpe ratio and M^2 measure. Among portfolios created in the study, Portfolio 6 has the highest performance. The higher the Treynor index the higher the portfolio performance. According to Jensen alpha, positive alpha means that portfolio has a positive return over the risk premium. High and positive alpha means that the portfolio performance is high. Portfolio 3 has the highest alpha value so, according to Jensen measure the highest performance belongs to Portfolio 3. Sortino ratio shows that excess return level per risk reflects portfolio performance. Portfolio performance is higher when the ratio gets higher. According to Sortino ratio Portfolio 6 has the best performance. The highest value for Sortino ratio can be seen at the Sortino ratio value of Portfolio 6 among other portfolios.

Portfolios having the highest performance according to performance measurement are seen in Table 7. According to all performance measurement examined in this study except Jensen alpha, Portfolio 6 has the best performance. The reason for not having the same results for all measurement is the difference of parameters used for these measures. Jensen measure being difference from Sharpe ratio and M^2 measure is based upon systematic risk (beta) rather than total risk (standard deviation). Treynor index is also based upon systematic risk but it measures every beta levels whereas Jensen alpha is measured at one beta level. Different risk measurements are considered for different performance measurements. So it is possible to see differences in results of performance measurements.

In the light of the having the highest performance according to

performance measurement and the highest return determined with optimization, international investors can utilize internationally diversifying and maximize their gain by obtaining optimal portfolio when they invest in Portfolio 6.

With the aim of determining portfolios' risks and equities' contributions of total diversification by numeral, portfolios' monthly Value at Risk (VaR) numbers are calculated at 95% level of confidence. Portfolios' VaR calculation results can be seen in Table 8. Portfolios, countries composing those portfolios, portfolios' VaRs and decreasing risks depending on diversification exist in this table. From this table VaRs can be seen in detailed country by country. So, understanding which country affects portfolio's VaR and decreases portfolio's risk in what extent can be possible.

As seen in Table 8 the least VaR is observed in Portfolio 4 at the 95% level of confidence. This portfolio that consists of equity indices returns of developed and emerging markets loses 6.21% monthly with 5% probability. Jordan has the highest risk reduction (1.09%) due to the diversification. The least risk reduction due to the diversification belongs to Czech Republic with 0.40%. The next country causing less risk reduction is Hungary with 0.43%. Portfolio manager can quit investing in these two countries to decrease portfolio's risk by analyzing other countries' equities.

The next portfolio having less VaR is Portfolio 6 that consists of equity indices returns of emerging markets and SMEs in developed markets. Analyzing countries' risks that can be seen that Finland that existing SMEs has the highest risk with 3%. The least risk reduction due to diversification belongs to Swiss that existing SMEs with 0.03% and the next one is Spain with 0.28%. Portfolio manager who wants to take out any asset can prefer no investing in these countries.

As understood, which level the portfolio loses at what probability and what proportions the assets affect these loses can be seen clearly through VaR. Portfolio managers that evaluate VaR results can easily make a decision which assets should be given up when taking out some assets from portfolios.

VI. Conclusion

World financial markets are growing up rapidly and coming closer with the results of globalization and technological improvements. These rapid improvements and integration make investors to think about which assets and at what proportions should be in portfolio, and when and at what level of risk should be taken.

This study determines the international diversification is beneficial in the light of other studies related portfolio diversification. With this aim, benefits expected from diversification by investing in emerging markets are investigated and optimal portfolio selection is made by optimization method. VaR is considered as portfolio risk measurement.

In this study it is observed that equity indices returns that have low relationships with each other are included the portfolios. The correlations between equity returns in emerging markets and developed markets are low. Average returns, price changes and volatilities are much higher in emerging markets. Also probability of forecasting of equity returns in emerging markets is high. With the effects of all these characteristics of emerging markets the portfolio (Portfolio 6) including equity indices returns of emerging markets and SMEs in developed markets is determined as an optimal portfolio in this study. Even though all the portfolios are efficient, this portfolio has the highest return and the least risk among other portfolios created in the study. Study also concludes that this portfolio's performance is higher than the other efficient portfolios.

The study determines that international diversification is beneficial, investing in emerging countries is advantageous and ADRs are not an alternative for investing in emerging markets. These conclusions should be taken seriously by individual and institutional investors who invest internationally in respect of international investment and diversification.

Investors' attitudes of risk, direction of market perceptions, and performance expectations have tremendous effect on determining the portfolio selection. Markowitz's mean-variance model can be criticized because of excessive parameters that should be calculated and substantially depended on historical data. But it is the truth that it guides at investment decisions for a long period of time. This study is based upon Markowitz's model. The study suggest using and improving this kind of approaches and becoming widespread efficient risk management tools when creating and selecting a portfolio.

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Table 1: Descriptive Statistics of Equity Indices of Developed Countries

Countries	N	Minimum Return (%)	Maximum Return (%)	Arithmetic Mean (%)	Standard Deviation (%)	Skewness	Kurtosis
Germany	152	-27.97	20.20	0.64	6.30	-0.85	3.37
USA	152	-15.11	9.42	0.68	4.20	-0.69	0.96
Australia	152	-14.75	13.18	0.74	5.10	-0.40	0.48
Belgium	152	-20.84	16.16	0.67	5.00	-0.97	3.22
Finland	152	-38.23	28.04	1.59	10.30	-0.45	1.42
France	152	-16.65	14.24	0.69	5.20	-0.33	0.81
Netherlands	152	-19.62	12.15	0.64	5.30	-1.03	2.31
Hong Kong	152	-34.41	28.37	0.49	8.10	-0.06	2.53
United Kingdom	152	-11.12	9.57	0.54	3.90	-0.30	-0.04
Ireland	152	-15.26	16.69	0.77	5.20	-0.62	1.46
Spain	152	-25.52	19.38	1.00	6.20	-0.36	1.68
Switzerland	152	-17.11	13.48	0.91	4.70	-0.56	1.34
Italy	152	-15.37	19.40	0.79	6.60	0.14	-0.02
Japan	152	-18.21	16.30	0.13	6.10	0.15	0.00
Canada	152	-24.37	13.45	0.91	5.50	-1.09	2.92
Portugal	152	-21.51	19.45	0.62	6.20	-0.18	0.77
Singapore	152	-23.08	22.85	0.28	7.70	-0.35	2.05
World	152	-15.26	8.60	0.58	4.10	-0.82	1.23
ADR	88	-17.18	11.48	0.44	5.30	-0.61	0.79

Table 2: Descriptive Statistics of Equity Indices of Emerging Countries

Countries	N	Minimum Return (%)	Maximum Return (%)	Arithmetic Mean (%)	Standard Deviation (%)	Skewness (%)	Kurtosis (%)
Argentina	152	-38.43	42.47	0.50	11.20	-0.34	2.06
Brazil	152	-49.44	31.12	1.20	12.20	-0.83	2.50
Czech Rep.	128	-32.40	26.30	1.10	8.60	-0.51	1.63
China	152	-32.40	38.18	-0.80	11.00	0.29	1.57
Indonesia	152	-52.47	44.20	-0.20	14.60	-0.38	2.02
Philippines	152	-34.65	36.01	-0.50	9.90	0.18	2.20
South Africa	152	-36.88	19.28	0.80	8.00	-1.07	3.38
South Korea	152	-37.48	53.41	0.50	12.00	0.31	3.08
India	152	-19.53	19.89	0.60	8.30	-0.10	-0.39
Israel	152	-20.94	23.86	0.40	7.70	-0.39	0.50
Hungary	128	-49.09	37.96	1.70	10.50	-0.73	4.49
Malaysia	152	-36.11	40.51	0.10	10.00	-0.10	3.30
Mexico	152	-41.95	17.42	0.60	9.70	-1.34	3.66
Egypt	128	-15.11	35.08	1.40	8.70	0.82	1.49
Pakistan	152	-47.62	31.68	0.20	11.50	-0.26	2.19
Poland	152	-42.98	78.07	1.40	13.90	0.80	5.97
Russia	128	-93.07	47.71	1.60	19.00	-1.06	4.54
Chile	152	-34.40	18.28	0.60	7.10	-0.80	3.12
Thailand	152	-41.63	35.90	-0.40	12.90	-0.23	1.52
Taiwan	152	-24.68	38.14	0.30	9.50	0.56	1.61
Turkey	152	-53.18	54.41	1.10	17.20	-0.29	0.98
Jordan	152	-9.20	18.14	0.90	4.90	0.65	0.63
Venezuela	152	-63.77	48.04	0.10	14.70	-0.78	3.95
EM	152	-34.65	15.23	0.50	6.80	-1.23	4.24
EM-Asia	152	-21.90	19.95	0.10	7.60	-0.24	0.74
EM-EMEA	104	-37.06	16.70	0.80	7.50	-1.63	5.43
EM-Latin America	152	-43.66	18.27	0.80	8.50	-1.26	4.11
World	152	-15.26	9.00	0.60	4.10	-0.82	1.23

Table 3: Correlation Coefficients Between Developed Countries

	Germany	USA	Australia	Belgium	Finland	France	Hong Kong	Kingdom	United	Ireland	Spain	Switzerland	Italy	Japan	Canada	Portugal	Singapore	World	ADR
Germany	1.00																		
USA	0.71	1.00																	
Australia	0.57	0.59	1.00																
Belgium	0.70	0.54	0.43	1.00															
Finland	0.54	0.59	0.47	0.30	1.00														
France	0.84	0.69	0.58	0.72	0.56	1.00													
Netherlands	0.85	0.71	0.58	0.77	0.53	0.84	1.00												
Hong Kong	0.45	0.53	0.59	0.29	0.33	0.44	0.47	1.00											
United Kingdom	0.70	0.71	0.61	0.69	0.54	0.77	0.80	0.52	1.00										
Ireland	0.63	0.63	0.55	0.61	0.43	0.58	0.70	0.37	0.71	1.00									
Spain	0.71	0.65	0.60	0.61	0.47	0.75	0.73	0.45	0.69	0.64	1.00								
Switzerland	0.61	0.56	0.46	0.66	0.39	0.66	0.74	0.37	0.67	0.57	0.61	1.00							
Italy	0.59	0.44	0.39	0.50	0.44	0.63	0.59	0.25	0.47	0.40	0.64	0.44	1.00						
Japan	0.28	0.39	0.55	0.23	0.36	0.38	0.41	0.36	0.41	0.37	0.37	0.38	0.30	1.00					
Canada	0.61	0.77	0.68	0.40	0.54	0.65	0.61	0.60	0.61	0.49	0.59	0.50	0.43	0.46	1.00				
Portugal	0.62	0.44	0.38	0.56	0.43	0.66	0.62	0.32	0.53	0.49	0.68	0.59	0.53	0.22	0.48	1.00			
Singapore	0.43	0.53	0.58	0.31	0.30	0.43	0.46	0.75	0.49	0.35	0.43	0.35	0.29	0.36	0.54	0.25	1.00		
World	0.79	0.91	0.74	0.62	0.65	0.81	0.83	0.61	0.82	0.69	0.76	0.68	0.58	0.63	0.81	0.55	0.61	1.00	
ADR	0.87	0.90	0.75	0.65	0.71	0.91	0.85	0.61	0.87	0.70	0.85	0.74	0.75	0.61	0.85	0.66	0.59	0.98	1.00

Table 4: Correlation Coefficients Between Emerging Countries

	Argentina	Brazil	Czech Rep.	China	Indonesia	Philippines	South Africa	South Korea	India	Israel	Hungary	Malaysia	Mexico	Egypt	Pakistan
Argentina	1.00														
Brazil	0.49	1.00													
Czech Rep.	0.30	0.38	1.00												
China	0.36	0.38	0.35	1.00											
Indonesia	0.24	0.33	0.24	0.32	1.00										
Philippines	0.36	0.31	0.19	0.47	0.58	1.00									
South Africa	0.36	0.46	0.36	0.49	0.33	0.50	1.00								
South Korea	0.23	0.28	0.26	0.26	0.37	0.33	0.44	1.00							
India	0.26	0.36	0.36	0.26	0.30	0.21	0.27	0.26	1.00						
Israel	0.37	0.37	0.26	0.23	0.18	0.18	0.27	0.20	0.30	1.00					
Hungary	0.40	0.53	0.63	0.31	0.32	0.35	0.49	0.24	0.30	0.34	1.00				
Malaysia	0.29	0.25	0.27	0.45	0.57	0.57	0.39	0.33	0.28	0.16	0.37	1.00			
Mexico	0.59	0.60	0.36	0.42	0.33	0.38	0.49	0.32	0.32	0.44	0.57	0.31	1.00		
Egypt	0.22	0.15	0.19	0.14	0.20	0.25	0.25	0.17	0.32	0.18	0.23	0.17	0.18	1.00	
Pakistan	0.13	0.31	0.28	0.16	0.16	0.09	0.22	0.14	0.39	0.15	0.32	0.20	0.24	0.16	1.00
Poland	0.30	0.43	0.57	0.28	0.25	0.28	0.39	0.31	0.31	0.26	0.69	0.33	0.45	0.27	0.20
Russia	0.39	0.52	0.35	0.36	0.51	0.41	0.48	0.25	0.26	0.33	0.52	0.45	0.57	0.18	0.28
Chile	0.53	0.61	0.38	0.46	0.46	0.47	0.53	0.39	0.44	0.36	0.48	0.43	0.53	0.32	0.26
Thailand	0.33	0.34	0.22	0.47	0.54	0.70	0.59	0.58	0.25	0.11	0.27	0.55	0.39	0.17	0.27
Taiwan	0.40	0.40	0.32	0.50	0.29	0.45	0.44	0.39	0.31	0.24	0.32	0.50	0.39	0.23	0.19
Turkey	0.35	0.39	0.33	0.24	0.18	0.18	0.31	0.21	0.23	0.42	0.47	0.22	0.39	0.27	0.20
Jordan	0.01	0.08	0.03	-0.02	0.15	0.09	0.09	0.15	0.14	0.11	0.06	0.09	0.08	0.31	0.18
Venezuela	0.23	0.28	0.32	0.32	0.22	0.29	0.25	0.16	0.25	0.21	0.26	0.26	0.22	0.15	0.11
EM	0.61	0.73	0.52	0.62	0.55	0.61	0.71	0.55	0.51	0.48	0.65	0.62	0.77	0.31	0.35
EM-Asia	0.42	0.45	0.42	0.63	0.60	0.68	0.60	0.65	0.50	0.32	0.47	0.77	0.51	0.29	0.32
EM-EMEA	0.51	0.69	0.59	0.48	0.40	0.43	0.86	0.42	0.47	0.56	0.72	0.43	0.76	0.37	0.32
EM-Latin America	0.67	0.90	0.43	0.48	0.41	0.43	0.57	0.37	0.40	0.46	0.61	0.37	0.86	0.22	0.32
World	0.44	0.61	0.33	0.41	0.40	0.43	0.56	0.49	0.30	0.55	0.55	0.40	0.60	0.21	0.12
ADR	0.41	0.71	0.46	0.46	0.36	0.44	0.64	0.53	0.38	0.60	0.61	0.39	0.71	0.29	0.09

Table 4: Correlation Coefficients Between Emerging Countries (Continued)

	Poland	Russia	Chile	Thailand	Taiwan	Turkey	Jordan	Venezuela	EM	EM-Asya	EM-EMEA	EM- Latin America	World	ADR
Argentina														
Brazil														
Czech Rep.														
China														
Indonesia														
Philippines														
South Africa														
South Korea														
India														
Israel														
Hungary														
Malaysia														
Mexico														
Egypt														
Pakistan														
Poland	1.00													
Russia	0.36	1.00												
Chile	0.34	0.60	1.00											
Thailand	0.30	0.35	0.47	1.00										
Taiwan	0.25	0.47	0.48	0.48	1.00									
Turkey	0.28	0.47	0.39	0.20	0.28	1.00								
Jordan	0.08	0.08	0.18	0.15	0.02	0.08	1.00							
Venezuela	0.25	0.25	0.32	0.19	0.21	0.21	0.01	1.00						
EM	0.55	0.67	0.76	0.66	0.65	0.52	0.15	0.37	1.00					
EM-Asia	0.46	0.52	0.62	0.76	0.70	0.35	0.15	0.31	0.87	1.00				
EM-EMEA	0.70	0.73	0.72	0.47	0.51	0.67	0.14	0.44	0.88	0.65	1.00			
EM-Latin America	0.49	0.62	0.74	0.46	0.48	0.45	0.10	0.32	0.88	0.59	0.80	1.00		
World	0.47	0.49	0.58	0.50	0.48	0.47	0.11	0.27	0.77	0.64	0.75	0.70	1.00	
ADR	0.65	0.55	0.65	0.49	0.54	0.62	0.13	0.34	0.81	0.68	0.78	0.77	0.98	1.00

Graph 1: Efficient Frontiers of All Portfolios

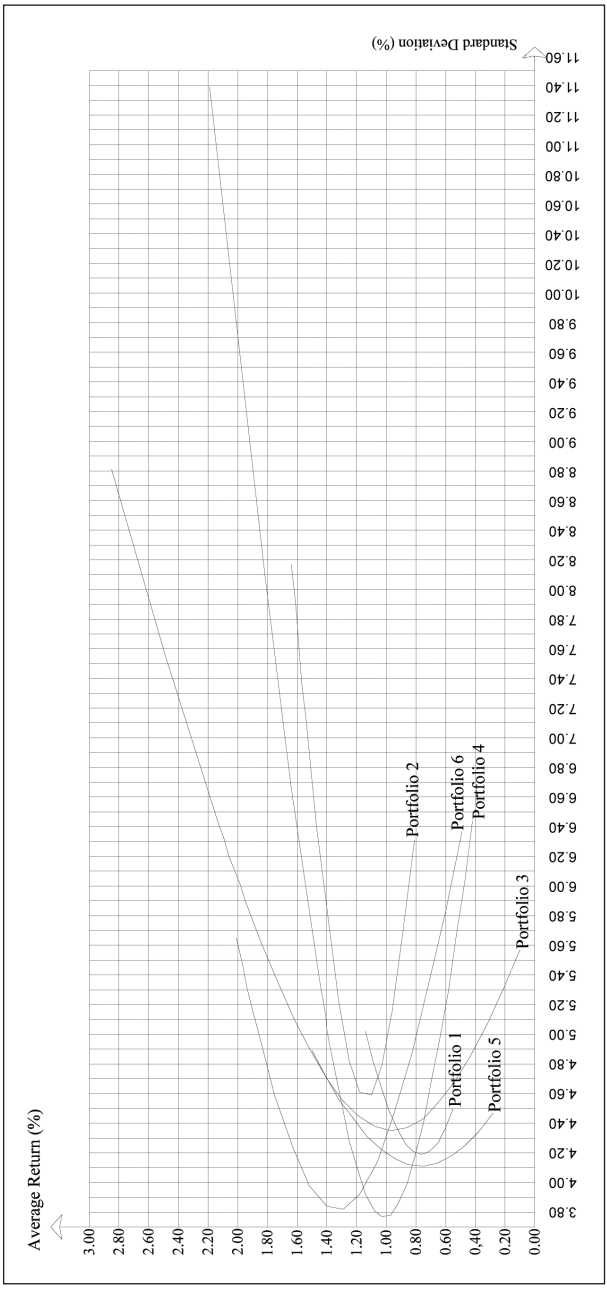

Table 5: Comparison of Results Related Portfolios

Portfolios	Average Return (%)	Standard Deviation (%)	Maximum Return (%)	Minimum Return (%)	Coefficient of Variation
Portfolio 1	1.03	4.73	19.06	5.83	4.5780
Portfolio 2	1.18	4.71	22.21	-5.63	3.9986
Portfolio 3	1.40	4.80	26.50	1.34	3.4200
Portfolio 4	1.08	3.77	25.20	-5.98	3.4854
Portfolio 5	1.41	4.82	26.54	-0.21	3.4161
Portfolio 6	1.29	3.92	29.56	-8.88	3.0376

Table 6: Comparison of Performance Measures' Results

Portfolios	Sharpe Ratio	M^2 Measure	Treynor Index	Jensen Measure		Sortino Ratio
Portfolio 1	0.1906	0.009	0.0106	Alpha	0.0035	0.1960
				Beta	0.8595	
Portfolio 2	0.2221	0.010	0.0210	Alpha	0.0073	0.2285
				Beta	0.4552	
Portfolio 3	0.2650	0.012	0.0152	Alpha	*0.0089*	0.2724
				Beta	0.8356	
Portfolio 4	0.2520	0.012	0.0154	Alpha	0.0063	0.2611
				Beta	0.6006	
Portfolio 5	0.2654	0.012	0.0148	Alpha	0.0088	0.2728
				Beta	0.8587	
Portfolio 6	*0.2956*	*0.013*	*0.0186*	Alfa	00085	*0.3059*
				Beta	0.6173	

Table 7: Best Performance According to Performance Measures

Performance Measures	Portfolios
Sharpe Ratio	Portfolio 6
M^2 Measure	Portfolio 6
Treynor Index	Portfolio 6
Jensen Measure	Portfolio 3
Sortino Ratio	Portfolio 6

Table 8: VaR Results of the Portfolios

Countries	Portfolios	VaR (%)	Risk of Countries' Equities (%)	Risk Reduction due to Diversification (%)
Finland	Portfolio 1	7.81	2.88	0.73
Spain			0.62	0.16
Switzerland			4.50	0.56
Canada			1.68	0.42
			Total **9.68**	**1.87**
Czech Republic	Portfolio 2	7.78	1.11	0.53
Hungary			3.58	1.17
Egypt			3.02	0.96
Jordan			4.05	1.32
			Total **11.76**	**3.98**
Finland	Portfolio 3	7.94	3.86	0.42
Ireland			2.43	0.45
Spain			2.07	0.42
Canada			1.26	0.39
			Total **9.62**	**1.68**
Finland	Portfolio 4	6.21	1.53	0.61
Switzerland			2.60	0.86
Czech Republic			0.84	0.40
Hungary			1.21	0.43
Egypt			1.31	0.80
Jordan			2.91	1.09
			Total **10.40**	**4.19**
Finland	Portfolio 5	7.97	0.55	0.25
Finland s*.			3.61	0.39
Ireland s.			2.50	0.47
Spain s.			2.08	0.43
Canada s.			1.11	0.34
			Total **9.85**	**1.88**
Egypt	Portfolio 6	6.48	1.64	0.79
Jordan			2.03	1.00
Finland s.			3.00	0.60
Ireland s.			1.35	0.37
Spain s.			0.97	0.28
Switzerland s.			0.07	0.03
Canada s.			0.79	0.30
			Total **9.85**	**3.37**

Portfolio 1: Equity indices returns of developed markets

Portfolio 2: Equity indices returns of emerging markets

Portfolio 3: Equity indices returns of SMEs (Small and Medium Sized Enterprises) in developed markets

Portfolio 4: Equity indices returns of developed markets and emerging markets

Portfolio 5: Equity indices returns of developed markets and SMEs in developed markets

Portfolio 6: Equity indices return of emerging markets and SMEs in developed markets.

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HOW TO ATTRACT MORE FOREIGN CAPITAL INVESTMENTS IN TURKEY

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Abstract

In this paper, the author initially determines the reasons of the lack of long term foreign capital investments in Turkey and then touches the application of International Accounting Standards in Turkish Capital Market as Turkey's being a candidate for European Union. Then he shows the detrimental consequences of applying existing taxation rules on the financial statements of foreign invested capital in Turkey by means of a case study. Then he proposes a tax rule change in order to attract more foreign investment flow to Turkey.

I. Introduction

Considering a new business is opened up by an investor in Turkey at the beginning of 2006, the investor has invested 1,000 Canadian dollars (CAD) into the business. The investor incurred no commercial transactions during the year. Table 1 summarizes the investment and exchange rate difference:

Table 1: CAD Investment Foreign Exchange Differences and the Tax Effect

Date	01.01.2006	12.31.2006	Profit in CAD	Profit in TL
CAD	1,000	1,000		
Currency rate	600	1,200		
TL	600,000	1,200,000	0	600,000
Tax (rate 30 %)			0	180,000
Net profit			0	420,000
Capital in CAD at 12.31.2006		850		

The currency rate is assumed to be Turkish lira (TL) 600,000 against one Canadian dollar at the beginning of the year and TL 1,200,000 at the end of the year due to 100% devaluation. Despite the fact that the CAD capital has not

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Jel Code:M41

changed, the investor has incurred an exchange gain in terms of TL, and since the investor is operating in Turkey he/she has to pay income tax out of his/her net income. Income tax of 30% erases TL 180,000 of investor's TL 600,000 of income before tax. His/her net income becomes TL 420,000. With the initial share capital of TL 600,000, his/her capital in CAD as of December 31, 2006, is TL 1,020,000 and 1,020,000 / 1,200,000 = CAD 850. This example shows the dramatic tax consequences of making investments in a country where a foreign investment is subject to local tax rules, and how, even without any single transaction, the investment loses its capital due to currency devaluations.

Turkey is a developing country, in need of foreign investment for sustained growth. Foreign investment has always been an important factor for growth in the country, as internal sources are scarce. Yet, as this article will show, Turkey's current incentives are not enough to attract foreign capital investments. Turkey has long struggled with inflation. For many years, inflation has destroyed income distribution and created an economy that does not use economic activity as a basis for growth, but has encouraged the rich to invest in government bonds rather than to increase production. When we look at the last ten years of inflation, devaluation rates against the U.S. dollar, and interest rates in Turkey, we see the following picture (year-end figures in %):

Table 2: 1997-2006 Period Inflation, Devaluation and Interest Rates in Turkey

Years	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Inflation [1]	90,9	54,2	62,9	32,6	88,5	30,8	13,9	13,8	2,7	11,6
Devaluation [2]	91,5	52,9	72,1	23,4	119,9	11,8	-15	-4	0,5	4,7
Interest rates [3]	80	80	80	70	70	64	43	38	23	27

Source: [1] www.tuik.gov.tr, Turkish Institute of Statistics (TIS) Wholesale Price Index.
[2] www.tcmb.gov.tr, Central Bank of Turkish Republic (CBTR).
[3] CBTR, year end discount rates for bank borrowings as an indicator.

Table 2 shows that, from the beginning of the decade until the end of 2000, inflation and devaluation rates were close to each other while interest rates were running at 80%. In 2001 Turkey had the biggest economic crisis in its economic history, as reflected by the inflation and devaluation rates (interest

rates also ran well above 70% during the crisis days in the first half of 2001). After 2001, we can observe a more stable development on all indicators. One more inference is that, due to interest rates being higher than inflation after 2001, foreign exchange denominated investments flowing into the economy were being invested in capital market instruments, namely government bonds and public company shares. This flow, coupled with high interest rates, kept the devaluation under pressure, as observable from Table 2. This phenomenon may well be continuing, with more imports into the economy than exports, leading to widening the foreign exchange currency gap or, in other words, the foreign exchange deficit.

Table 2 shows high interest rates as compared to inflation. This helps to create foreign exchange deficit. Turkey's foreign exchange deficit has long been financed by foreign investments buying the government's debt instruments and public company shares. Does this type of investment fuel growth in the Turkish economy? The answer is a point of dispute that leads to the next question: Where is the borrowed money spent? Since it is mainly the government being funded, the money is used to balance its budget. In order to keep the expenditures at minimum, new capital investments have been occupying less and less share of government's budget since 2001, as this is closely monitored by International Monetary Fund-IMF. Turkey's foreign exchange currency is in balance (otherwise there would have been continued devaluations), but it is due to the foreign denominated funds flowing into the economy. Since these funds are of short-term investments on bonds and shares, they do not help to fuel the economic growth. Economic growth is possible if foreign investments are in capital goods rather than in financial instruments. Macro economic factors play an important role as the indicators show above. After 2001, the economic indicators show a better picture but it is not enough to attract long-term foreign capital investments. Taxation rules need to be changed to achieve these investments.

II. Historical Background

Turkey has been a candidate to enter the European Union [formerly the European Economic Community-EEC] since the Ankara Agreement was signed on September 12, 1963.

In this regard, the government has been changing and updating its accounting rules and taxation regulations, in addition to its economic criteria. As far the accounting issues are concerned, the Capital Market Board of Turkey has adopted International Financial Reporting Standards (IFRS) to those companies whose shares are traded in the Istanbul Stock Exchange.[1] As far as tax issues are concerned, Turkey has applied International Accounting Standard 29 (IAS 29), Financial Reporting in Hyperinflationary Economies, on all balance sheets as at December 31, 2003, and 2004.[2] Inflation adjustments for 2003 on balance sheets did not have any tax consequences, but inflation adjustments for 2004 did.

In accordance with IAS 29, the standard should be applied when the cumulative inflation rate over three years is approaching or exceeding 100%.[3] This is one of the signs that hyperinflation exists in the economy and, as a consequence, IAS 29 requires the financial statements to be restated. This application has been useful, as many large-size companies have updated their balance sheets, which were not showing the current purchasing power values of noncurrent assets-liabilities and shareholders' equity that were initially recorded on historical cost principle. The article tries to stress the point that what consequences the inflation would have on financial statements if inflation remains below 100% over the three-year period but may well be at or above 1% per month, which is currently the case with wholesale prices (the annual Wholesale Price Index annual increase is 11.6% as of December 2006). According to the current Turkish Procedural Tax Law application, since this annual inflation increase is below the required level for restatement of accounts, there will not be any restatement of the financial statements as required by IAS 29, to show the effects of inflation on financial statements. In this case, even with 10–15% inflation and/or devaluation in the economy, the financial statements will be distorted again and will not be able to reflect their current purchasing power values. In an ideal situation, devaluation and inflation should run parallel. But in real life, due to high interest rates prevailing in the market and flow of foreign transitory investments, the parallel run of inflation and devaluation may not be the case as is shown on Table I.2. From a different point

[1] Turkish Capital Market Board. Accounting Standards at Capital Markets' Decree Serial:XI, No:25.

[2] Tax Law Number 5024 issued at December 30, 2003 and its related Procedural Tax Law's Decree Number:328.

[3] International Accounting Standards website, www.iasplus.com.

of view, it may be considered that depressed currency devaluation, enhances imports and helps stabilize inflation. On the other hand, it widens the foreign exchange deficit, which is financed by the foreign investments attracted by the higher interest rates. This is not a sign of a healthy economy because foreign investments are quite sensitive to fluctuations in the local economy and can leave the country within hours in case of an economic downturn. If foreign investors leave, it may leave the foreign currency equilibriums way above their level before the crisis. This in turn may fuel inflation due to higher imported costs but may gradually close the foreign deficit gap as imports will become more expensive and exports will increase due to currency devaluation.

The article suggests that foreign companies operating in Turkey should be allowed to keep their records in the original reporting hard currency and should be taxed accordingly. This will enable them to understand whether they have really incurred a loss or profit at the end of their financial periods. There may be periods during which they would not experience any devaluation at all due to high interest rates prevailing in the market. However, there may be periods of high or gradual devaluations running parallel to inflation. Applying IAS 21, "The Effects of Changes in Foreign Exchange Rates", best solves this problem. Actually, Turkey's current Procedural Tax Law does not fully prohibit foreign companies from keeping their accounting records on reporting currency basis. According to item 215 of the Procedural Tax Law, "foreign companies may be allowed to keep their records other than the TL on the basis of Cabinet decision and with the provision of their paid-up capital not being lower than 100 million USD." This critera is high and getting a Cabinet decision per company may require a considerable amount of time due to bureaucratic reasons.

III. IAS 21, The Effects of Changes in Foreign Exchange Rates

International Financial Reporting Standards (IFRS), including International Accounting Standards (IASs), are issued by the International Accounting Standards Board (IASB), which represents all member countries. IAS 21, "The Effects of Changes in Foreign Exchange Rates", deals with double currency reporting of financial statements. The objective, key definitions, and currency translation rules of IAS 21 are summarized below in the following excerpt from the IAS Web site.[4]

[4] International Accounting Standards website. www.iasplus.com.

Objective of IAS 21

The objective of IAS 21 is "to prescribe how to include foreign currency transactions and foreign operations in the financial statements of an entity and how to translate financial statements into a presentation currency. The principal issues are which exchange rate(s) to use and how to report the effects of changes in exchange rates in the financial statements."

Key Definitions:

Functional currency: The currency of the primary economic environment in which the entity operates.

Presentation currency: The currency in which financial statements are presented.

Exchange difference: The difference resulting from translating a given number of units of one currency into another currency at different exchange rates.

Foreign operation: A subsidiary, associate, joint venture, or branch whose activities are based in a country other than that of the reporting enterprise.

Basic Steps for Translating Foreign Currency Amounts into the Functional Currency:

Steps apply to a stand-alone entity, an entity with foreign operations (such as a parent with foreign subsidiaries), or a foreign operation (such as a foreign subsidiary or branch).

1. The reporting entity determines its functional currency.

2. The entity translates all foreign currency items into its functional currency.

3. The entity reports the effects of such translation in accordance with paragraphs 20–37 and 50.

Foreign Currency Transactions:

A foreign currency transaction should be recorded initially at the rate of exchange at the date of the transaction (use of averages is permitted if they are a reasonable approximation of actual).

At each subsequent balance sheet date:

Foreign currency monetary amounts should be reported using the closing rate.

Non-monetary items carried at historical cost should be reported using

the exchange rate at the date of the transaction.

Exchange differences arising when monetary items are settled or when monetary items are translated at rates different from those at which they were translated when initially recognised or in previous financial statements are reported in profit or loss in the period.

If a gain or loss on a non-monetary item is recognised directly in equity (for example, a property revaluation under IAS 16), any foreign exchange component of that gain or loss is also recognised directly in equity.

Translation from the Functional Currency to the Presentation Currency:

The results and financial position of an entity whose functional currency is not the currency of a hyperinflationary economy are translated into a different presentation currency using the following procedures:

- assets and liabilities for each balance sheet presented (including comparatives) are translated at the closing rate at the date of that balance sheet.

- income and expenses for each income statement (including comparatives) are translated at exchange rates at the dates of the transactions; and

- all resulting exchange differences are recognised as a separate component of equity.

Special rules apply for translating the results and financial position of an entity whose functional currency is the currency of a hyperinflationary economy into a different presentation currency.

Where the foreign entity reports in the currency of a hyperinflationary economy, the financial statements of the foreign entity should be restated as required by IAS 29, "Financial Reporting in Hyperinflationary Economies", before translation into the reporting currency.

Disclosure:

When an entity presents its financial statements in a currency that is different from its functional currency, it may describe those financial statements as complying with IFRS only if they comply with all the requirements of each applicable Standard (including IAS 21) and each applicable Interpretation.

VI. Growing International Operations Adopt IFRS

Although business operations in foreign countries have existed for centuries,

we have entered an era of unprecedented activity of worldwide production and distribution. Many examples exist of the growing importance of international operations for U.S. companies. Mobile Oil, Texaco, Gulf Oil, Dow Chemical, and Coca Cola earn more than 60% of their total operating profits in international operations. U.S. multinational companies such as Mobile, IBM, and American Express do business with more than 50 countries around the world. U.S. exports and imports have increased more than ten times in the last two decades. U.S. direct investments abroad have increased from $32 billion in 1960 to $600 billion in 1992. International finance has also become increasingly important as it serves world trade and foreign investment. International earning assets for the Bank of America, for example, represent more than half its total earning assets. Citibank maintains more than 250 overseas branches in over 100 countries.[5]

Turkey is not the only country that wants to adopt IFRS as its reporting base. In Canada, according to the Accounting Standards Board's (AcSB) Strategic Plan, Canada is converging its
accounting standards with IFRS.[6] In the U.S., similar convergence activities are underway. The Financial Accounting Standards Board (FASB) says, "joint projects are those that standard setters have agreed to conduct simultaneously in a coordinated manner. Joint projects involve the sharing of staff resources, and every effort is made to keep joint projects on a similar time schedule at each Board. Currently, the FASB and IASB are conducting joint projects to address Revenue Recognition and Business Combinations."[7]

Brazilian accounting principles are not as comprehensive as U.S. GAAP in several areas. In the absence of specific guidance for a particular accounting issue, Brazilian accountants frequently refer to International Accounting Standards for suggestions.[8]

Based on the rules of IAS 21, the effects of devaluation are best explained by numerical examples. In the following case study, a hypothetical Canadian parent company whose subsidiary operates in Turkey keeps its accounts in TL for local tax purposes and also reports in CAD in order to be consolidated with the parent company's financial statements on IAS principles.

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[5] Guithues A. D. (Spring 1994). Reporting of foreign currency translation – Multinational Business Review.

[6] www.asbcanada.org

[7] www.fasb.org

[8] Brasil Company Turismo & Receptivo website.

The 11 transactions in the case study start with the establishment of the company and include merchandise purchases, exports, buying of non current asset-machinery, its amortization calculation, and calculation of cost of goods sold (COGS). All rules with regard to the application of accounting rules are the same in both TL and CAD accounts; that is, inventory valuation, useful life of the machinery, and its amortization method have all been applied in the same manner on both TL and CAD accounts. Every transaction is converted from TL to CAD at the exchange rate prevailing at the date of the transaction. Devaluation of TL against CAD is assumed to be 1% per month; the total cumulative (compound) devaluation rate is 12.7% per annum.

V. Case Study

The case study has been given as an appendix to this article.

VI. Results of the Case Study and Possibility of Hedging

The case study at the appendix shows that due to devaluation effect on the TL side, the company is incurring an income before tax and therefore paying the income tax. Whereas on the CAD side the company is incurring a loss. In order to hedge against the income tax to be paid on the TL side, the company needs to create a liability in a foreign currency and incur foreign exchange losses. The income before tax figure in TL is 5,816 (TL figures are expressed in million TL). I.e. In order to create as much foreign exchange loss as TL 5,816, let's assume that the company borrows CAD 80,110 at February 28 and converts it to TL. The TL equivalent of this amount is 55,586. Without considering the interest on this loan, the company will incur a foreign exchange loss of TL 5,816 at year end when the exchange rate is TL 766,464 per CAD ((80,110 X (766,464 – 693,870)). By doing so the Canadian subsidiary will not pay any taxes on TL since its income before tax is zero. On the CAD side the TL equivalent of CAD 80,110 as at February 28th is TL 55,586. TL 55,586 at December 31 is equal to CAD 72,523 (55,586,000,000/766,464), the CAD loss of the company due to foreign exchange loss on the loan 7,587 and the total loss on the CAD side is (7,587 + 1576) 9,163. It may be argued that CAD 9,163 loss can partly be eliminated by investing the TL equivalent of the amount in government bonds or time deposits. But in the assumption above there has been no consideration

of interest on the loan. Considering the borrowing interest rates are greater than the interest rates on government bonds, the company`s loss of 9,163 on the CAD side can be said minimum.

VII. Conclusion

The result of the case study shows that even if the same accounting rules on both sides of the reporting currencies are applied (in our case the local currency is TL and reporting-presentation currency is CAD) there can be totally different or even contradictory results. In the case study, it is clearly shown that the company is incurring a profit before tax figure on its TL books and paying income tax. On the other hand on its CAD books the company is incurring a loss. If there had been a chance for this subsidiary to present its financials in CAD in stead of TL it would not have paid any tax. Due to operating in Turkey and being subject to Turkish Tax Legislation the subsidiary has incurred a loss in real terms (in a medium where no devaluation occurs-namely in a CAD environment) and still paid taxes and as a consequence it has lost its equity. Its beginning equity at January 1, 2006 is CAD 145,560 and its ending equity as at December 31, 2006 is CAD 142, 087, the subsidiary in real terms (in CAD) has lost its equity by CAD 3,473 (2.4%).

The calculations on the CAD side did not include deferred tax (future income tax) effect due to temporary differences between CAD and TL applications, calculation of deferred tax would even increase the loss on the CAD side. In these circumstances the foreign investment for long term attitudes investing in capital goods can hardly be attracted. Existing tax rules can only give way to a foreign investment to keep its records in its functional (presentation) currency on the provision of investing at least USD 100 million and with the approval of the Turkish Cabinet. USD 100 million is not a small amount, even a one USD million can bring value added to the economy, provide a few jobs that may lead to the absorption of unemployed. The best solution, to this problem is changing the item of 215 of the Procedural Tax Law and allowing all long term foreign investments coming for production and/or merchandising purposes without any minimum capital requirement and without seeking the approval of the Cabinet.

The case study has particularly been prepared on Turkey whose current account balance is around USD 33 billion (about 10% of its GNP) as of

2006 year end, and its economy has been stabilized since 2001 on IMF's stake. The greater the amount of current account deficit the more the possibilities that the country may face devaluations. Therefore any country who is running proportionately (as a percentage of its GNP) high current account deficits, may face devaluation(s) and attracting more direct capital investment is a major cure to stabilize its economy.

Appendix

Case study

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ASSUMPTIONS
The company (subsidiary) is located in Turkey and subject to consolidation in Canada.
It is assumed that the Canadian Parent Co. is consolidating on IFRS basis for international reporting purpose.
All accounting treatments are the same in both countries.
Inventories are valued on FIFO method.
Reporting (presentation) currency to the parent company is CAD.
It is assumed that TL rate depreciates against CAD on monthly basis as 1 % per month.
Annual compound devaluation in % 12.7.
The economic life of the machine in accordance with IFRS and Local Tax Law is 10 years and
Straight Line amortization on pro-rata basis is applied.
Pro rata amortization is calculated both for Local and IFRS side.
All records have been revised at year end and necessary closing entries have been made.
Journal entries have been seperately recorded at TL and CAD general ledgers.
Monthly VAT (GST) accruals have been made but no payment has been realised.
VAT:Value Added Tax same as GST:Government Services Tax
All figures on TL Journal Book is denominated in “million TL”

Table 2: Transactions in TL and CAD

	Date & Event	Journal Entry	DEBIT (TL)	CREDIT (TL)	CAD/TL RATE	DEBIT CAD	CREDIT CAD
	31.01.2006						
1	Company XYZ has been established with 100 billion TL capital paid as cash	Bank	100.000		687.000	145.560	
		Capital		100.000	687.000		145.560
	28/02/2006						
2	100 Pieces of goods have been purchased on credit 100 million TL each + GST (18 %)	Inventory	10.000		693.870	14.412	
		Deductable GST	1.800		693.870	2.594	
		Suppliers		11.800	693.870		17.006
	31/03/2006						
3	Machinery purchase in cash for 50 billion TL + GST (18 %)	Machinery & equipment	50.000		700.809	71.346	
		Deductable GST	9.000		700.809	12.842	
		Bank		59.000	700.809		84.188
	30/04/2006						
4	100 Pieces of goods have been purchased on credit 120 million TL each + GST (18 %)	Inventory	12.000		707.817	16.954	
		Deductable GST	2.160		707.817	3.052	
		Suppliers		14.160	707.817		20.005

Table 2: Transactions in TL and CAD (continued)

	31/05/2006						
5	100 Pieces of goods have been sold to customer A on credit 220 million TL each + GST (18 %)	Customer A's account	25.960		714.895	36.313	
		Domestic sales		22.000	714.895		30.774
		GST payable		3.960	714.895		5.539
	30/06/2006						
6	Payment to suppliers for the first purchase (transaction 2)	Suppliers	11.800		722.044	16.342	
		Bank		11.800	722.044		16.342
	31/07/2006						
7	50 Pieces of goods exported to customer C in Canada for 120 CAD each (on credit)	Customer C's account	4.376		729.264	6.000	
		Export sales		4.376	729.264		6.000
	Receivable from customer C in CAD 6,000.	6.000					
	31/08/2006						
8	25 Pieces of goods exported to customer D in Germany for 120 Euro (€) each (on credit)	Customer D current account	2.104		736.557	2.857	
		Export sales		2.104	736.557		2.857
	CAD/TL rate	736.557					
	CAD/€ parity (1 CAD = 1.05 €) CAD is stronger against €.	1.05					

Table 2: Transactions in TL and CAD (continued)

	Euro/TL rate	701.483					
	€ equivalent of the export	3.000					
	TL equivalent of the export	2.104.448.534					
	CAD equivalent of the export	2.857					
	30/09/2006						
9	Payment received from customer A (transaction 5)	Bank (Tl)	25.960		743.923	34.896	
		Company A's account		25.960	743.923		34.896
	31/10/2006						
10	Payment received from customer C (6,000 CAD)	Bank CAD account (con. TL)	4.508		751.362	6.000	
		Company C's current account		4.508	751.362		6.000
	11/30/2006						
11	Payment received from customer D (3,000 €, transaction 8)	Bank Euro account (con. TL)	2.475		758.875	3.261	
		Company D's account		2.475	758.875		3.261
	CAD/€ parity (1 CAD =0.92 €) € is stronger against dollar	0.92					
	CAD/TL rate	758.875					
	Euro/TL rate	824.865					
	€ equivalent of the export	3.000					
	TL equivalent of the export	2.474.593.696					
	CAD equivalent of the payment	3.261					
	Totals of the Journal Book Before the Year End Adjustments		262.143	262.143		372.430	372.430

Tablo 3: TL Ledger Accounts

Abbreviations: YEA : Year end adjustment
B : Balance
BAYEA : Balance after year end adjustment
GAFS : Goods available for sale
EI: Ending inventory
COGS: Cost of goods sold

BANK			
1	100.000	3	59.000
9	25.960	6	11.800
10	4.508		
11	2.475		
B	62.143		

CAPITAL			
		1	100.000
		B	100.000

INVENTORY			
2	10.000	YEA 2	19.000
4	12.000		
B	22.000		
BAYEA	3.000		

MACHINERY			
3	50.000		
B	50.000		

DED. GST			
2	1.800		
3	9.000		
4	2.160		
B	12.960		

GST PAY.			
		5	3.960
		B	3.960

Tablo 3: TL Ledger Accounts (contunied)

CUSTOMER A

5	25.960	9	25.960
B	0		

CUSTOMER C

7	4.376	10	4.508
YEA 8	133		
		B	133
		BAYEA	0

CUSTOMER D

8	2.104	11	2.475
YEA 9	370		
		B	370
		BAYEA	0

SUPPLIERS

6	11.800	2	11.800
		4	14.160
		B	14.160

COGS

YEA 2	19.000		
BAYEA	19.000		

F/X GAIN

		YEA 8	133
		YEA 9	370
		BAYEA	503

Tablo 3: TL Ledger Accounts (contunied)

DOMESTIC SALES			EXPORT SALES			AMORT. EXP.		
	5	22.000		7	4.376	YEA 1	4.167	
				8	2.104			
	B	22.000		B	6.480	BAYEA	4.167	

ACCUM. AMORT		
	YEA 1	4.167
	BAYEA	4.167

TOTAL OF DEBIT BALANCES	151.270	TOTAL OF CREDIT BALANCES	151.270

Tablo 4: CAD Ledger Accounts

Abbreviations: YEA: Year end Adjustment
B: Balance
BAYEA: Balance After Year End Adjustment
GAFS: Goods Available For Sale
EI: Ending Inventory
COGS: Cost Of Goods Sold

BANK				CAPITAL				INVENTORY			
1	145.550	3	84.188			1	145.560	2	14.412	YEA 2	27.127
9	34.896	6	16.342					4	16.954		
10	6.000	YEA 3	8.109								
11	3.261										
B	89.186					B	145.560	B	31.365		
BAYEA	81.077							BAYEA	4.238		

MACHINERY				DED. GST				GST PAY.			
3	71.346			2	2.594	YEA4	1.579	YEA6	373	5	5.539
				3	12.842						
				4	3.052						
B	71.346			B	18.488					B	5.539
				BAYEA	16.909					BAYEA	5.167

Tablo 4: CAD Ledger Accounts (contunied)

CUSTOMER A			
5	36.313	9	34.896
		YEA 7	1.417
B	1.417		
BAYEA	0		

CUSTOMER C			
7	6.000	10	6.000
B	0		

CUSTOMER D			
8	2.857	11	3.261
YEA 9	404		
		B	404
		BAYEA	0

SUPPLIERS			
6	16.342	2	17.006
YEA 5	2.194	4	20.005
		B	20.669
		BAYEA	18.474

F/X LOSS	
YEA 3	8.109
YEA 4	1.579
YEA 7	1.417
BAYEA	11.105

F/X GAIN	
YEA 5	2.194
YEA 6	373
YEA 9	404
BAYEA	2.971

Tablo 4: CAD Ledger Accounts (contunied)

DOMESTIC SALES			EXPORT SALES			AMORT. EXP.		
	5	30.774		7	6.000	YEA 1	5.946	
				8	2.857			
	B	30.774		B	8.857	BAYEA	5.946	

ACCUM. AMORT.			COGS		
	YEA 1	5.946	YEA 2	27.127	
	BAYEA	5.946	BAYEA	27.127	

TOTAL OF DEBIT BALANCES	217.749	TOTAL OF CREDIT BALANCES	217.749

Table 5: Year End Adjustments

	TOTALS OF THE JOURNAL BOOK CARRIED FORWARD BEFORE THE YEAR END ADJUSTMENTS		262.143	262.143	372.430	372.430
	31/12/2006		DEBIT (TL)	CREDIT (TL)	DEBIT CAD	CREDIT CAD
	Year end adjustments entries					
1	Machinery's annual depreciation of 10 % according to straight line method calculated on pro-rata basis 50.000.000.000 / 10 /12 X 10 = 4.166.666.667 TL	Depreciation expense	4.167			
		Accumulated depreciation		4.167		
	Machinery's annual depreciation of 10 % according to straight line and economic life method	Depreciation expense			5.946	
	On IFRS 21 side it is also calculated on pro-rata basis. March - December 10 months	Accumulated depreciation				5.946
	Machinery cost in CAD	71.346				
	Amortization of the year : Cost / 10 / 12 X 10	5.946				
2	Calculation of cost of Goods Sold (COGS)	COGS	19.000		27.127	
		Inventory		19.000		27.127

Table 5: Year End Adjustments (continued)

			DEBIT (TL)	CREDIT (TL)	DEBIT CAD	CREDIT CAD
3	TL balance of Bank account (in million TL)	62.143				
	$/TL closing rate at year end	766.464				
	CAD equivalence of TL balance of Bank account from closing rate	81.077				
	TL bank account balance in CAD before the adjustment	89.186				
	Adjustment entry on CAD ledger for bank TL balance	8.109				
		F/X difference loss			8.109	
		Bank account				8.109
4	GST deductable account balance in (million TL)	12.960				
	CAD equivalent of VAT-GST deductable account before the adjustment	18.488				
	$/TL closing rate at year end	766.464				
	CAD equivalent of GST deductable account from year end closing rate	16.909				
	Adjustment entry for deductable GST on CAD ledger	1.579				
		F/X difference loss			1.579	
		GST deductable account				1.579

Table 5: Year End Adjustments (continued)

			DEBIT (TL)	CREDIT (TL)	DEBIT CAD	CREDIT CAD
5	Year end balance of suppliers account in (million TL)	14.160				
	Suppliers account balance in CAD before the adjustment at year end	20.669				
	$/TL closing rate at year end	766.464				
	Suppliers account balance in CAD adjusted from the year end closing rate	18.474				
	Adjustment entry for suppliers account on CAD ledger	2.194				
		Suppliers			2.194	
		F/X gain				2.194
6	GST payable account balance in (million TL)	3.960				
	CAD equivalent of VAT payable account before the adjustment	5.539				
	$/TL closing rate at year end	766.464				
	CAD equivalent of VAT-GST payable account from year end closing rate	5.167				
	Adjustment entry for payable GST on CAD ledger	373				
		GST payable			373	
		F/X gain				373

Table 5: Year End Adjustments (continued)

			DEBIT (TL)	CREDIT (TL)	DEBIT CAD	CREDIT CAD
7	Company A TL account balance	0				
	Company A's account balance in CAD before the adjustment	1.417				
	Company A's account should be nil balance as of year end 31/12/2006 on CAD ledger	0				
	Adjustment entry to Company A's account on CAD ledger	1.417				
		F/X difference loss			1.417	
		Company A account				1.417
8	Company C (Canadian importer) TL account balance before the year end adjustment (in million TL)	133				
	Company C's account balance in CAD ledger	0				
	Company C's account should also be nil balance as of year end 31/12/2006 on TL ledger	0				
	Adjustment entry to Company C's account on TL ledger	133				
		Company C's account	133			
		F/X income		133		

Table 5: Year End Adjustments (continued)

			DEBIT (TL)	CREDIT (TL)	DEBIT CAD	CREDIT CAD
9	Company D's (German importer) account balance in (million TL) before the adjustment	370				
	Company D's account balance in CAD before the adjustment	404				
	Company D's account balance in Euro	0				
	Company D's account should also be nil balance as of year end 31/12/2006 on TL ledger	0				
	Company D's account should also be nil balance as of year end 31/12/2006 on CAD ledger	0				
	Adjustment entry to Company D's account on TL ledger	370				
	Adjustment entry to Company D's account on CAD ledger	404				
		Company D's account	370			
		F/X gain		370		
		Company D's account			404	
		F/X gain				404
		Journal book totals	**285.813**	**285.813**	**419.578**	**419.578**

Table 6: Adjusted Trial Balances of TL and CAD

Adjusted balances in year end trial balance	TL	TL	CAD	CAD
Bank TL account	62.143		81.077	
Capital account		100.000		145.560
Inventory	3.000		4.238	
GST deductable	12.960		16.909	
GST payable		3.960		5.167
Machinery (F/A)	50.000		71.346	
Machinery accumulated amortization		4.167		5.946
Yearly depreciation expense	4.167		5.946	
Suppliers' account		14.160		18.474
Company A's account	0		0	
Company C's account	0		0	
Company D's account	0		0	
Cost of Goods Sold	19.000		27.127	
Domestic sales		22.000		30.774
Export sales		6.480		8.857
F/X difference loss	0		11.105	
F/X difference gain		503		2.971
Rounding error	0	0	0	0
Adjusted trial balance totals	**151.270**	**151.270**	**217.749**	**217.749**

Table 7: Income Statement Denominated in TL and CAD

01/01/2006 - 31/12/2006 Income Statement	TL	CAD
Domestic sales	22.000	30.774
Export sales	6.480	8.857
Total sales	28.480	39.631
COGS	-19.000	-27.127
Gross profit	9.480	12.504
Amortization expense	-4.167	-5.946
F/X difference gain	503	2.971
F/X difference loss	0	-11.105
Rounding error	0	0
Income / loss (-) before tax	**5.816**	**-1.576**

Table 8: Balance Sheets Denominated in TL and CAD

Balance Sheet as of 31/12/2006	TL ASSETS	TL LIAB.& EQ.	CAD ASSETS	CAD LIAB.& EQ.
Bank	62.143		81.077	
Inventory	3.000		4.238	
Account receivable	0		0	
GST deductable	12.960		16.909	
Non-current assets (machinery)	50.000		71.346	
NCA accumulated amortization	-4.167		-5.946	
NCA (net)	45.833		65.401	
Suppliers account		14.160		18.474
GST payable		3.960		5.167
Capital account		100.000		145.560
Income statement		5.816		-1.576
Balance sheet totals	123.936	123.936	167.625	167.625

Table 9: Inventory in TL and CAD

CALCULATION OF COST OF GOODS SOLD IN ACCORDANCE WITH FIFO (FIRST IN FIRST OUT) (MILLION TL)										
		PURCHASES			SALES			REMAINDER		
DATE	EXPLANATION	QUANTITY	UNIT COST	TOTAL	QUANTITY	UNIT COST	TOTAL	QUANTITY	UNIT COST	TOTAL
28/02/2006	GOODS IN	100	100	10.000	-	-	-	100	100	10.000
30/04/2006	GOODS IN	100	120	12.000	-	-	-	100	120	12.000
31/05/2006	GOODS OUT				100	100	10.000	0	100	0
31/07/2006	GOODS OUT				50	120	6.000	50	120	6.000
31/08/2006	GOODS OUT				25	120	3.000	25	120	3.000
Cost of Sales at 31/12/2006					175		19.000	TL		
Value of Goods Remained at 31/12/2006					25		3.000	TL		
CALCULATION OF COST OF GOODS SOLD IN ACCORDANCE WITH FIFO (FIRST IN FIRST OUT) (CAD)										
		PURCHASES			SALES			REMAINDER		
DATE	EXPLANATION	QUANTITY	UNIT COST	TOTAL	QUANTITY	UNIT COST	TOTAL	QUANTITY	UNIT COST	TOTAL
28/02/2006	GOODS IN	100	144.12	14.412	-	-	-	100	144.12	14.412
30/04/2006	GOODS IN	100	169.54	16.954	-	-	-	100	169.54	31.365
31/05/2006	GOODS OUT				100	144.12	14.412	0	144.12	16.954
31/07/2006	GOODS OUT				50	169.54	8.477	50	169.54	8.477
31/08/2006	GOODS OUT				25	169.54	4.238	25	169.54	4.238
Cost of Sales at 31/12/2006					175		27.127 CAD			
Value of Goods Remained at 31/12/2006					25		4.238 CAD			

Table 10: Tax Effects in CAD

Since the company operating in Turkey it will be subject to local tax rules. The effective tax rate is considered to be 25% in Turkey.	
Income before tax in TL	5.816
Tax expense in TL	1.454
Net income in TL	4.362
Equity at the beginning of the year in CAD	145.560
Tax paid in CAD	1.897
Equity at the end of the year in CAD	
Paid in capital in CAD	145.560
Loss of the period in CAD	-1.576
Tax paid in CAD	-1.897
Equity at the end of the year in CAD	142.087
Loss on equity in CAD due to depreciation of TL	-3.473

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GLOBAL CAPITAL MARKETS

The global economy moderated in the first quarter 2008 down from 5 percent in the third quarter of 2007 due to slowing demand in many advanced economies and rising inflation everywhere, especially in developing economies. As a result of negative developments in the housing and financial market the US economy maintained steady growth in the first quarter of 2008 underpinned by a surge in exports and growth in private consumption expenditure and government consumption expenditure. Growth in the Euro area in the same quarter matched the preceding quarter's pace with imports and exports of goods rising by 9.8% and 6.8% respectively. The Asian economies maintained solid growth in the first quarter notwithstanding the slowing US economy and continuing buoyancy of global food and oil prices. Growth in Japan eased by 0.7 percent over the previous quarter due to a plunge in housing investment.

The equity markets in advanced countries retreated due to continued declines in housing prices, higher energy prices and the drying up of liquidity in credit markets as well as prospect of inflation in many markets.

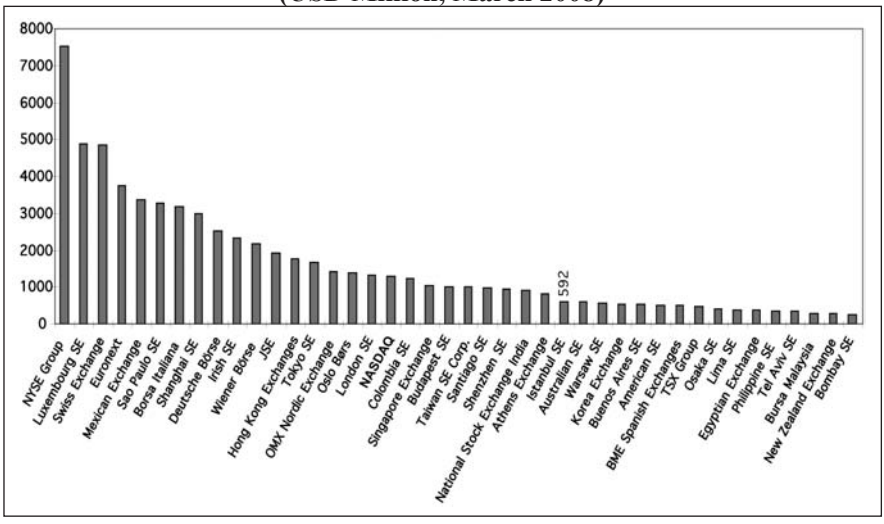
The performances of some developed stock markets with respect to indices indicated that DJIA, FTSE-100, Nikkei-225 and DAX changed by –5.0%, -8.8%, -6.3% and –10.3%, respectively, at April 2nd, 2008 in comparison with the December 31, 2007. When US $ based returns of some emerging markets are compared in the same period, the best performer markets were: Saudi Arabia (18.1 %), Egypt (11.2 %), Mexico (10.1 %) and Chile (8.8 %). In the same period, the lowest return markets were: Venezuela (-47.9 %), China (-35.2 %) and Turkey (-32.7 %). The performances of emerging markets with respect to P/E ratios as of end of March 2008 indicated that the highest rates were obtained in China (37.1), Indonesia (29.0), Taiwan (27.9), Jordan (27.3) and Czech Rep. (23.8) and the lowest rates in Thailand (11.4), Hungary (11.4) and Poland (13.3).

Market Capitalization (USD Million, 1986-2006)

	Global	Developed Markets	Emerging Markets	ISE
1986	6,514,199	6,275,582	238,617	938
1987	7,830,778	7,511,072	319,706	3,125
1988	9,728,493	9,245,358	483,135	1,128
1989	11,712,673	10,967,395	745,278	6,756
1990	9,398,391	8,784,770	613,621	18,737
1991	11,342,089	10,434,218	907,871	15,564
1992	10,923,343	9,923,024	1,000,319	9,922
1993	14,016,023	12,327,242	1,688,781	37,824
1994	15,124,051	13,210,778	1,913,273	21,785
1995	17,788,071	15,859,021	1,929,050	20,782
1996	20,412,135	17,982,088	2,272,184	30,797
1997	23,087,006	20,923,911	2,163,095	61,348
1998	26,964,463	25,065,373	1,899,090	33,473
1999	36,030,810	32,956,939	3,073,871	112,276
2000	32,260,433	29,520,707	2,691,452	69,659
2001	27,818,618	25,246,554	2,572,064	47,689
2002	23,391,914	20,955,876	2,436,038	33,958
2003	31,947,703	28,290,981	3,656,722	68,379
2004	38,904,018	34,173,600	4,730,418	98,299
2005	43,642,048	36,538,248	7,103,800	161,537
2006	54,194,991	43,736,409	10,458,582	162,399

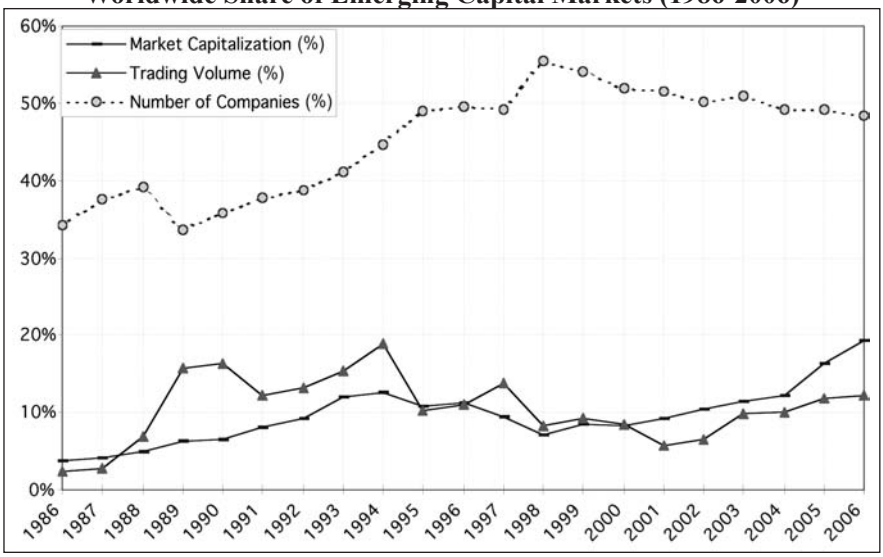
Source: Standard & Poor's Global Stock Markets Factbook, 2007.

Comparison of Average Market Capitalization Per Company (USD Million, March 2008)



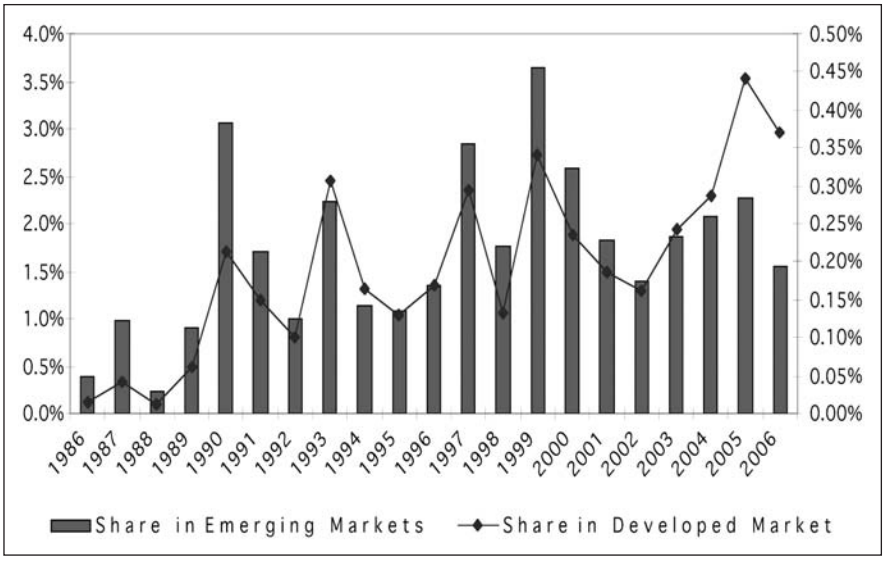
Source: FIBV, Monthly Statistics, March 2008.

Worldwide Share of Emerging Capital Markets (1986-2006)



Source: Standard & Poor's Global Stock Markets Factbook, 2007,

Share of ISE's Market Capitalization in World Markets (1986-2006)



Source: Standard & Poor's Global Stock Markets Factbook, 2007,

Main Indicators of Capital Markets (March 2008)

	Market	Monthly Turnover Velocity (March 2008) (%)	Market	Value of Share Trading (millions, US$) Up to Year Total (2008/1-2008/3)	Market	Market Cap. of Share of Domestic Companies (millions US$) March 2008
1	Shenzhen SE	349.5%	NYSE Group	8,969,966	NYSE Group	14,225,517.3
2	NASDAQ	322.2%	NASDAQ	3,858,171	Tokyo SE	3,971,393.7
3	Deutsche Börse	212.3%	London SE	1,914,231	Euronext	3,863,663.7
4	Borsa Italiana	206.0%	Tokyo SE	1,587,924	NASDAQ	3,470,380.7
5	Korea Exchange	195.3%	Euronext	1,395,076	London SE	3,394,869.2
6	Shanghai SE	187.0%	Deutsche Börse	1,233,766	Shanghai SE	2,586,282.8
7	NYSE Group	186.6%	Shanghai SE	904,908	Hong Kong Exch	2,176,888.8
8	BME Spanish Exchanges	185.6%	BME Spanish Exc	762,524	Deutsche Börse	1,905,400.3
9	Taiwan SE Corp,	159.9%	Hong Kong Exchanges	534,563	TSX Group	1,863,985.9
10	London SE	157.6%	Swiss Exchange	502,383	BME Spanish Ex	1,730,744.8
11	Tokyo SE	141.3%	Borsa Italiana	473,366	Bombay SE	1,288,045.9
12	Oslo Børs	141.2%	TSX Group	451,246	Sao Paulo SE	1,286,761.1
13	Euronext	140.5%	Shenzhen SE	446,112	Swiss Exchange	1,248,031.0
14	Osaka SE	139.4%	OMX Nordic Exchange	435,130	National Stock Exchange India	1,217,879.6
15	Swiss Exchange	137.2%	Korea Exchange	411,192	OMX Nordic Exch	1,167,543.5
16	OMX Nordic Exchange	135.1%	Australian SE	385,946	Australian SE	1,121,372.3
17	Istanbul SE	131.3%	Taiwan SE Corp,	259,967	Korea Exchange	959,790.1
18	Australian SE	109.9%	National Stock Exchange India	246,885	Borsa Italiana	951,860.6
19	Budapest SE	103.4%	Sao Paulo SE	198,874	Taiwan SE Corp,	715,191,4
20	Hong Kong Exchanges	99.0%	American SE	188,494	JSE	712,553.0
21	TSX Group	86.8%	Oslo Børs	135,337	Shenzhen SE	648,017.6
22	Irish SE	86.8%	JSE	109,888	Singapore Exchange	486,485.3
23	Singapore Exchange	76.7%	Bombay SE	105,478	Mexican Exchange	419,343.9
24	National Stock Exchange India	71.2%	Singapore Exchan	84,867	Oslo Børs	312,553.7
25	Egyptian Exchange	67.9%	Istanbul SE	76,974	Bursa Malaysia	289,813.5
26	Athens Exchange	64.0%	Osaka SE	76,267	American SE	242,820.1
27	Sao Paulo SE	58.8%	Egyptian Exch	39,657	Athens Exchange	230,676.3
28	JSE	56.0%	Athens Exchange	38,816	Santiago SE	230,006.7
29	Wiener Börse	56.0%	Bursa Malaysia	36,651	Wiener Börse	221,917.3
30	Bursa Malaysia	51.2%	Wiener Börse	34,210	Tel Aviv SE	219,686.1
31	Tel Aviv SE	50.3%	Tel Aviv SE	31,740	Warsaw SE	202,954.5
32	New Zealand Exchange	45.7%	Mexican Exchange	31,330	Osaka SE	191,748.6
33	Warsaw SE	42.4%	Irish SE	30,704	Istanbul SE	188,953.6
34	Philippine SE	30.6%	Warsaw SE	22,624	Luxembourg SE	165,858.1
35	Bombay SE	29.8%	Budapest SE	10,539	Egyptian Exch	160,108.7
36	Mexican Exchange	29.4%	Santiago SE	10,260	Irish SE	139,740.7
37	Santiago SE	23.3%	New Zealand Exch	5,439	Colombia SE	109,075.1
38	Colombia SE	21.6%	Philippine SE	5,186	Philippine SE	84,230.4
39	Cyprus SE	18.1%	Colombia SE	4,621	Lima SE	72,273.2
40	Tehran SE	17.9%	Buenos Aires SE	1,877	Buenos Aires SE	56,472.5
41	Ljubljana SE	15.9%	Tehran SE	1,510	Tehran SE	49,097.0
42	Lima SE	13.0%	Lima SE	1,444	New Zealand Exch	41,438.0
43	Colombo SE	10.5%	Cyprus SE	750	Budapest SE	40,743.6
44	Buenos Aires SE	8.9%	Ljubljana SE	687	Ljubljana SE	23,653.4
45	Bermuda SE	5.5%	Colombo SE	192	Cyprus SE	20,803.7

Source: FIBV, Monthly Statistics, March 2008.

Trading Volume (USD millions, 1986-2006)

	Global	Developed	Emerging	ISE	Emerging / Global (%)	ISE/ Emerging (%)
1986	3,573,570	3,490,718	82,852	13	2.32	0.02
1987	5,846,864	5,682,143	164,721	118	2.82	0.07
1988	5,997,321	5,588,694	408,627	115	6.81	0.03
1989	7,467,997	6,298,778	1,169,219	773	15.66	0.07
1990	5,514,706	4,614,786	899,920	5,854	16.32	0.65
1991	5,019,596	4,403,631	615,965	8,502	12.27	1.38
1992	4,782,850	4,151,662	631,188	8,567	13.20	1.36
1993	7,194,675	6,090,929	1,103,746	21,770	15.34	1.97
1994	8,821,845	7,156,704	1,665,141	23,203	18.88	1.39
1995	10,218,748	9,176,451	1,042,297	52,357	10.20	5.02
1996	13,616,070	12,105,541	1,510,529	37,737	11.09	2.50
1997	19,484,814	16,818,167	2,666,647	59,105	13.69	2.18
1998	22,874,320	20,917,462	1,909,510	68,646	8.55	3.60
1999	31,021,065	28,154,198	2,866,867	81,277	9.24	2.86
2000	47,869,886	43,817,893	4,051,905	179,209	8.46	4.42
2001	42,076,862	39,676,018	2,400,844	77,937	5.71	3.25
2002	38,645,472	36,098,731	2,546,742	70,667	6.59	2.77
2003	29,639,297	26,743,153	2,896,144	99,611	9.77	3.44
2004	39,309,589	35,341,782	3,967,806	147,426	10.09	3.72
2005	47,319,584	41,715,492	5,604,092	201,258	11.84	3.59
2006	67,912,153	59,685,209	8,226,944	227,615	12.11	2.77

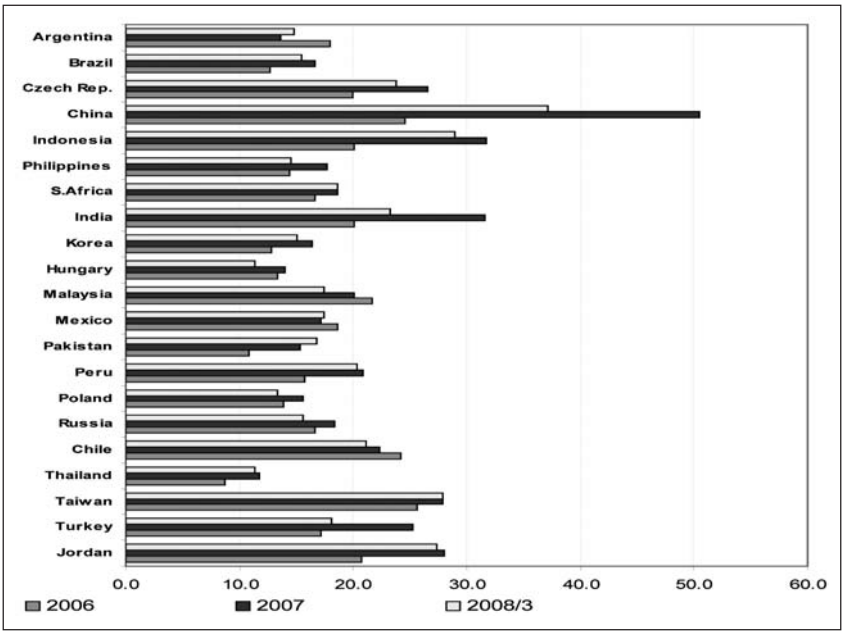
Source: Standard & Poor's Global Stock Markets Factbook, 2007,

Number of Trading Companies (1986-2006)

	Global	Developed	Emerging	ISE	Emerging / Global (%)	ISE/ Emerging (%)
1986	28,173	18,555	9,618	80	34.14	0.83
1987	29,278	18,265	11,013	82	37.62	0.74
1988	29,270	17,805	11,465	79	39.17	0.69
1989	25,925	17,216	8,709	76	33.59	0.87
1990	25,424	16,323	9,101	110	35.80	1.21
1991	26,093	16,239	9,854	134	37.76	1.36
1992	27,706	16,976	10,730	145	38.73	1.35
1993	28,895	17,012	11,883	160	41.12	1.35
1994	33,473	18,505	14,968	176	44.72	1.18
1995	36,602	18,648	17,954	205	49.05	1.14
1996	40,191	20,242	19,949	228	49.64	1.14
1997	40,880	20,805	20,075	258	49.11	1.29
1998	47,465	21,111	26,354	277	55.52	1.05
1999	48,557	22,277	26,280	285	54.12	1.08
2000	49,933	23,996	25,937	315	51.94	1.21
2001	48,220	23,340	24,880	310	51.60	1.25
2002	48,375	24,099	24,276	288	50.18	1.19
2003	49,855	24,414	25,441	284	51.03	1.12
2004	48,806	24,824	23,982	296	49.14	1.23
2005	49,946	25,337	24,609	302	49.27	1.23
2006	50,212	25,954	24,258	314	48.31	1.29

Source: Standard & Poor's Global Stock Markets Factbook, 2007,

Comparison of P/E Ratios Performances



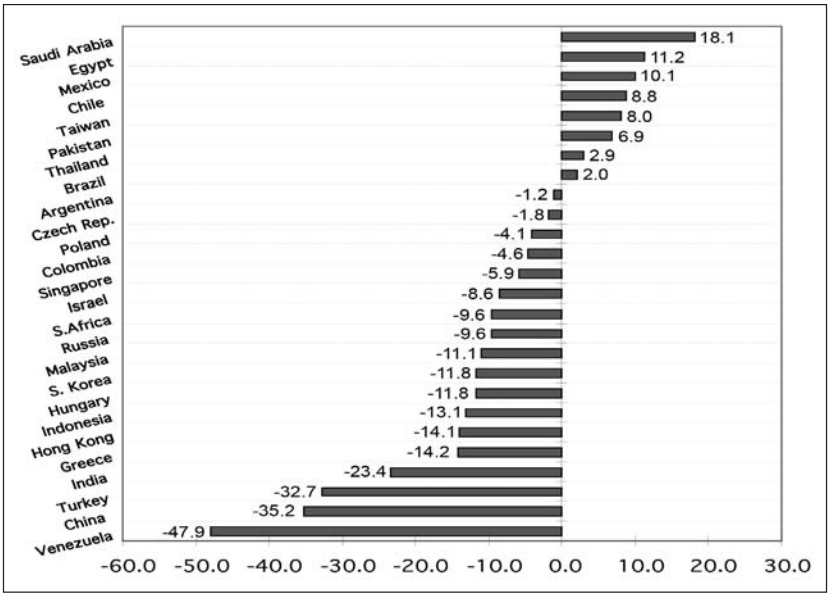
Source: IFC Factbook 2001, Standard & Poor's, Emerging Stock Markets Review, March 2008,

Price-Earnings Ratios in Emerging Markets

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008/3
Argentina	39.4	-889.9	32.6	-1.4	21.1	27.7	11.1	18.0	13.6	14.8
Brazil	23.5	11.5	8.8	13.5	10.0	10.6	10.7	12.7	16.6	15.5
Chile	35.0	24.9	16.2	16.3	24.8	17.2	15.7	24.2	22.3	21.1
China	47.8	50.0	22.2	21.6	28.6	19.1	13.9	24.6	50.5	37.1
Czech Rep.	-14.9	-16.4	5.8	11.2	10.8	25.0	21.1	20.0	26.5	23.8
Hungary	18.1	14.3	13.4	14.6	12.3	16.6	13.5	13.4	14.0	11.4
India	25.5	16.8	12.8	15.0	20.9	18.1	19.4	20.1	31.6	23.2
Indonesia	-7.4	-5.4	-7.7	22.0	39.5	13.3	12.6	20.1	31.7	29.0
Jordan	14.1	13.9	18.8	11.4	20.7	30.4	6.2	20.8	28.0	27.3
Korea	-33.5	17.7	28.7	21.6	30.2	13.5	20.8	12.8	16.4	15.1
Malaysia	-18.0	91.5	50.6	21.3	30.1	22.4	15	21.7	20.1	17.4
Mexico	14.1	13.0	13.7	15.4	17.6	15.9	14.2	18.6	17.2	17.4
Pakistan	13.2	-117.4	7.5	10.0	9.5	9.9	13.1	10.8	15.3	16.8
Peru	25.7	11.6	21.3	12.8	13.7	10.7	12.0	15.7	20.9	20.3
Philippines	22.2	26.2	45.9	21.8	21.1	14.6	15.7	14.4	17.7	14.5
Poland	22.0	19.4	6.1	88.6	-353.0	39.9	11.7	13.9	15.6	13.3
Russia	-71.2	3.8	5.6	12.4	19.9	10.8	24.1	16.6	18.4	15.6
S.Africa	17.4	10.7	11.7	10.1	11.5	16.2	12.8	16.6	18.7	18.7
Taiwan	52.5	13.9	29.4	20.0	55.7	21.2	21.9	25.6	27.9	27.9
Thailand	-12.2	-6.9	163.8	16.4	16.6	12.8	10.0	8.7	11.7	11.4
Turkey	34.6	15.4	72.5	37.9	14.9	12.5	16.2	17.2	25.2	18.1

Source: IFC Factbook, 2004; Standard&Poor's, Emerging Stock Markets Review, March 2008,
Note: Figures are taken from S&P/IFCG Index Profile,

Comparison of Market Returns in USD (31/12/2007-02/04/2008)



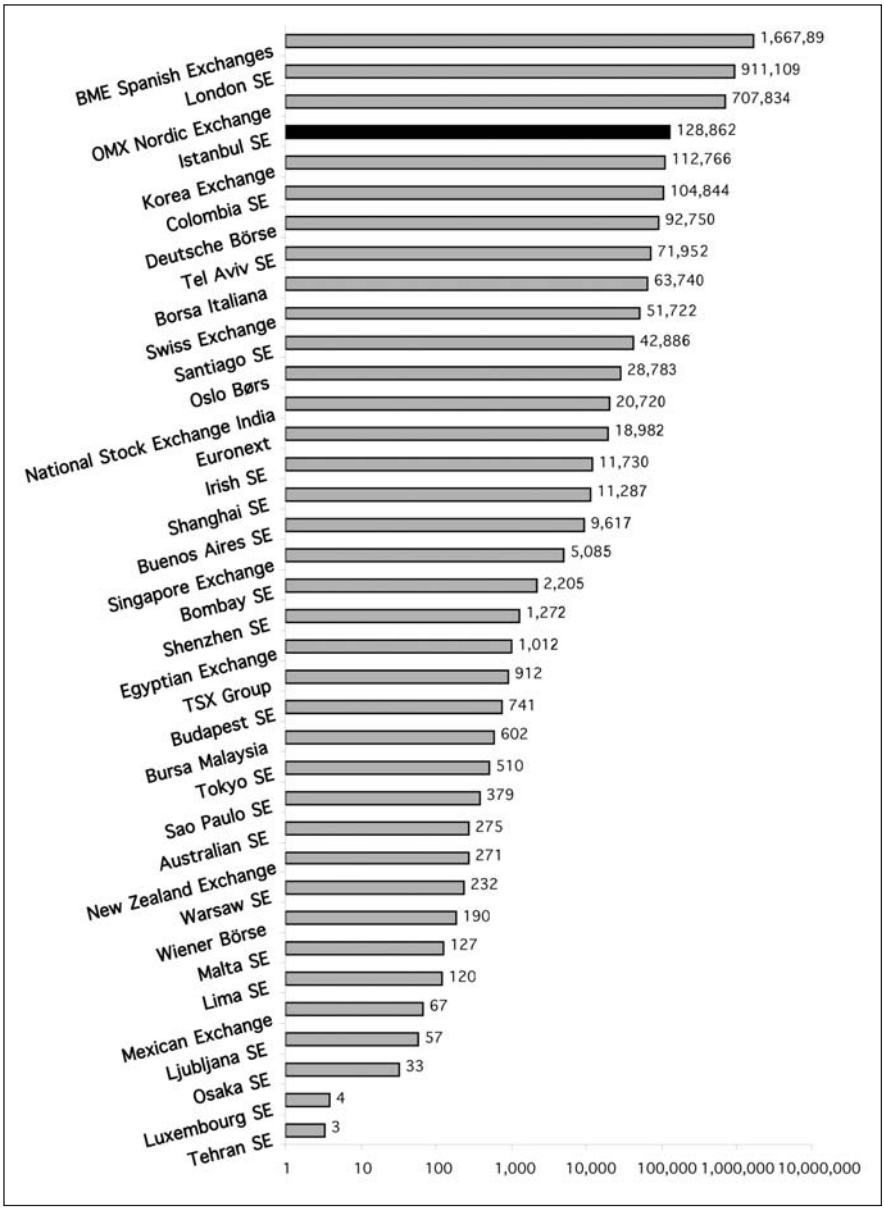
Source: The Economist, Apr 3rd 2008,

Market Value/Book Value Ratios

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008/3
Argentina	1.5	0.9	0.6	0.8	2.0	2.2	2.5	4.1	3.2	3.5
Brazil	1.6	1.4	1.2	1.3	1.8	1.9	2.2	2.7	3.3	3.1
Chile	1.7	1.4	1.4	1.3	1.9	0.6	1.9	2.4	2.5	2.4
China	3.0	3.6	2.3	1.9	2.6	2.0	1.8	3.1	6.3	4.6
Czech Rep.	0.9	1.0	0.8	0.8	1.0	1.6	2.4	2.4	3.1	2.8
Hungary	3.6	2.4	1.8	1.8	2.0	2.8	3.1	3.1	3.2	2.6
India	3.3	2.6	1.9	2.0	3.5	3.3	5.2	4.9	7.9	5.8
Indonesia	3.0	1.7	1.7	1.0	1.6	2.8	2.5	3.4	5.6	5.1
Jordan	1.5	1.2	1.5	1.3	2.1	3.0	2.2	3.3	4.4	4.3
Korea	2.0	0.8	1.2	1.1	1.6	1.3	2.0	1.7	2.2	2.0
Malaysia	1.9	1.5	1.2	1.3	1.7	1.9	1.7	2.1	2.5	2.2
Mexico	2.2	1.7	1.7	1.5	2.0	2.5	2.9	3.8	3.6	3.6
Pakistan	1.4	1.4	0.9	1.9	2.3	2.6	3.5	3.2	4.7	5.1
Peru	1.5	1.1	1.4	1.2	1.8	1.6	2.2	3.5	6.0	5.8
Philippines	1.4	1.0	0.9	0.8	1.1	1.4	1.7	1.9	2.8	2.3
Poland	2.0	2.2	1.4	1.3	1.8	2.0	2.5	2.5	2.8	2.4
Russia	1.2	0.6	1.1	0.9	1.2	1.2	2.2	2.5	2.8	2.4
S.Africa	2.7	2.1	2.1	1.9	2.1	2.5	3.0	3.8	4.4	4.4
Taiwan	3.4	1.7	2.1	1.6	2.2	1.9	1.9	2.4	2.6	2.6
Thailand	2.1	1.3	1.3	1.5	2.8	2.0	2.1	1.9	2.5	2.4
Turkey	8.9	3.1	3.8	2.8	2.6	1.7	2.1	2.0	2.8	2.0

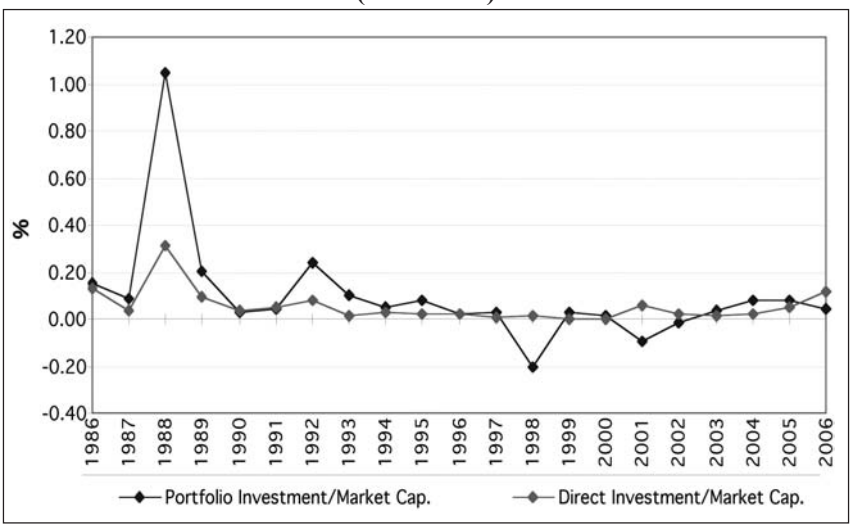
Source: IFC Factbook, 2004; Standard & Poor's, Emerging Stock Markets Review, March 2008,
Note: Figures are taken from S&P/IFCG Index Profile,

Value of Bond Trading (Million USD Jan, 2008-March 2008)



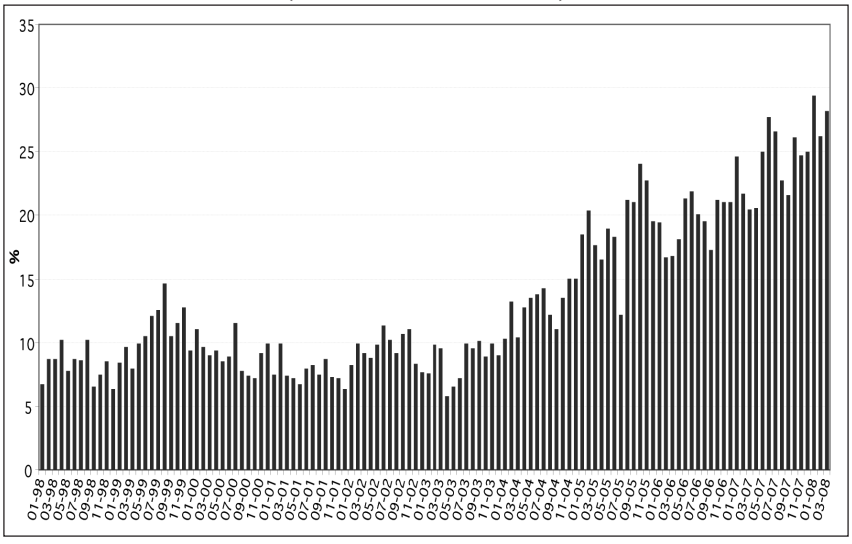
Source: FIBV, Monthly Statistics, March 2008,

Foreign Investments as a Percentage of Market Capitalization in Turkey (1986-2006)



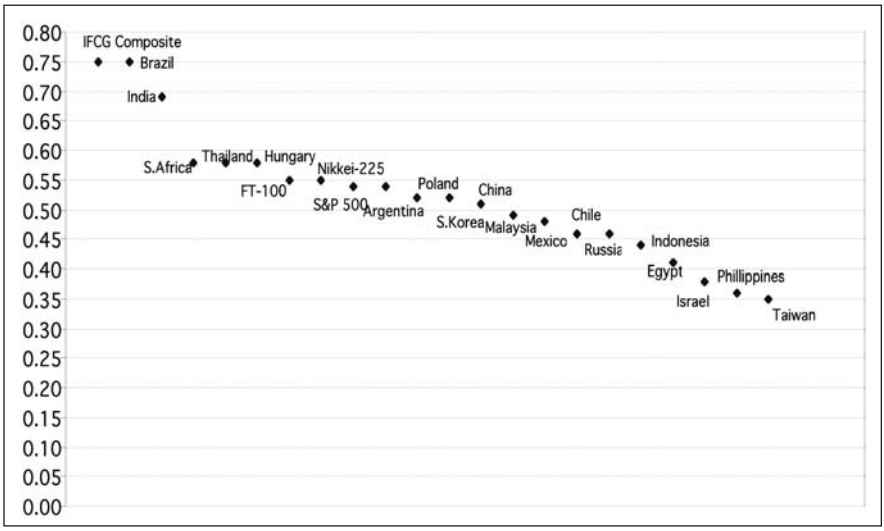
Source: ISE Data, CBTR Databank,

Foreigners' Share in the Trading Volume of the ISE (Jan, 1998-March 2008)



Source: ISE Data.

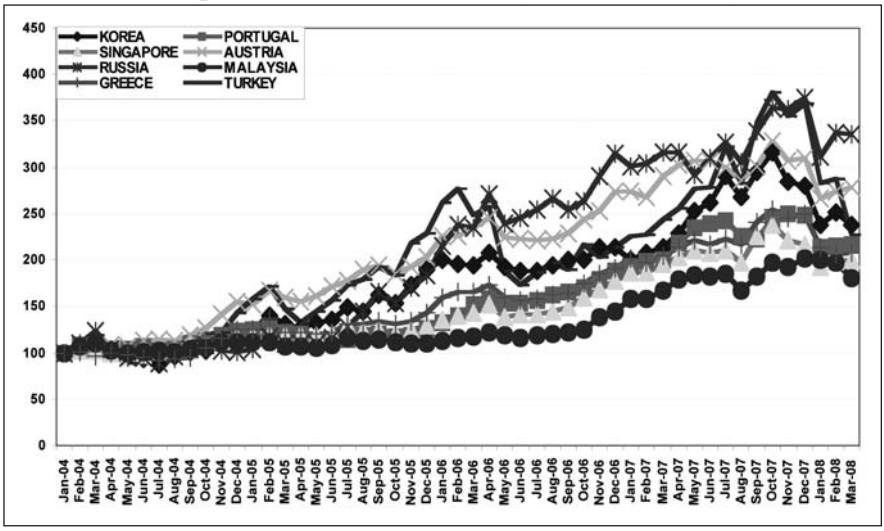
Price Correlations of the ISE (March 2003- March 2008)



Source: Standard & Poor's, Emerging Stock Markets Review, March 2008,

Notes: The correlation coefficient is between -1 and +1. If it is zero. for the given period. It is implied that there is no relation between two serious of returns.

Comparison of Market Indices (31 Jan, 2004=100)



Source: Bloomberg

Note: Comparisons are in US$.

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ISE
Market Indicators

	STOCK MARKET										
	Number of Companies	Traded Value				Market Value		Dividend Yield	P/E Ratios		
		Total		Daily Average							
		YTL Million	US$ Million	YTL Million	US$ Million	YTL Million	US$ Million	(%)	YTL(1)	YTL(2)	US$
1986	80	0,01	13	---	---	0,71	938	9,15	5,07	---	---
1987	82	0,10	118	---	---	3	3.125	2,82	15,86	---	---
1988	79	0,15	115	---	---	2	1.128	10,48	4,97	---	---
1989	76	2	773	0,01	3	16	6.756	3,44	15,74	---	---
1990	110	15	5.854	0,06	24	55	18.737	2,62	23,97	---	---
1991	134	35	8.502	0,14	34	79	15.564	3,95	15,88	---	---
1992	145	56	8.567	0,22	34	85	9.922	6,43	11,39	---	---
1993	160	255	21.770	1	88	546	37.824	1,65	25,75	20,72	14,86
1994	176	651	23.203	3	92	836	21.785	2,78	24,83	16,70	10,97
1995	205	2.374	52.357	9	209	1.265	20.782	3,56	9,23	7,67	5,48
1996	228	3.031	37.737	12	153	3.275	30.797	2,87	12,15	10,86	7,72
1997	258	9.049	58.104	36	231	12.654	61.879	1,56	24,39	19,45	13,28
1998	277	18.030	70.396	73	284	10.612	33.975	3,37	8,84	8,11	6,36
1999	285	36.877	84.034	156	356	61.137	114.271	0,72	37,52	34,08	24,95
2000	315	111.165	181.934	452	740	46.692	69.507	1,29	16,82	16,11	14,05
2001	310	93.119	80.400	375	324	68.603	47.689	0,95	108,33	824,42	411,64
2002	288	106.302	70.756	422	281	56.370	34.402	1,20	195,92	26,98	23,78
2003	285	146.645	100.165	596	407	96.073	69.003	0,94	14,54	12,29	13,19
2004	297	208.423	147.755	837	593	132.556	98.073	1,37	14,18	13,27	13,96
2005	304	269.931	201.763	1.063	794	218.318	162.814	1,71	17,19	19,38	19,33
2006	316	325.131	229.642	1.301	919	230.038	163.775	2,10	22,02	14,86	15,32
2007	319	387,777	300,842	1,539	1,194	335,948	289,986	1.90	12.16	11.97	13.48
2008	316	96,652	80,737	1,510	1,262	245,394	187,969	2.55	8.70	8.65	8.39
2008/Q1	316	96,652	80,737	1,510	1,262	245,394	187,969	2.55	8.70	8.65	8.39

Q: Quarter

Note:

- Between 1986-1922, the price earnings ratios were calculated on the basis of the companies previous year-end net profits. As from 1993,
  TL(1)= Total Market Capitalization / Sum of Last two six-month profits
  T(2)= Total Market Capitalization / Sum of Last four three-month profits.
  US$= US$ based Total Market Capitalization / Sum of Last four US$ based three-month profits.
- Companies which are temporarily de-listed and will be traded off the Exchange under the decision of ISE's Executive Council are not included in the calculations.
- ETF's data are taken into account only in the calculation of Traded Value.

Closing Values of the ISE Price Indices

YTL Based

	NATIONAL-100 (Jan. 1986=1)	CORPORATE GOVERNANCE (Aug.29,2007= 48,082.17)	NATIONAL-INDUSTRIALS (Dec. 31.90=33)	NATIONAL-SERVICES (Dec. 27,96 =1046)	NATIONAL-FINANCIALS (Dec. 31.90=33)	NATIONAL-TECHNOLOGY (Jun. 30.2000 =14.466,12)	INVESTMENT TRUSTS (Dec 27, 1996=976)	SECOND NATIONAL (Dec 27, 1996=976)	NEW ECONOMY (Sept 02,2004 =20525,92)
1986	1,71	---	---	---	---	---	---	---	---
1987	6,73	---	---	---	---	---	---	---	---
1988	3,74	---	---	---	---	---	---	---	---
1989	22,18	---	---	---	---	---	---	---	---
1990	32,56	---	---	---	---	---	---	---	---
1991	43,69	---	49,63	---	33,55	---	---	---	---
1992	40,04	---	49,15	---	24,34	---	---	---	---
1993	206,83	---	222,88	---	191,90	---	---	---	---
1994	272,57	---	304,74	---	229,64	---	---	---	---
1995	400,25	---	462,47	---	300,04	---	---	---	---
1996	975,89	---	1.045.91	---	914,47	---	---	---	---
1997	3.451,--	---	2.660,--	3,593.--	4.522,--	---	2.934,--	2.761,--	---
1998	2.597,91	---	1.943,67	3,697.10	3.269,58	---	1.579,24	5.390,43	---
1999	15.208,78	---	9.945,75	13,194.40	21.180,77	---	6.812,65	13.450,36	---
2000	9.437,21	---	6.954,99	7,224.01	12.837,92	10.586,58	6.219,00	15.718,65	---
2001	13.782,76	---	11.413,44	9,261.82	18.234,65	9.236,16	7.943,60	20.664,11	---
2002	10.369,92	---	9.888,71	6,897.30	12.902,34	7.260,84	5.452,10	28.305,78	---
2003	18.625,02	---	16.299,23	9,923.02	25.594,77	8.368,72	10.897,76	32.521,26	---
2004	24.971,68	---	20.885,47	13,914.12	35.487,77	7.539,16	17.114,91	23.415,86	39.240,73
2005	39.777,70	---	31.140,59	18,085.71	62.800,64	13.669,97	23.037,86	28.474,96	29.820,90
2006	39.117,46	---	30.896,67	22,211.77	60.168,41	10.341,85	16.910,76	23.969,99	20.395,84
2007	55,538.13	55,406.17	40,567.17	34,204.74	83,822.29	10,490.51	16,428.59	27,283.78	32,879.36
2008	39,015.44	39,330.78	33,264.72	29,323.22	53,210.19	7,650.83	11,096.39	19,810.76	24,707.47
2008/Q1	39,015.44	39,330.78	33,264.72	29,323.22	53,210.19	7,650.83	11,096.39	19,810.76	24,707.47

US $ Based

EURO Based

	NATIONAL-100 (Jan. 1986=100)	CORPORATE GOVERNANCE (Aug.29,2007= 2,114.37)	NATIONAL-INDUSTRIALS (Dec. 31.90=643)	NATIONAL-SERVICES (Dec. 27,96 =572)	NATIONAL-FINANCIALS (Dec.31.90= 643)	NATIONAL-TECHNOLOGY (Jun. 30,2000 =1.360.92)	INVESTMENT TRUSTS (Dec 27, 96=534)	SECOND NATIONAL (Dec 27,96=534)	NEW ECONOMY (Sept 02, 2004 =796,46)	NATIONAL-100 (Dec.31,98= 484)
1986	131,53	---	---	---	---	---	---	---	---	---
1987	384,57	---	---	---	---	---	---	---	---	---
1988	119,82	---	---	---	---	---	---	---	---	---
1989	560,57	---	---	---	---	---	---	---	---	---
1990	642,63	---	---	---	---	---	---	---	---	---
1991	501,50	---	569,63	---	385,14	---	---	---	---	---
1992	272,61	---	334,59	---	165,68	---	---	---	---	---
1993	833,28	---	897,96	---	773,13	---	---	---	---	---
1994	413,27	---	462,03	---	348,18	---	---	---	---	---
1995	382,62	---	442,11	---	286,83	---	---	---	---	---
1996	534,01	---	572,33	---	500,40	---	---	---	---	---
1997	982,--	---	757,--	1,022,--	1.287,--	---	835,--	786,--	---	---
1998	484,01	---	362,12	688,79	609,14	---	294,22	1.004,27	---	---
1999	1.654,17	---	1.081,74	1.435,08	2.303,71	---	740,97	1.462,92	---	1,912.46
2000	817,49	---	602,47	625,78	1.112,08	917,06	538,72	1.361,62	---	1,045.57
2001	557,52	---	461,68	374,65	737,61	373,61	321,33	835,88	---	741.24
2002	368,26	---	351,17	244,94	458,20	257,85	193,62	1.005,21	---	411.72
2003	778,43	---	681,22	414,73	1.069,73	349,77	455,47	1.359,22	---	723.25
2004	1.075,12	---	899,19	599,05	1.527,87	324,59	736,86	1.008,13	1.689,45	924.87
2005	1.726,23	---	1.351,41	784,87	2.725,36	593,24	999,77	1.235,73	1.294,14	1,710.04
2006	1.620,59	---	1.280,01	920,21	2.492,71	428,45	700,59	993,05	844,98	1,441.89
2007	2,789.66	2,783.03	2,037.67	1,718.09	4,210.36	526.93	825.20	1,370.45	1,651.52	2,221.77
2008	1,739.06	1,753.12	1,482.73	1,307.05	2,371.78	341.03	494.61	883.04	1,101.30	1,289.85
2008/ Q1	1,739.06	1,753.12	1,482.73	1,307.05	2,371.78	341.03	494.61	883.04	1,101.30	1,289.85

Q: Quarter

BONS AND BILLS MARKET

Traded Value

Outright Purchases and Sales Market

	Total		Daily Average	
	(YTL Million)	(US $ Million)	(YTL Million)	(US $ Million)
1991	1	312	0,01	2
1992	18	2.406	0,07	10
1993	123	10.728	0,50	44
1994	270	8.832	1	35
1995	740	16.509	3	66
1996	2.711	32.737	11	130
1997	5.504	35.472	22	141
1998	17.996	68.399	72	274
1999	35.430	83.842	143	338
2000	166.336	262.941	663	1.048
2001	39.777	37.297	158	149
2002	102.095	67.256	404	266
2003	213.098	144.422	852	578
2004	372.670	262.596	1.479	1.042
2005	480.723	359.371	1.893	1.415
2006	381.772	270.183	1.521	1.076
2007	363,949	278,873	1,444	1,107
2008	99,246	82,986	1,551	1,297
2008/Q1	99,246	82,986	1,551	1,297

Repo-Reverse Repo Market

Repo-Reverse Repo Market

	Total		Daily Average	
	(YTL Million)	(US $ Million)	(YTL Million)	(US $ Million)
1993	59	4.794	0.28	22
1994	757	23.704	3	94
1995	5.782	123.254	23	489
1996	18.340	221.405	73	879
1997	58.192	374.384	231	1.486
1998	97.278	372.201	389	1.489
1999	250.724	589.267	1.011	2.376
2000	554.121	886.732	2.208	3.533
2001	696.339	627.244	2.774	2.499
2002	736.426	480.725	2.911	1.900
2003	1.040.533	701.545	4.162	2.806
2004	1.551.410	1.090.477	6.156	4.327
2005	1.859.714	1.387.221	7.322	5.461
2006	2.538.802	1.770.337	10.115	7.053
2007	2,571,169	1,993,283	5,102	3,955
2008	669,583	558,817	10,462	8,732
2008/Q1	669,583	558,817	10,462	8,732

Q: Quarter

ISE GDS Price Indices (January 02, 2001=100)

	YTL Based					
	3 Months (91 Days)	6 Months (182 Days)	9 Months (273 Days)	12 Months (365 Days)	15 Months (456 Days)	General
2001	102,87	101,49	97,37	91,61	85,16	101,49
2002	105,69	106,91	104,87	100,57	95,00	104,62
2003	110,42	118,04	123,22	126,33	127,63	121,77
2004	112,03	121,24	127,86	132,22	134,48	122,70
2005	113,14	123,96	132,67	139,50	144,47	129,14
2006	111,97	121,14	127,77	132,16	134,48	121,17
2007	112.67	122.83	130.72	136.58	140.49	128.23
2008	112.41	122.15	129.44	134.57	137.65	125.06
2008/Q1	112.41	122.15	129.44	134.57	137.65	125.06

ISE GDS Performance Indices (January 02, 2001=100)

	YTL Based				
	3 Months (91 Days)	6 Months (182 Days)	9 Months (273 Days)	12 Months (365 Days)	15 Months (456 Days)
2001	195,18	179,24	190,48	159,05	150,00
2002	314,24	305,57	347,66	276,59	255,90
2003	450,50	457,60	558,19	438,13	464,98
2004	555,45	574,60	712,26	552,85	610,42
2005	644,37	670,54	839,82	665,76	735,10
2006	751,03	771,08	956,21	760,07	829,61
2007	887.85	916.30	1,146.36	917.23	1,008.52
2008	921.98	949.85	1,188.33	944.28	1,045.45
2008/Q1	921.98	949.85	1,188.33	944.28	1,045.45

ISE GDS Portfolio Performance Indices (December 31, 2003=100)

	YTL Based						
	Equal Weighted Indices			Market Value Weighted Indices			
	EQ 180-	EQ 180-	EQ COMPOSITE	MV 180-	MV 180+	MV COMPOSITE	REPO
2004	125,81	130,40	128,11	125,91	130,25	128,09	118,86
2005	147,29	160,29	153,55	147,51	160,36	154,25	133,63
2006	171,02	180,05	175,39	170,84	179,00	174,82	152,90
2007	203.09	221.63	211.76	202.27	221.13	212.42	177.00
2008	210.57	227.06	218.30	209.69	226.29	218.60	182.87
2008/Q1	210.57	227.06	218.30	209.69	226.29	218.60	182.87

Q: Quarter

ISE PUBLICATIONS		
I. PERIODICALS	ISSN/ISBN	DATE
Weekly Bulletin	ISSN 1300-9311	
Monthly Bulletin (Turkish)	ISSN 1300-9303	
Monthly Bulletin (English)	ISSN 1300-9834	
Annual Factbook 2001	ISBN 975-8027-82-4	2001
Newly Trading Stock at the ISE 1998	ISSN 1301-2584 ISBN 975-8027-54-9	1999
ISE Companies-Capital Increases Dividends and Monthly Price Data (1986-2001)*	ISSN 1300-929X ISBN 975-8027-74-3	2000
ISE Review	ISSN 1301-1642	
Euro Asia Economic Bulletin	ISSN 1302-3330	1999
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Taxation of Capital Market Instruments in Turkey- Sibel Kumbasar Bayraktar		1994
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