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EDITORIAL

Dear readers!

Current special issue of the journal Corporate Ownership and Control is devoted to the International conference "Governance & Control in Finance & Banking: A New Paradigm for Risk & Performance" in Paris, France, April 18-19, 2013. Since the start of the world financial turmoil a lot of urgent questions arouse for the financial and banking sector concerning necessary reforms and changes in day-to day operations, strategy and regulation. There are several key-points that occupy minds of the practitioners and scholars worldwide ever since. In this respect the vital importance of governance and risk issues for the financial sector was re-emphasized by bank professionals, supervisors and standard setters. How should markets and financial institutions be governed and regulated with regard to risk framework and performance? How to strike the right balance between risk oversight and profit seeking? Does corporate governance really play significant role in risk control and management process? Will the new tendencies in regulation help to achieve more sustainable condition in finance and banking industry? Do financial institutions need stricter regulation? What framework of financial market regulation would be the most efficient in reducing systemic risks? Does corporate governance have potential to contribute significantly to safeguarding against systemic risks? Which corporate governance standards will effectively improve financial institutions in this case? Thus, a new paradigm for risk and performance in finance and banking needs to be developed through governance and control procedures. This wide range of relevant issues were highlighted during the conference.

This issue pays attention to the problems of mergers and acquisitions in Japan, China and Greece, quality of corporate governance and firm value, selecting non-executive directors to banks' boards, regulative initiatives in the sphere of corporate governance, cooperative banks activity, dividend payments in aquired and non aquired banks and finally risk issues of the insurance companies.

Keisuke Chikamoto, Cheng Lu, Fumiko Takeda and Mariko Watanabe study the effect of mergers and acquisitions by Chinese acquirers of Japanese targets (China-Japan M&As) on the firm value. Using the data on China-Japan M&As in 1990-2009. *Electra Pitoska and Themistokles Lazarides* pay attention to bank mergers and acquisitions in Greece and highlight the state of employees during the economic crisis. *Barbara Monda and Marco Giorgino* design a multi-dimensional index to measure the quality of corporate governance systems adopted by firms and use it to investigate the correlation between corporate governance quality and firm value. They present present a complex index (CGI) composed of 39 variables referable to four dimensions: board, remuneration, shareholder rights and disclosure. *Ronald H Mynhardt* proposes a model for selecting non-executive directors with appropriate knowledge, experience and skills in the banking industry. *Themistokles Lazarides* argues, using specific data that these initiatives like the introduction of IFRS (2003-2004), corporate governance best practices (2002-2003), monitoring and auditing reforms weren't efficient enough, not by designers fault but because they weren't appropriate for the fundamental characteristic of the social, political, legal and economic business environment of Greece. The paper, using the Proton bank case, shows these inefficiencies and highlights the fallacies of the policy makers in Greece and in Europe. *Anna-Lena Kühn, Markus Stiglbauer and Ev Zschäckel* conduct a content analysis of the annual reports of German cooperative banks, with reference to two research questions: Are the basic principles and values of cooperatives optimally realized and communicated to external stakeholders? Can cooperative banks comply with the requirements of the triple bottom line, namely the economic, environmental and social responsibility? *Matthias A. Nnadi and Sailesh Tanna* evaluate the various factors affecting dividend of both acquired and non-acquired banks using data from 120 large mergers and acquisitions in Europe. *Mohamed Sherif and Mahmoud Elsayed* using a two-way panel regression analysis with fixed and random effects and the generalized method of moment(GMM), investigate the impact of both firm-specific and external factors on the risk taking of Egyptian insurance companies.

We hope that you will enjoy reading the journal and in future we will receive new papers, outlining the most important issues and best practices of corporate governance!

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CONTENTS

Using a two-way panel regression analysis with fixed and random effects and the generalized method of moment(GMM), we investigate the impact of both firm-specific and external factors on the risk taking of Egyptian insurance companies. We use hand-collected data of Egyptian insurance companies over the period from 2006 to 2011 to estimate the relationship between total and systematic risks as risk measures and the independent variables. Following Eling and Mark, (2011) the extent of risk taking is quantified through variations in stock prices and these are explained by firm-specific and external factors. We find that differences in company size, interest rate level and economic development affect variations in stock prices. The analysis also highlights differences between the life and non-life insurers, with the non-life insurers exhibiting a higher level of risk (market and premium) and board independence. The pattern of results are qualitatively the same for non-life insurers but different for life insurers when we use GMM method.

CROSS-BORDER M&A AND FIRM VALUE: EVIDENCE FROM CHINESE ACQUISITIONS OF JAPANESE FIRMS

Keisuke Chikamoto*, Cheng Lu**, Fumiko Takeda, Mariko Watanabe*******

Abstract

We study the effect of mergers and acquisitions by Chinese acquirers of Japanese targets (China-Japan M&As) on the firm value. Using the data on China-Japan M&As in 1990-2009, we find that China-Japan M&As show a greater positive effect on stock prices for the targets than for the acquirers. We also observe the following tendencies: 1) the lower the management efficiency of the target is, the greater the market reactions are; 2) a bailout M&A generates greater market reactions for targets than does a non-bailout M&A; 3) capital participation imparts greater market reactions for the target than occur with other forms of M&A; and 4) targets experience smaller market reactions from the subsidiary sales than occur with other forms of M&A.*****

JEL classification: G32; G34

Keywords: Cross-border M&A; Emerging market; MNEs; Event study

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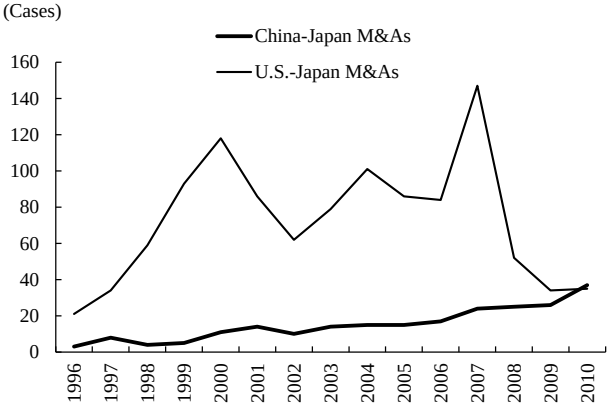
****** Views expressed in this article are the authors' and do not necessarily reflect those of Nomura Research Institute Shanghai Limited and the Institute of Developing Economies. We would like to thank Fumie Nakao for her excellent research assistance. All remaining errors are our own.*

1 Introduction

We examine the effects of the growing number of mergers and acquisitions by Chinese firms of Japanese firms (China-Japan M&As) in recent years. The number of M&As targeting Japanese firms by firms in developed countries declined drastically following the Lehman crisis in 2008, along with a world-wide shrinking of cross-border M&As. In contrast, the number of M&As targeting Japanese firms by Chinese firms steadily increased (Figure 1). According to the Nikkei Newspaper (Nihon Keizai Shimbun in Japanese) on October 28, 2010, Chinese firms became the top acquiring firms of Japanese firms in 2010 for the first time since 1985.

Figure 1. M&As of Japanese targets by American and Chinese acquirers



Source: RECOF M&A database. Note: China includes Hong Kong.

Reports on individual cases provide mixed evaluations of China-Japan M&As: some cases are praised highly for generating favorable synergy effects between a Japanese target and a Chinese acquirer, while other cases are criticized for bringing Chinese rivals into the Japanese market. An example of the former is the acquisition of Laox by Suning Appliance Co., Ltd., which was announced on June 24, 2009. The Nikkei Newspaper reported on June 25 that this M&A could benefit both firms via reducing costs by cooperative purchasing of home electronics products and development of private brand products. An example of the latter is Haier Home Electronics Appliances' purchase of the major household appliances units of SANYO Electric Co., Ltd., a subsidiary of Panasonic Corp. Although Panasonic aimed to restructure businesses that overlapped with those of SANYO Electric, this deal provided competitive technology to and shared a sales network with Panasonic's own rivals and thus can be regarded as Panasonic's "showing humanity even to one's enemy."[1]

The authors of many prior studies have investigated the impact of M&As on the target and acquiring firms. However, few studies have focused on M&As of firms in developed countries by firms in developing countries. In addition, it is not reasonable to assume that previously accepted hypotheses regarding cross-border M&As between firms in developed countries are applicable to China-Japan M&As. In fact, the M&As by firms in developing countries are suspected to be a channel for leakage of advanced technology and to infringe upon national interests. If this suspicion is correct, the M&As by Chinese acquires are less likely to increase the firm value of Japanese targets than are the M&As by firms in advanced countries. Using these developments as a basis, we examine how M&A practice and firm characteristics are associated with stock price reactions to the announcement of M&As based on the data on the 66 listed acquirers and 107 listed targets in China-Japan M&As between 1990 and 2009.

We find that as a whole, M&A announcements show a greater positive effect on targets compared with effects on the acquirers. We also observe the following tendencies: 1) the lower the management efficiency of the target is, the greater the stock price reactions to China-Japan M&As are; 2) a bailout M&A generates greater stock price reactions for targets than does a non-bailout M&A; 3) capital participation imparts greater stock price reactions on the target than occur with other forms of M&A; and 4) targets experience smaller stock price reactions from the subsidiary sales than occur with other forms of M&As. The first finding is consistent with the hypothesis previously accepted by studies on M&As between firms in developed countries, while the other three findings are not.

The rest of this article is organized as follows. Section 2 describes the background of China-Japan M&As. Sections 3 and 4 provide a literature review of empirical studies that examine market reactions to M&As and hypotheses development, respectively. Our methodology and data are described in Section 5. Our empirical results are discussed in Section 6. Sections 7 and 8 provide sensitivity analysis and concluding remarks, respectively.

2 Background information

The China-Japan M&A is a variant of Chinese foreign direct investment (FDI) in Japan.[2] According to the Ministry of Economy, Trade and Industry (METI), 78 percent of investment in Japan took the form of M&As in 2005 (METI, 2007). As the M&A is the most popular form of FDI, this section describes the development of FDI in Japan and then the development of China's FDI policies and practices.

2.1 FDI in Japan

Following WWII, Japan's Foreign Investment Law of 1950 prohibited the inflow of foreign capital with exceptions for desirable investments. Although the exceptions were broadened gradually, the prohibitive nature with procedural complexity remained until the law was abolished and replaced by the Foreign Exchange and Foreign Trade Control Law of 1980. The new law imposed restrictions only in exceptional cases, with streamlined procedures (Tatsuta, 1981).

The liberalization of inward FDI was promoted to resolve structural issues, reflected in the growing current account imbalance between Japan and the U.S. However, amounts of inward FDI remained far smaller than FDI by Japan's. Under the Structural Impediments Initiative between the two countries, in 1990, the Japanese government issued the "Declaration Concerning Openness to Foreign Direct Investment." Following the collapse of the economic "bubble" and the subsequent economic slowdown in the 1990s, several measures were taken to enhance capital inflows, which were expected to revitalize the Japanese economy and promote structural reform. These measures included the establishment of the Japan Investment Council (JIC) and improvements to the environment for M&A activities (Wada, 2005).

Despite these policy initiatives, inward FDI to Japan remained quite low from the 1990s to the early 2000s. According to the Ministry of International Trade and Industry (MITI), the outstanding amount of FDI in Japan was approximately $50 billion in 2000, which accounted only for 1 percent of the Japanese GDP, far less than that to the other G7 countries,

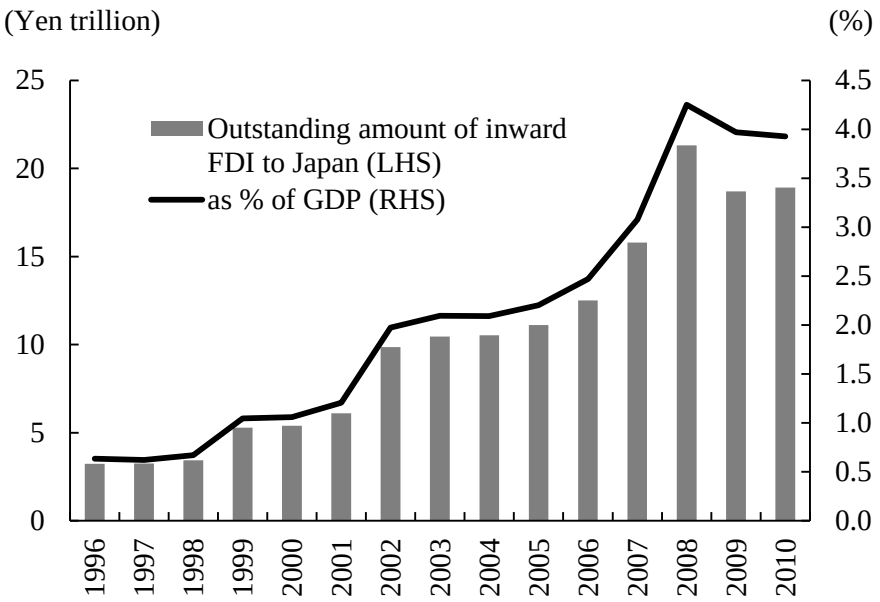
[1] For example, please refer to the following article by J-CAST News (in Japanese): http://www.j-cast.com/2011/08/07103305.html?p=all.

[2] FDI takes two forms: green field investment, which is the investment to establish a brand-new firm or a production base, and the M&A.

whose FDI accounted for 22-32 percent of each country's GDP. On the basis of the continued stagnation, the Japanese government implemented a series of measures to double FDI in Japan between 2001 and 2006. In 2003, the JIC issued the "Program for the Promotion of Foreign Direct Investment into Japan" to promote structural reform and to revitalize the Japanese economy through the introduction of new technology, innovative know-how in management, and new products, services, or money from abroad, and through job creation.

As a result of the government's continuous efforts to promote inward FDI, the FDI in Japan increased drastically between 2006 and 2008, following the reversal after the global financial crisis in 2009. According to the Japan External Trade Organization (JETRO), the outstanding amount of FDI reached approximately 4 percent of the Japanese GDP in 2010 (see Figure 2).

Figure 2. FDI in Japan



Source: JETRO.

As part of the promotion of inward FDI, the government liberalized M&As of Japanese targets by foreign acquirers. A turning point of this liberalization was the introduction of the concept of a "triangular merger" on May 1, 2007. The triangular merger is a merger in which the acquiring firm provides shares of its parent firm to shareholders of the target firm instead of its own shares. It should be noted that the "triangular merger" has no restriction with regard to the nationality of the parent firm of the target firm. Before that, equity swaps and equity transfers had been allowed only for domestic firms and not for foreign firms since 1999, when the Commercial Code and tax system were revised. Thus, the triangular merger removed the restriction for foreign firms that were involved in cross-border M&As.

2.2 China's FDI policies and practices

Since China enacted the Reform and Opening-up Policy in 1978, the Chinese government was eager to host FDI and became one of the largest capital importers of the world. After initial rapid economic growth, however, China also became compelled to invest abroad to seek profitable investment opportunities for the accumulated foreign exchange reserves that were generated from the huge trade surplus.

The Chinese policies covering outward FDI can be classified into two periods, the regulated period (1978-1990s) and the liberalization period (2000s-).[3] From the beginning of the Reform and Opening-up Policy until the early 1990s, outward FDI by Chinese firms was basically prohibited with some special exceptions. For example, Chinese firms were not fully qualified to implement overseas investment, and firms wishing to invest abroad had to utilize overseas technologies, resources, and markets to make up for shortages of these factors in China. This implied that the Chinese economy could not afford to invest abroad because it suffered from serious shortages of foreign exchanges and technologies in its domestic market.

The basic principle of the policies on outward FDI shifted from regulation to liberalization in the 2000s. This change was brought about by the "Going Out" strategy under the 10th Five-Year Plan (2001-

[3] For details of China's overseas investment policies, see Wenbin and Wilkes (2011), for example.

2005). Based on this strategy, the Chinese government formulated several policies favorable to outward FDI, which included simplified application procedures and raising the upper limit of investment in 2004. The Chinese government used to control outward FDI, but changed its policy to supporting the decisions made by firms investing overseas.

At the same time, in 2003, the National Development and Reform Commission (NDRC) and China's Export-Import (EXIM) Bank published the "Circular on Prior Support to Significant Overseas Investments." Through this policy the NDRC and EXIM Bank provided financial support to overseas investments for securing natural resources, introducing advanced technologies, and exporting goods and labor from China. In May 2005, the Ministry of Commerce and EXIM Bank published the "Circular on Implementing the Import and Export Privilege Credit Insurance to Support Individual and Private Companies to Develop International Markets," which raised the upper limit of foreign exchange for outward investment from $3.3 billion to $5 billion.

Based on these developments, the current policy environment in China is supportive of outward FDI, which has attracted global attention. According to the Chinese Ministry of Commerce, outward FDI flow from China recorded less than $3 billion in 2003, but after a drastic increase, it reached $59 billion in 2010, a 36.3% increase from the previous year. Outward FDI from China reached approximately $280 billion by the end of 2010, which was in sharp contrast to the stagnated overseas investment by the advanced countries after the global financial crisis.

3 Literature review

Prior empirical studies on the effects of M&As typically use either an event study or a performance study methodology. Based on the efficient market hypothesis, the event study estimates abnormal returns (ARs) of stock prices around the announcement of M&As and tests whether the ARs are significantly different from zero. The performance study compares key financial data of target or acquiring firms such as return on assets (ROA) and sales ratios before and after M&A transactions to determine whether the financial conditions have been improved after M&A transactions. Because stock prices are expected to reflect all information related to future corporate performance, we employ the event study methodology to evaluate the impact of China-Japan M&As on firm value, although we acknowledge the limitation of this methodology, that is, the difficulty in examining whether ex ante expectation is realized ex post.[4]

This section provides a brief review of the related empirical literature that investigates the effects of M&As on firm value by using the event study methodology. In particular, we mainly review the following two types of empirical studies: those examining domestic M&As within the U.S. or Japan, and those examining cross-border M&As. Although most of the empirical studies show that M&A announcements increase stock prices of target firms, how the announcements affect acquiring firms depends on circumstances and conditions.

In their influential paper on American M&As, Andrade et al. (2001) analyze M&As that took place from 1973 to 1998 between firms listed on the New York Stock Exchange (NYSE), AMEX, or NASDAQ. They find that M&A announcements tend to increase stock prices of target firms but decrease those of the acquiring firms. In contrast, prior empirical studies on Japanese M&As provide different results with regard to the wealth effect of M&As on acquiring firms (Kang et al., 2000; Inoue and Kato, 2006; Kakuda and Takeda, 2006; Hanamura et al., 2011). For instance, Kang et al. (2000) examine stock price reactions to the Japanese domestic M&As between 1997 and 1993, finding that cumulative abnormal returns (CARs) for acquiring firms are significantly positive, except for acquisitions motivated by rescue purposes, which provide significantly negative CARs for acquirers.

More recently, Inoue and Kato (2006) examine M&As between listed firms that took place from 1990 to 2002. They document that M&A announcements tend to increase stock prices for both target and acquiring firms, and that the market reaction is larger for target firms than for acquiring firms. In addition, Kakuda and Takeda (2006) investigate M&As that were publicly announced between 2002 and 2003, while Hanamura et al. (2011) analyze M&As that took place between 2000 and 2007. Both papers provide results similar to those of Inoue and Kato (2006). That is, M&A announcements provide positive effects on stock prices of both target and acquiring firms.

Based on the difference in estimated effects of M&As on acquiring firms between the U.S. and Japan, the next question is what causes this difference. Inoue and Kato (2006) attribute the differences to the varied purposes and conditions of M&As between the two countries. For example, M&As between U.S. firms that took place in the 1980s were mostly hostile takeover M&As, and in some cases there were multiple potential acquirers competing for acquisition. Such hostile M&As are costly, because acquiring firms are burdened with huge merger premiums or the necessity to replace management personnel. In contrast, M&As between Japanese firms were less costly because hostile or contested M&As were very exceptional.

Prior empirical studies on cross-border M&As also provide mixed results with regard to market

[4] Inoue and Kato (2006) discuss the pros and cons of event study and performance study methodologies and choose the former.

reactions to the M&A announcements. Table 1 presents a summary of these studies. Although several studies report positive responses, other studies, which mainly focus on cross-border M&As among European countries, document negative responses. As an example of a positive response, Kang (1993) investigates the M&As of U.S. target firms by Japanese acquirers between 1975 and 1988. He finds that M&A announcements tend to increase stock prices for both the U.S. target and the Japanese acquiring firms, and that stock price responses increase with the acquirers' leverage, their ties to financial institutions through borrowings, and the depreciation of the dollar against the yen. He also reports that U.S. targets of Japanese acquiring firms realize the greatest differential returns when they sell a majority interest to Japanese acquirers.

Prior empirical studies examining the effects of cross-border M&As involving the U.S. acquiring firms also report the positive effects of such acquisitions (Markides and Ittner, 1994; Doukas 1995; Moeller and Schilingemann, 2005; Wooster, 2006; Freund et al., 2007; Francis et al., 2008), except for Datta and Puia (1995). For instance, Moeller and Schlingemann (2004) examine cross-border M&As by U.S. acquirers that took place between 1985 and 1995. They report that M&A announcements tend to increase stock prices of the acquiring firms, although the market reaction is larger for domestics M&As than for cross-border M&As. Wooster (2006) focuses on M&As of Central and East European firms by the U.S. firms between 1987 and 1999, finding positive wealth effects for the U.S. acquiring firms.

With regard to the impact of cross-border M&As by acquiring firms in countries other than the U.S. and Japan, prior empirical studies provide mixed results (Cakici et al., 1996; Goergen and Renneboog, 2004; Conn et al., 2005; Gregory and McCorriston, 2005; Aybar and Ficici, 2009). Cakici et al. (1996) examine cross-border acquisitions of U.S. target firms between 1983 and 1992, finding that foreign acquirers gain significantly from purchases of U.S. firms. Goergen and Renneboog (2004) investigate cross-border M&As among European firms, documenting that M&A announcements increase stock prices for both target and acquiring firms and that the market reaction is larger for target firms than it is for acquiring firms. In contrast, Conn et al. (2005), Gregory and McCorriston (2005), Aybar and Ficici (2009) do not find a positive wealth effect from cross-border M&As by acquiring firms in Europe and emerging countries.

4 Hypotheses development

As discussed in the previous section, prior empirical studies on domestic and cross-border M&As show that M&A announcements tend to increase the stock prices of target firms, and that how the announcements affect acquiring firms depends on circumstances and conditions. Because the effect of M&As varies across countries, we want to examine how China-Japan M&As affect stock prices of acquiring and target firms, and to that end we develop four hypotheses to consider the factors influencing stock price reactions. We note that these four hypotheses are mainly about stock price responses for Japanese target firms, as we are especially interested in how reactions are different between China-Japan M&As and domestic M&As reported in prior studies.

4.1 Management improvement hypothesis

In the U.S., improvement of management has been reported when firms with inefficient management are acquired by firms with efficient management (Lang et al., 1989). The Q ratio, which is the market value of a firm divided by the replacement cost of capital (capital stock), is frequently used to measure the efficiency of corporate management (Tobin and Brainard, 1977). This Q ratio is the basis for determining whether an investor will make additional investments, and it can also be used to measure a corporation's management efficiency: the higher the Q ratio is, the better a firm is managed. Firms with a Q ratio less than 1 are inefficiently managed and are not using the firm's asset value effectively.[5]

When using the Q ratio as an indicator of management efficiency under a current management team, we can predict a management improvement effect after M&A of a target firm with a low Q ratio by an acquiring firm with a high Q ratio, because of efficient operation through reallocation of assets or more efficient management by changes of management. In fact, the impact that the Q ratio has on stock prices of the firms engaged in M&A has been well researched. For example, Dong et al. (2006) analyze the M&A activities among firms listed on the NYSE, AMEX, and NASDAQ from 1978 to 2000. They show that 1) the lower the Q ratio of the target firm, the greater the positive effect on its stock price, and the lower the negative effect on the acquiring firm's stock price; and 2) the higher the Q ratio of an acquiring firm, the greater the positive effect on the stock price of the target firm, and the greater the negative effect on the acquiring firm's stock price.

[5] A Q ratio less than 1 means the market value of a corporation is less than the value of its capital stock. In other words, the current capital stock is over-evaluated, in the sense that selling capital stock on the market leads to higher profits than investing in existing capital stock and reproducing it. On the other hand, a Q ratio greater than 1 means that the current market value of a corporation is greater than the value of its capital stock. In other words, increasing capital stock is advantageous because using and reproducing capital stock leads to a greater value for the corporation.

Table 1. Summary of related literature on cross-border M&As

Empirical studies	Targets	Acquirers	Investigation period	Empirical results
Kang et al. (1993)	U.S.	Japan	1975-1988	M&A announcements increase stock prices for both target and acquiring firms. Stock price responses increase with the acquirers' leverage, their ties to financial institutions through borrowings, and the depreciation of the dollar against the yen.
Markides and Ittner (1994)	Foreign	U.S.	1975-1988	Announcements on international M&As increase stock prices for acquiring firms, while those on domestic do not create value.
Datta and Puia (1995)	Foreign	U.S.	1978-1990	Announcements on international M&As do not increase stock prices for acquiring firms. Acquisitions characterized by high cultural distance are assocaited with low stock price reactions.
Doukas (1995)	Foreign	U.S.	1975-1989	M&A announcements show that acquirer ARs are substantially higher for high q acquirers than low q acquirers.
Moeller and Schilingemann (2005)	Foreign	U.S.	1985-1995	M&A annoucements increase stock prices for acquiring firms. Stock price responses are larger for domestics M&As is than cross-border M&As.
Wooster (2006)	Central and Eastern Europe	U.S.	1987-1999	M&A announcements increase stock prices for acquiring firms.
Freund et al. (2007)	Foreign	U.S.	1985-1998	M&A announcements increase stock prices for acquiring firms. Stock price reactions are larger for firms with lower Tobin's q than for those with higher Tobin's q.
Francis et al. (2008)	Foreign	U.S.	1990-2003	M&A announcements increase stock prices for acquiring firms.
Cakici et al. (1996)	U.S.	Foreign	1983-1992	Foreign acquirers gain significantly from purchases of U.S. firms.
Goergen and Renneboog (2004)	Europe	Europe	1993-2000	M&A announcements increase stock prices for both target and acquiring firms. The market reaction is larger for target firms than acquiring firms. A high market-to-book ratio of the target leads to a negative price reaction for the acquiring firm.
Conn et al. (2005)	Foreign	U.K.	1984-1998	Cross-border public acquisitions result in zero announcement returns, while cross-border private acquisitions result in positive announcement returns. Domestic public acquisitions result in negative announcement returns, while domestic private acquisitions result in positive announcement returns.
Gregory and McCorriston (2005)	Foreign	U.K.	1985-1994	M&A announcements do not create value for acquiring firms.
Aybar and Ficici (2009)	Foreign	Emerging countries	1991-2004	M&A announcements do not create value for acquiring firms.

In addition, Hanamura et al. (2011) perform multiple regression analysis on firms listed on the first and second sections of the Tokyo Stock Exchange (TSE), which are involved in M&A between 2000 and 2007. Their results show that 1) the lower the Q ratio of a target firm, the greater the positive effect on that firm's stock price; and 2) the higher the Q ratio of the acquiring firm, the greater the positive effect on that firm's stock price. In the present study we set the following hypothesis to guide our analysis of the impact of the target firm's management efficiency on the stock price reaction to M&A:

Hypothesis 1: China-Japan M&As involving target firms with low Q ratios generate greater positive stock price responses for the target firms than do those involving target firms with high Q ratios.

4.2 Bailout effect hypothesis

While hostile M&A activity is almost unheard of in Japan, there are many instances of bailout M&As for firms otherwise unable to survive. The motives for M&As done for such bailout purposes are primarily to improve management, but can also be to provide an infusion of capital to a company starving for funding, with no change in management lineup resulting from the M&A. Bailout M&As can also be observed in China-Japan M&As.[6]

A typical case is the capital participation in Laox by the Suning Appliance Chain Store (Group) on June 24, 2009. Suning Home Appliance acquired around 1.5 billion yen worth of new shares of Laox through a third party allocation. Laox had fallen into deficit and wanted to shore up its financial standing. Suning Home Appliance made no changes to the existing management team of Laox, only sending two experienced directors to help manage and control the company. This limited replacement of management is probably because M&As by foreign acquirers are not well regarded in Japan, as the ethics and competency of employees in Japanese firms are regarded as quite high.[7] In particular, if a management team is replaced after an M&A in Japan, it could easily give employees the impression that the assets of the Japanese firm were forcibly taken by foreign capital entities, and there would be a high risk of existing technical and management talent leaving the company.[8]

Several studies on bailout M&As have been done in Japan. However, there appears to be no set standard for determining what constitutes a bailout vs. a non-bailout M&A. For example, Kang et al. (2000) analyze the wealth effect of transactions reported by the press as having a bailout purpose. Inoue and Kato (2006) set more detailed judgment conditions and categorize transactions initially reported as bailouts in the press. In addition, they include the following two cases in the bailout category, even though they were not reported as so in the press. The first case is where the target firm recorded either a net loss or an operating loss for at least two of the three fiscal terms prior to the M&A announcement. The second case is where there is no dividend at the time of the M&A announcement and no dividend expected for the following term. These conditions indicate that the firms had difficulty rebuilding management on their own, and thus they can be regarded as firms acquired for the purpose of bailing them out. Inoue and Kato (2006) report that there is a significantly positive effect on stock prices for both acquiring and target firms involved in a non-bailout M&A, but for bailout M&As, there is a negative market reaction for acquiring firms and a positive but insignificant response for target firms. Accordingly, we formulate the following hypothesis:

Hypothesis 2: China-Japan M&As based on a non-bailout purpose generate greater positive stock price reactions for the target firm than do those based on a bailout purpose.

4.3 M&A structure hypothesis

The RECOF Corporation's M&A database[9] classifies M&A structures according to the following five categories: mergers, acquisitions, business transfers, capital participation, and investment expansion. Mergers are the situation in which two or more parties agree to merge into one company through a merger contract. Mergers conducted by stock transfers are integrations wherein shares are transferred to form a joint holding company. Mergers by stock exchange are integrations wherein Company A splits to form a holding company prior to the stock exchange, and that holding company exchanges shares with Company B.

Acquisitions are usually done by obtaining more than 50% of a company's shares. Acquisitions may also include situations with no more than a 50% acquisition of shares where management control is obtained (see Companies Act, Article 2, Item 3). Examples include underwriting of a capital increase, acquisitions by existing shareholders, and exchanges of shares. In addition, the result of a company split where the split company becomes the parent of the successor company is classified as an acquisition. The result of a merger where the parent of a merged

[6] Nakamura (2010) hints that there are many poorly performing Japanese firms that received investment from Chinese corporations.

[7] The JETRO (2004) notes that "A resistance to M&A by foreign capital persists among Japanese companies. Foreign companies have also deeply recognized that integration is very difficult in Japan, mainly due to the different cultural background."

[8] For example, after the M&A of Akiyama Printing Machinery Co. by the Shanghai Electric Group on December 6, 2001, many Akiyama engineers temporarily quit because of the acquisition by a Chinese company, which caused great damage to the company (Niwa, 2010).

[9] The explanation of the RECOF M&A database is provided in Section 5.

company becomes the parent of the surviving company can also be categorized as an acquisition.

Business transfers are the moving of assets, employees, or goodwill and other property among two or more companies. This includes the integration of existing businesses between two companies. Company splits are, in principle, categorized as business transfers. However, this does not apply to cases where the successor company becomes a subsidiary. Capital participation means an acquisition of no more than 50% of shares. However, this does not apply to cases where the corporation becomes a subsidiary. It is the undertaking of a capital increase or acquisition of stock by existing shareholders. This is also limited to first-time acquisitions only. Investment expansion is another acquisition of no more than 50% of shares by capital participation parties. However, this acquisition of shares is excluded from acquisition or investment expansion, in the case of investments already greater than 50% or with the goal of forming a subsidiary.

Several prior studies on M&A structures in Japan feature a comparative analysis among different M&A structures. For example, Inoue and Kato (2006) compare M&As by share exchange and stock transfer with those by mergers and takeover bids (TOB) to show that the former generates a greater positive stock price reactions for both the acquiring and target firms. They point out that this is because the Commercial Act revisions enacted in October 1999 created additional options for transaction structures, and this led to a decrease in transaction cost, including the cost of integration. Kakuda and Takeda (2006) also compare M&As by stock exchange with M&As by mergers and stock transfers, and find that the former has greater positive stock price reactions for both acquiring and target firms listed on Japanese markets between 2002 and 2004.

Okabe and Seki (2006) examine M&A activities in Japan in 2001 based on data from 157 acquiring firms. They conclude that 1) in an M&A transaction, the effect on the acquiring firm varies greatly depending on the M&A structure; and 2) M&As with capital participation or business transfers have a relatively greater stabilizing effect and management efficiency effect,[10] while acquisitions have a clearly small impact on both of these. We use the M&A categories set forth based on the RECOF M&A database.[11]

Our sample has very few firms in each category other than acquisitions and capital participation, and thus we categorize all transactions outside of these two categories as "other structure." In referring to the results of previous research, we note that, among the various M&A structures, M&As by capital participation result in greater stabilizing and efficiency effects on the acquiring firm, and capital participation has lower transaction costs than acquisitions (Okabe and Seki 2006). We thus form the following hypothesis:

Hypothesis 3: China-Japan M&As by capital participation generate greater positive stock price reactions for both the acquiring and target firms than those generated by the other structures.

4.4 Carve-out (subsidiary sale) hypothesis

When overseas and domestic subsidiaries of Japanese firms become target firms, the parent company is also classified as a target firm in the RECOF M&A database. Thus, acquisitions of the overseas subsidiaries of Japanese firms or joint venture corporations by a Chinese partner are categorized as out-in M&As. Accordingly, in the present study, if the subsidiary is not listed, we use the share price of the parent instead.

Research has also been done to examine the impact on the performance of a parent company when a subsidiary is sold, a process known as a carve-out. By analyzing carve-outs occurring between 1970 and 1993 on the NYSE, AMEX, and NASDAQ, Slovin and Sushka (1998) determine that a parent's sale of a subsidiary to a third party tends to significantly increase the share price of the parent, although it significantly reduces the share price of the third party. Inoue and Kato (2006) note that "carve-outs that reduce the size of a corporation can be appropriate actions from an economic rationale, and can be an option to increase shareholder value." Based on these prior studies, we can expect that sales of subsidiaries to third parties are likely to increase the share price of the target firm, and that they tends to increase the share prices of both subsidiaries and parents. Accordingly, we set forth the following hypothesis:

Hypothesis 4: The sale of a subsidiary to a Chinese acquirer generates greater stock price reactions for the Japanese parent, i.e., the target firm, than those generated by the other forms of China-Japan M&As.

In addition to testing the above four hypotheses, we also examine the effect of other factors on stock price reactions to China-Japan M&As. These factors include 1) markets wherein both the acquired and the

[10] The stabilizing effect means "to raise trust in that corporation within the market." On the other hand, the management efficiency effect refers to "a growth in the value of products generated by various kinds of resources (physical and human resources as well as technology and intangible assets) under control of a corporation" (Okabe and Seki, 2006: pp. 18-19).

[11] Our reason for doing so is that publicly available information for China-Japan M&As at the time of the transaction is limited, and it is difficult to use other forms of classification. In particular, transactions where Japanese firms enter the Chinese market by forming a joint venture company with a Chinese firm, and then subsequently sell their share in the joint venture to the Chinese partner when they withdraw from the Chinese market, fall under the purview of this research, but in some cases, there is no information about it in the Japanese press. Accordingly, there is no basis for determining whether these are share exchange transactions or stock transfer transactions.

acquiring firms are publicly traded; 2) a type of industry of the acquired and the acquiring firms; and 3) the region of the acquiring company (mainland China and Hong Kong).

5 Methodology and data

5.1. Methodology

To examine market reactions to Chinese M&As in Japan, we employ a standard event study methodology. The event day here is the disclosure of China-Japan M&As. We take two-day (0, +1) and four-day (0, +3) event windows. The estimation window is set at 150 trading days before the event window. We estimate the standard market model for the estimation window as follows:

$$\begin{aligned} R_{it} &= \alpha_i + \beta_i R_{mt} + \epsilon_{it} \\ E[\epsilon_{it}] &= 0 \; Var[\epsilon_{it}] = \sigma^2_{\epsilon_i} \end{aligned} \tag{1}$$

where R_{it} represents the stock price return of firm *i* at period *t*, R_{mt} is a return on market portfolio at period *t*, and ϵ_{it} is a disturbance term.

By using the estimated parameters, we can calculate the abnormal return (AR), as follows:

$$\begin{aligned} AR_{it} &= R_{it} - (\alpha_i + \beta_i R_{mt}) \\ AR_{it} &\sim N\left(0, \sigma^2(AR_{it})\right) \\ \sigma^2(AR_{it}) &= \sigma^2_{\epsilon_i} + \frac{1}{L_1}\left[1 + \frac{(R_{mt} - \mu_m)^2}{\sigma^2_m}\right] \end{aligned} \tag{2}$$

where L_1 is the length of the estimation window, which starts at t_1 and ends at t_2. The CAR and standardized CAR (SCAR) are obtained as follows:

$$\begin{aligned} CAR_i(t_1, t_2) &= \sum_{t=t_1}^{t_2} AR_{it} \\ CAR_i(t_1, t_2) &\sim N(0, \sigma^2(t_1, t_2)) \\ \sigma^2(t_1, t_2) &= (t_2 - t_1 + 1)\sigma^2_{\epsilon_i} \\ SCAR_i(t_1, t_2) &= \frac{CAR_i(t_1, t_2)}{\sigma(t_1, t_2)} \end{aligned} \tag{3}$$

The average CAR (CAAR) for groups of firms is calculated as follows:

$$\begin{aligned} CAAR(t_1, t_2) &= \tfrac{1}{N}\textstyle\sum_{i=1}^{N} CAR_i(t_1, t_2), \\ Var[CAAR(t_1, t_2)] &= \tfrac{1}{N^2}\textstyle\sum_{i=1}^{N} \sigma^2_i(t_1, t_2), \end{aligned} \tag{4}$$

where N is the number of firms within the same subsample. We set the null hypothesis H_0: $CAAR(t_1, t_2) = 0$ and test whether this H_0 can be statistically rejected. To test H_0, we can use a J_1-statistic, and we also use a J_2-statistic based on SCAR to guarantee robustness, as follows.

$$\begin{aligned} J_1 &= \frac{CAAR(t_1, t_2)}{\left[\overline{\sigma^2}(t_1, t_2)\right]^{\frac{1}{2}}} \sim N(0, 1) \\ SCAAR(t_1, t_2) &= \frac{1}{N}\sum_{i=1}^{N} SCAR_i(t_1, t_2) \\ J_2 &= \left(\frac{N(L_1 - 4)}{L_1 - 2}\right)^{\frac{1}{2}} SCAAR(t_1, t_2) \sim N(0, 1) \end{aligned} \tag{5}$$

We first conduct univariate analysis to analyze the type of factors that influence targets' CAR. The analysis uses the seven afore-mentioned categories, namely, 'management efficiency;' 'bailout purpose;' 'M&A structure;' 'subsidiary sale;' 'industry sector;' 'stock exchange of listing;' and 'location of acquiring firms.' We then conduct multivariate analysis, examining all of these variables. We also include in the control variables some factors other than the seven listed above, which may feasibly have an impact on CAR, using the following model:

$$\begin{aligned} CAR_{(0,+3)} = \alpha &+ \beta_1 PBR + \beta_2 BailouZ \\ &+ \beta_3 Method \\ &+ \beta_4 Manufacturing \\ &+ \beta_5 Market + \beta_6 District \\ &+ \beta_7 Equityratio + \beta_8 Asset \\ &+ \beta_9 ROA + \varepsilon \end{aligned} \tag{6}$$

where $CAR_{(0,+3)}$ denotes CARs of the target firm over a four-day window (0, +3). A summary of each explanatory variable is presented in Table 2.

Table 2. Definitions and predicted correlation signs for explanatory variables

Explanatory variable	Definition	Related hypothesis / prediction	Predicted correlation with CAR (+/–)
PBR	Price-to-book ratio of the target firm	Management improvement	–
Bailout	Dummy variable that takes 1 if China-Japan M&A has a bailout purpose, 0 otherwise.	Bailout effect	–
Method	Dummy variable that takes 1 if China-Japan M&A is made by capital participation, 0 otherwise.	M&A structure	+
Manufacturing	Dummy variable that takes 1if the target firm is in a manufacturing sector, 0 otherwise (non-manufacturing sector).	Industry sector	–
Market	Dummy variable that takes 1 if the target firm is listed on the emerging stock exchange, 0 otherwise.	Stock exchange	–
District	Dummy variable that takes 1 if the acquiring firm is located in Hong Kong, 0 otherwise (mainland China).	Location of acquiring firms	–
Equityratio	Target's rate of equity on total assets	Financial security of the target firm	–
Asset	Logarithm of total assets of the target firm	Size of the target firm	–
ROA	Target's rate of return on total assets	Profitability of the target firm	–

The price-to-book ratio (PBR) is a proxy for the Q ratio and is calculated as follows:

$$\text{Price} - \text{to} - \text{Book Ratio (PBR)} = \frac{\text{Share Price}}{\text{Net Assets per Share}} \quad (7)$$

PBR is an indicator of business efficiency to test the management improvement hypothesis (*Hypothesis 1*) described in sub-section 4.1. The Q ratio of less than 1 indicates a company running an inefficient business that cannot fully realize its asset value potential. Thus we classify companies as 'efficient management' or 'inefficient management' depending on whether PBR>1 or PBR<1, respectively. Based on the management improvement hypothesis (*Hypothesis 1*), which states that the lower the Q ratio of the target firm, the more positive the effect of the M&A on its share price, we predict a negative correlation between PBR, as a proxy for the Q ratio, and CAR.

Bailout is the dummy variable coded 1 for a China-Japan M&A based on a bailout purpose and 0 otherwise. This variable is included to test the bailout effect hypothesis (*Hypothesis 2*) described in sub-section 4.2. In the previous studies, one of the criteria for deciding whether an M&A is for bailout purpose is whether or not newspaper reports it as so. However, our sample includes hardly any cases from the M&A records in the RECOF M&A database or from the newspaper articles searched at Nikkei Telecom 21, where the word 'bailout' is directly employed. Therefore, in this study, M&A deals deemed to have a 'bailout objective' are classified, in line with Inoue and Kato's (2006) evaluation criteria, as those where the target firm has shown a deficit in more than 2 out of 3 fiscal years preceding the announcement of the deal, or where no dividend has been paid in the accounting period immediately preceding the announcement. Our bailout effect hypothesis (*Hypothesis 2*) states that there is less market reaction for the target firm in a China-Japan M&A based on a bailout purpose than for the target firm in an M&A based on a non-bailout purpose. Therefore, we predict a negative correlation between the Bailout dummy variable and CAR.

Method is the dummy variable coded 1 for capital participation and 0 otherwise. This variable is included to test the M&A structure hypothesis (*Hypothesis 3*) described in sub-section 4.3. The RECOF M&A database categorizes M&A structures as 'capital participation;' 'investment expansion;' 'acquisition;' and 'business transfer.' However, there are few firms that fall into only a single category, so we categorize 'capital participation' and 'acquisition' separately and the rest of the samples as 'other structures.' In fact, capital participation and acquisitions make up the overwhelming majority of all our sample cases (43 and 46 cases, respectively, amongst a total of 107 cases). Our *Hypothesis 3* states that a China-Japan M&A through capital participation generates greater positive effects on stock prices for the target firm than does an acquisition. Consequently we predict a positive correlation between the Method dummy variable and CAR.

Manufacturing is the dummy variable coded 1 if the target firm is classified as a manufacturing company and 0 if it is classified as a non-manufacturing company. Using this variable, we can measure the impact of the target's industry sector on CAR. We use fundamentally the same categories for the industry sector as those defined in the RECOF M&A database (Table 3). However, as the number of samples falling under each industry sector is deemed few, we divide them into two industry sectors, 'manufacturing' and 'non-manufacturing.' If the target firm is a manufacturing company, it may face fears regarding the technology drain, which is likely to reduce the future firm value, compared to a non-manufacturing company. Therefore, we predict a negative correlation between the Manufacturing dummy variable and CAR.

Table 3. Industry composition

RECOF Data Industry Sector Classifications	No. of samples in each industry sector	
	Acquirer	Target
Manufacturing	27	51
Agriculture, Forestry and Fisheries	1	0
Mining	1	2
Construction	0	1
Foodstuffs	2	5
Textiles	0	2
Paper/Pulp	0	1
Chemicals	1	3
Pharmaceuticals	1	1
Coal/Oil	0	0
Rubber	0	1
Publishing/Printing	0	0
Ceramics	0	3
Iron/Steel	2	1
Non-ferrous Metal Products	2	6
Machinery	2	2
Electrical Machinery	11	13
Transport Equipment	1	6
Precision	1	0
Other Manufacturing	2	4
Non-manufacturing	39	56
General Trading Company	0	1
Food Wholesaler	1	0
Pharmaceutical Wholesaler	0	1
Other Sales – Wholesaler	5	6
Department Store	3	1
Supermarket/Convenience Store	1	6
Consumer Electronics Store/HC	2	1
Other Retailer	1	1
Restaurant	0	1
Banking	3	2
Credit Union/Association	0	0
Life Assurance/Insurance	0	0
Securities	0	2
Other Financial	8	1
Transport/Warehousing	0	3
Electricity/Gas	1	1
Communications/Broadcasting	1	3
Real Estate/Hotel	2	4
Amusements	1	3
Software/Data	6	10
Service	4	9

Market is the dummy variable coded 1 if the target firm is listed on an emerging stock exchange (TSE Mothers, OSE Hercules, JASDAQ) and 0 if it is listed on the TSE or other regional stock exchanges. Using this variable, we can measure the impact of the stock exchange where the target is listed on CAR. Classification is carried out according to the stock exchange where each of the companies involved has its main listing (Table 4). The future income from shares of target firms listed on emerging market stock exchanges is regarded as more uncertain than that of other stock exchanges, and we therefore predict a negative correlation with CAR.

Table 4. Stock exchange of listing

Panel A: Stock exchange for Acquirers	
Stock exchange	No. obs
Hong Kong	40
Shanghai	14
Others	12
Shenzen	7
JASDAQ	2
NYSE	3
Panel B: Stock exchange for Targets	
Stock exchange	No. obs
TSE 1st section	54
TSE 2nd section	13
OSE 1st section	3
OSE 2nd section	5
Emerging	
JASDAQ	21
TSE Mothers	6
OSE Heracles	3
Nagoya Centrex	1
Hong Kong	1

The acquiring firms are mainly listed on the Shanghai or Shenzhen stock markets on the Chinese mainland, or on the Hong Kong exchange. Some of the acquiring firms are also listed on the NYSE or JASDAQ, but they are few in number and have been combined under the heading 'Others,' along with those listed on the Shenzhen exchange, which has the fewest listed companies amongst China's three major stock markets. District is the dummy variable coded 1 if the target firm is located in Hong Kong and 0 if it is located on mainland China. Using this variable, we can measure the impact of the acquirer's location on CAR. In the RECOF M&A database, under the nationality of acquiring firms, the Hong Kong Chinese companies are specifically noted and differentiated from the companies on mainland China. Acquirers located on the mainland China are naturally regarded as having less experience with cross-border M&As compared with those located in Hong Kong and so can be expected to pay a higher acquisition premium, which will be beneficial for the target firm. Consequently, we predict that with the District dummy variable will have a negative correlation with CAR.

The remaining three variables – Equity Ratio, Asset, and ROA – are included to capture the financial condition of the target firms. The equity ratio is a measure of the capital adequacy of the target firm. It is calculated as shown in equation (8). Using this variable, we can measure the impact of the target's financial security on CAR.

$$\text{Equity Ratio} = \frac{\text{Owner's Equity}}{\text{Total Assets}} \quad (8)$$

On the subject of Japanese M&A, Arikawa and Miyajima (2007) suggest that the lower the equity ratio of a firm, the more susceptible it is to take-over. Consequently, we consider it possible for the equity ratio to also have an impact on the market reactions for the target firm. The lower the equity ratio of the target firm, the lower its financial security. Conversely, there is a substantial expectation that China-Japan M&As improve this financial situation and moreover, we consider that such an expectation may have a positive impact on the target's share price. In other words, we predict a negative correlation between the equity ratio and CAR.

The Asset variable shows natural logarithm of the target's total assets for the financial accounting year immediately preceding the announcement of the M&A deal. Using this variable, we can measure the impact of the target's size on CAR. The regression results provided by Dong et al. (2006) suggest that the greater the size of the acquirer in comparison to that of the target firm, the greater the target's CAR. Accordingly, we anticipate that the smaller the target firm, the greater the CAR. In other words, we predict a negative correlation between Asset and CAR.

ROA shows the rate of return on total assets for the fiscal year immediately preceding the announcement of the M&A deal. It is calculated as shown in equation (9). Using this variable, we can

measure the impact of the target's profitability on CAR.

$$\text{ROA} = \frac{\text{Profit（for the current period）}}{\text{Total Assets}} \quad (9)$$

We predict that the worse the target's profitability, the bigger the margin for improvement following a takeover, and also the greater the effects on business improvement. As such, we predict a negative correlation between ROA and CAR.

Last, based on the carve-out hypothesis (*Hypothesis 4*) described in sub-section 4.4, we estimate equation (6) by using a sample consisting only of subsidiaries. Using articles on M&A from the RECOF M&A database and newspaper reports from the time of the acquisition researched at Nikkei Telecom, we categorize 'subsidiary sales' as those where the target is a subsidiary affiliated with the parent company, or a company that is legally incorporated overseas. All other samples have been classified as 'others.'

5.2 Sample selection

We collect data on China-Japan M&As (including Hong Kong) for the period 1990-2009, using information taken from RECOF DATA Corporation's RECOF M&A database, which covers M&A projects involving with Japanese firms. The acquiring firms conform to nationality criteria that require them to be Chinese firms. Some of the acquiring firms are overseas legal entities; however, as they have taken on Chinese nationality, they have been included in our sample. We compile a list of the following data relating to the acquiring and target firms: company name; industry sector; nationality; and details of the M&A structure, including the announcement date, disclosed amounts, etc. Furthermore, as our analysis requires the use of stock prices and financial data, we limit our scope to listed firms only, as the analysis of non-listed firms is quite difficult, due to data collection problems.

A company's stock price is essential to examine the impact of M&A on its firm value. We take acquirers' stock prices from 150 trading days prior to the M&A announcement to 3 trading days after the announcement, using China's "WIND Investment Enquiry" database. Meanwhile, targets' stock prices are obtained from the 'Kabuka CD-ROM' by Toyokeizai, Inc. The sample also consists of some firms listed in the U.S. markets, and their stock prices are taken from Google Finance. We take the financial data on targets from the EOL database for the accounting period immediately prior to the M&A announcements. However, it is difficult to obtain financial data on acquirers with Chinese or Hong Kong nationality. Moreover, as detailed below, there was no substantial impact of China-Japan M&As on the stock prices of acquirers. Therefore, in the present study, we limit the scope of our analysis to financial data of targets only.

During our sample period, there are 197 China-Japan M&A cases (Table 5). Amongst these, the 67 cases where the acquirer is listed and the 108 cases where the target firm is listed form the subjects of our research. Within these listed firms, we remove those whose stock price we are unable to obtain (e.g., acquirers with Chinese nationality, those listed on the Republic of Kenya's stock exchange). Our final sample consists of 66 acquirers and 107 targets (one case is associated with two targets and so it is recorded as a sample of two). Furthermore, for the purposes of multivariate regression analysis, the number of targets falls to 103, as we remove those companies that are yet to be listed as of the accounting period immediately prior to the M&A announcement, or , as of such period, have yet to publically disseminate any financials at all.

Table 5. China-Japan M&As for 1990–2009

	No. of M&A (A)	No. of listed acquirers (B)	(B) / (A) (%)	No. of listed target firms (C)	(C) / (A) (%)
1990	1	0	0.0	1	100.0
1991	1	1	100.0	0	0.0
1992	2	1	50.0	1	50.0
1993	1	0	0.0	1	100.0
1994	0	0	---	0	---
1995	1	1	100.0	1	100.0
1996	3	1	33.3	2	66.7
1997	8	5	62.5	3	37.5
1998	4	3	75.0	2	50.0
1999	5	1	20.0	4	80.0
2000	11	9	81.8	3	27.3
2001	14	5	35.7	4	28.6
2002	10	4	40.0	4	40.0
2003	14	6	42.9	4	28.6
2004	15	1	6.7	6	40.0
2005	15	4	26.7	7	46.7
2006	17	4	23.5	11	64.7
2007	24	4	16.7	21	87.5
2008	25	8	32.0	14	56.0
2009	26	9	34.6	19	73.1
Total	197	67	34.0	108	54.8

Source: RECOF M&A database. Compiled by authors

6 Empirical results

We first analyze the effect that announcements of China-Japan M&As have on the share prices of all the acquirers and targets (Table 6). CAARs are not significant in any of the four event windows for the 66 acquirers. However, SCAARs are significantly positive in all the event windows. This implies that China-Japan M&As tend to increase the share price of the acquirer. In contrast, both CAAR and SCAAR are significantly positive in each event window for all 105 targets. Moreover, in all event windows, both CAAR and SCAAR greatly exceed those of the acquirers over the same period. This implies that not only do China-Japan M&As have a positive impact on the firm value of the targets, but also that the impact is greater than any positive gains made by the acquirer.

Table 6. Stock price responses to the China-Japan M&As for all samples

Panel A: Stock price responses for acquirers

No. of acquirers	Event window	CAAR (%)	J_1-stat	SCAAR	J_2-stat	
66	(0,+1)	0.320	0.142	0.254	2.050	**
	(0,+2)	0.492	0.178	0.332	2.676	***
	(0,+3)	-0.071	-0.022	0.212	1.712	*
	(-1,+3)	0.149	0.042	0.259	2.091	**

Panel B: Stock price responses for targets

No. of targets	Event window	CAAR (%)	J_1-stat		SCAAR	J_2-stat	
107	(0,+1)	3.116	4.886	***	0.923	9.481	***
	(0,+2)	3.632	4.649	***	0.946	9.715	***
	(0,+3)	4.287	4.753	***	1.070	10.998	***
	(-1,+3)	4.849	4.808	***	1.129	11.603	***

Note: ***, **, and* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Many previous studies have been concerned with how value created by an M&A is distributed between the shareholders of the acquirer and the target. Therefore, their samples only use companies that are part of the same M&A. Similarly, we calculate CAAR only for matched samples (Table 7). Table 7 shows that CAARs are not significantly different from zero in all four event windows for any of the 34 acquirers**.** SCAARs are significantly positive only at two- and three-day windows. These findings are consistent with those in Table 6, suggesting that a China-Japan M&A tends to increase the share price of the acquirer.

Table 7. Stock price responses to the China-Japan M&As for matched samples

Panel A: Stock price responses for acquirers						
No. of acquirers	Event window	CAAR (%)	J_1-stat	SCAAR	J_2-stat	
34	(0,+1)	0.542	0.532	0.424	2.455	**
	(0,+2)	0.225	0.180	0.438	2.539	**
	(0,+3)	-0.610	-0.423	0.100	0.579	
	(-1,+3)	-0.424	-0.263	0.238	1.379	
Panel B: Stock price responses for targets						
No. of targets	Event window	CAAR (%)	J_1-stat	SCAAR	J_2-stat	
35	(0,+1)	5.501	5.929	1.409	8.281	***
	(0,+2)	6.738	5.930	1.492	8.765	***
	(0,+3)	7.301	5.565	1.520	8.929	***
	(-1,+3)	9.505	6.480	1.897	11.149	***

Note: ***, and ** indicate statistical significance at the 1% and 5% levels, respectively.

In addition, both CAAR and SCAAR are significantly positive in all event windows for each of the 35 targets. We note that the results in Table 7 show that in all event windows both CAAR and SCAAR surpass those of the acquirers over the same period. Consequently, China-Japan M&As have a positive impact on the firm value of the target and furthermore, the results imply that the larger part of the value created by M&A goes to the target.

6.1. Univariate analysis

6.1.1 Management improvement hypothesis

We first test the management improvement hypothesis. The relationship between PBR and stock price responses is presented in Table 8, which shows that with one exception (an efficient management in the two-day window), for all the event windows CAARs and SCAARs in cases of both inefficient management and efficient management are significantly positive. In addition, CAARs and SCAARs are greater in cases of inefficient management than in cases of efficient management in both event windows. These results are consistent with those of Dong et al. (2006) and with our hypothesis that targets with inefficient management gain comparatively greater positive economic effects from M&As than do targets with efficient management.

Table 8. Stock price responses and management efficiency for targets

Type of M&A	No. of obs	Event window	CAAR (%)	J_1-stat		SCAAR	J_2-stat	
Inefficient management	43	(0, +1)	6.634	6.998	***	1.999	12.241	***
	43	(0, +3)	8.952	6.678	***	2.293	14.039	***
Efficient management	60	(0, +1)	1.345	1.560		0.384	3.074	***
	60	(0, +3)	2.109	1.730	*	0.507	4.059	***

Note: ***, and * indicate statistical significance at the 1% and 10% levels, respectively.

There are two possible reasons for the lesser reaction in share price of 'efficient' targets, compared to that of 'inefficient' ones. First, because net assets are the denominator of PBR, the high PBR is likely to be associated with the high net asset value of the target at the time of the M&A. If PBR is greater than 1, the acquisition cost of assets exceeds that of the actual value and this leaves little scope for imposing an additional acquisition premium. Because acquisition premiums push up the target's share price (Inoue and Kato 2006), we speculate that the acquisition premium for taking possession of an efficiently run target is smaller than that for taking possession of a target run inefficiently. Another reason may be that when an efficiently run target is subject to an M&A, the management improvement

resulting from the M&A are of little value to the shareholders.

6.1.2 Bailout effect hypothesis

The relationship between stock price responses and the bailout objective is presented in Table 9, showing that both bailout and non-bailout structured M&As have significantly positive CAAR. Among China-Japan M&As based on a bailout purpose, the CAARs are 4.073% for the two-day window and 5.961% for the four-day window. For non-bailout structured M&As, CAAR is 1.691% at the 1% significance level for the two-day window, and 1.630% at the 10% level for the four-day window. These results indicate that targets experience comparatively greater stock price increases from a bailout structured M&A than a non-bailout structured M&A. The SCAAR results are consistent with the CAAR results.

Table 9. Stock price responses and bailout objective for targets

Type of M&A	No. of obs	Event window	CAAR (%)	J_1-stat		SCAAR	J_2-stat	
Bailout	66	(0, +1)	4.073	4.209	***	1.013	8.172	***
	66	(0, +3)	5.961	4.355	***	1.229	9.915	***
Non-bailout	39	(0, +1)	1.691	2.875	***	0.845	5.238	***
	39	(0, +3)	1.630	1.959	*	0.906	5.619	***

Note: ***, and * indicate statistical significance at the 1% and 10% levels, respectively.

Our findings are inconsistent with our bailout effect hypothesis and the results of Inoue and Kato (2006), which show that among Japanese domestic M&As, the positive effects on the target's share price are not significant and are less in the case of a bailout M&A than in a non-bailout case. Their results can be interpreted as follows: In inter-Japanese M&As, large-scale restructuring after the acquisition and the associated management improvement costs in bailout-structured M&As can supersede any anticipated management improvement effects. Furthermore, in the case of bailout M&A non-group deals, the target is often purchased at a substantial discount compared to the total market value and this suggests that any upward effects on the share price are but small.

Based on these explanations, we consider two possible reasons for the lack of consensus between the results of the present study and previous research. First, in bailout-structured China-Japan M&As, Chinese acquirers do not subsequently implement restructuring, such as changing the management team, which may bring a feeling of security to the existing management and shareholders[12] and may make the M&As go smoothly, so that management improvement costs are less than those of bailout-structured M&As between Japanese companies.

Second, limited experience with cross-border M&As by a Chinese acquirer may lead to the high purchase price of a Japanese target, resulting in an increase of the target's stock price. This is similar to the experience of Japanese firms that purchased foreign firms at extortionate prices up to the year 2000 (Usui, 2001: p.118). In fact, in terms of acquisition costs, Chinese firms have been criticized domestically for their naivety and lack of strategy in conducting overseas M&As. For example, if several state-owned enterprises attempt an M&A of the same target company, it ends up becoming a contest and rather than remaining reasonable, the purchase costs become vastly inflated.[13]

6.1.3 M&A structure hypothesis

Table 10 presents the relationship between stock price responses and M&A structure with panels A and B showing the relationship between stock price reactions and M&A structure for acquires and for targets, respectively.

[12] For example, on August 4, 2004, the takeover of Ikegai, a manufacturer of machine tools and industrial machinery, by the Shanghai Electric Group left responsibility for the running of the target firm in the hands of the former management team, and it is held up as an example of M&A success (Niwa, 2010).

[13] In China, according to a report by a member of the 'State-owned Assets Supervision & Administration Commission of the State Council' on the internet version (the People's Net on October 18, 2010) of the most popular 'People's Daily,' quote: "There are many examples of M&A deals that should have fallen into $50 - 60 million bracket, which have ended up costing around $100 million."

Table 10. Stock price responses and M&A structure

Panel A: Stock price responses and M&A structure for acquirers

M&A structure	No. of obs	Event window	CAAR (%)	J_1-stat	SCAAR	J_2-stat	
Capital participation	29	(0, +1)	0.038	0.030	0.050	0.266	
	29	(0, +3)	-0.822	-0.451	-0.169	-0.906	
Acquisitions	29	(0, +1)	0.634	0.776	0.568	3.036	***
	29	(0, +3)	1.202	1.040	0.852	4.558	***
Other structures	8	(0, +1)	0.205	0.012	-0.142	-0.398	
	8	(0, +3)	-1.960	-0.078	-0.725	-2.038	

Panel B: Stock price responses and M&A structure for targets

M&A structure	No. of obs	Event window	CAAR (%)	J_1-stat		SCAAR	J_2-stat	
Capital participation	43	(0, +1)	5.873	5.332	***	1.628	10.603	***
	43	(0, +3)	8.371	5.374	***	1.781	11.602	***
Acquisitions	46	(0, +1)	1.231	1.363		0.487	3.282	***
	46	(0, +3)	0.974	0.763		0.474	3.196	***
Other structures	18	(0, +1)	1.348	0.924		0.352	1.481	
	18	(0, +3)	2.997	1.452		0.895	3.773	***

Note: ***, **, and* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A shows that no CAAR is significantly different from zero. However, SCAAR for the category 'acquisition' is significantly positive at the 1% level. This means that amongst China-Japan M&As, the 'acquisition' category tends to have the largest positive economic impact on the acquirer's share price. This is inconsistent with our M&A structure hypothesis (*Hypothesis 3*). Okabe and Seki (2006) indicate that 'capital participation' M&As have greater post-M&A business efficiency than that of 'acquisition' M&As. However, at the time of M&A execution, such effects may not be factored into the share price. Furthermore, it is conceivable that the reason 'acquisition' M&As have the greatest wealth effects on the acquirer has to do with the level of control. Unlike other M&As, we can speculate that the 'acquisition' structure is the most highly valued by the acquirer's shareholders, as it guarantees control of the target's business. In particular, in the case of China-Japan M&As, it may be that the greatest benefits are the accompanying technology, management know-how, and procurement of sales channels.

Panel B presents that the results for the targets differ from those for the acquirers. The CAARs are significantly positive at the 1% level only for 'capital participation,' while both 'acquisition' and 'capital participation' have significantly positive SCAARs at the 1% level. We also note that both the CAARs and the SCAARs for 'capital participation' are larger than those for 'acquisition.' These results are consistent with our M&A structure hypothesis (*Hypothesis 3*) that 'capital participation' M&As have a greater wealth effect on the targets than do 'acquisition' M&As. As Inoue and Kato (2006) point out, the reason for this may be because the cost of 'capital participation' is lower than that of 'acquisition.' Moreover, because Japanese shareholders may be wary of domestic firms being taken over by foreign investors, they may evaluate 'acquisition' M&As as less desirable than 'capital participation' M&As by Chinese acquirers, due to yet more fears regarding the technology drain and deterioration in the competitiveness of Japanese targets.[14]

6.1.4 Carve-out (subsidiary sale) hypothesis

Table 11 presents the relationship between stock price responses for targets and subsidiary sales showing that neither CAAR nor SCAAR for 'subsidiary sales' is significant in any of the event windows. In contrast, CAAR and SCAAR for the 'others' category are 6.578% and 1.974, respectively, for the two-day window, and 5.593% and 2.183, respectively, for the four-day window. In addition to exceeding the CAAR and SCAAR for 'subsidiary sales,' all are significant at the 1% level. These results are consistent with neither the results of Slovin and Sushka (1998) nor our carve-out hypothesis (*Hypothesis 4*), stating that the target (parent company) gains greater wealth effects from the 'subsidiary sales' than from M&As structured in other ways.

[14] The cautious attitude of Japanese firms regarding M&As by companies in emerging countries is reported in the Teikoku Databank (2010) "Survey on corporate attitudes towards industry reorganization." Of a total of 10,772 firms providing a valid response to the Survey, 8,408, or around 78.1%, said that they thought "the acquisition of Japanese firms by companies based in emerging nations (including business acquisitions and business alliances) would become a threat." In comparison, there are only 1,069 firms, or less than around 10%, which answered that they thought this "would not become a threat." This survey suggests that Japanese firms have severe anxieties on the topic of M&A targeted at Japan by firms in emerging countries.

Table 11. Stock price responses and subsidiary sales for targets

Type of M&A	No. of obs	Event window	CAAR (%)	J_1-stat		SCAAR	J_2-stat	
Subsidiary sales	56	(0, +1)	-0.036	-0.055		-0.035	-0.260	
	56	(0, +3)	0.012	0.013		0.057	0.426	
Others	51	(0, +1)	6.578	5.793	***	1.974	14.005	***
	51	(0, +3)	8.981	5.593	***	2.183	15.484	***

Note: *** indicates statistical significance at the 1% level.

There are two possible explanations for the lack of wealth effects for Japanese parent firms from the sale of subsidiaries to Chinese acquirers. First, there have been cases where China-Japan M&As are not reported in domestic Japanese newspapers. In our sample, the highest numbers of unreported cases are acquisitions of subsidiaries. Specifically, among the 107 Japanese firms, there is no M&A reporting for a total of 35 firms. In addition, among 56 cases of subsidiary sales, 23 cases are not reported. This is approximately twice as many as the 12 cases that went unreported among 51 other cases (One reason for the lack of reporting about M&As is that name recognition for the target companies themselves is low, and they do not receive much attention, even with an acquisition. In addition, because China-Japan M&As are transacted overseas, recognition of and attention paid to the M&As within Japan are limited).

Second, in many of the cases where Japanese firms sell their overseas subsidiaries to Chinese acquirers, initially these subsidiaries are joint ventures with the Chinese and subsequently, for one reason or another, the Japanese firm withdraws and sells its stake holding in the joint venture to its Chinese counterpart. Although withdrawal may well be based on economic logic, such as a carve-out to concentrate business resources and dispose of non-profitable departments, it can also be viewed negatively by shareholders who see it as giving up on the Chinese market. Moreover, this may reduce possible positive wealth effects on the parent firm's share price.

This contrasting effect between 'Hong Kong' and 'Mainland' may be because, as discussed in sub-section 6.1.3, the development of overseas M&As by mainland Chinese acquirers may have been slower than that of Hong Kong acquirers and thus such mainland acquirers are likely to lack experience in negotiating prices. This may result in paying larger acquisition premiums for overseas M&As, which in turn may have a greater upward impact on the share price of the target.

6.2 Multivariate regression results

Before conducting multivariate regression, we calculate correlation coefficients between variables. The correlation matrix is presented in Table 12, which shows that no large correlation coefficients exist between variables. The results of multiple regression analysis are shown in Table 13. We estimate equation (6) by using all samples and the sample without subsidiary sales to eliminate possible carve-out effects.

Table 12. Pearson correlation matrix

	PBR	Bailout	Method	Manufacturing	Market	District	Equityratio	Asset	ROA
PBR	1.000								
Bailout	0.119	1.000							
Method	-0.119	0.047	1.000						
Manufacturing	-0.097	-0.188	-0.271	1.000					
Market	-0.007	-0.177	-0.166	0.318	1.000				
District	0.030	0.293	0.167	-0.282	-0.114	1.000			
Equityratio	-0.129	-0.262	0.013	0.096	-0.062	-0.140	1.000		
Asset	0.040	-0.302	-0.044	0.223	0.421	-0.163	-0.303	1.000	
ROA	-0.038	-0.332	-0.064	0.187	0.299	-0.201	0.213	0.344	1.000

Table 13. Factors influencing stock price responses to China-Japan M&As

	All samples		Sample without subsidiary sale	
	Coefficient	t-stat	Coefficient	t-stat
Intercept	0.4585	2.0629 **	0.8569	2.0979 **
PBR	-0.0015	-1.5473	-0.0057	-2.2039 **
Bailout	0.0720	1.7330 *	0.0781	0.8882
Method	0.0805	2.1486 **	0.0444	0.5850
Manufacturing	-0.0215	-0.5503	-0.0908	-1.0866
Market	0.0350	0.7902	0.0670	0.8569
District	-0.0709	-1.8937 *	-0.1776	-2.4382 **
Equityratio	0.0051	0.0600	-0.0464	-0.3309
Asset	-0.0412	-2.2181 **	-0.0638	-1.9051 *
ROA	0.0011	2.0775 **	0.0015	1.8839 *
No. of obs		103		48
Adjusted R^2		12.190%		20.298%
S.E. of regression		0.1739		0.2287
Durbin-Watson stat		2.1663		2.2151
F-stat		2.5732 **		2.3299 **

Note: ***, **, and* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

First, PBR has a negative coefficient for both samples. Although the regression using all samples does not generate a significant coefficient, the regression using the sample without subsidiary sales gives a significant coefficient at the 5% level. The second result is consistent with both our management improvement hypothesis (*Hypothesis 1*) and univariate analysis, stating that the lower the PBR of the target, the greater the wealth effects the target will get from an M&A.

Second, Bailout has a positive coefficient for both samples. Although the regression using the sample without subsidiary sales does not generate a significant coefficient, the regression using all samples gives a significant coefficient at the 10% level. The second result is consistent with both our bailout effect hypothesis (*Hypothesis 2*) and univariate analysis, stating that bailout-structured M&As have a larger wealth impact on the targets than do other M&As.

Third, Method has a positive coefficient for both samples. Although regression using the sample without subsidiary sales does not generate a significant coefficient, the regression using all samples gives a significant coefficient at the 5% level. The second result is consistent with both our M&A structure hypothesis (*Hypothesis 3)* and univariate analysis, stating that Capital Participation M&As have a greater wealth effect on the targets than do other M&A structures, including Acquisition M&As.

Fourth, we could find significant results for neither the manufacturing dummy (Manufacturing) nor the market dummy (Market), but Manufacturing has a negative coefficient and Market has a positive coefficient. Although the coefficients are not significant, their signs are consistent with our predictions, showing a negative impact of a China-Japan M&A when the target is listed on an emerging stock exchange or runs a manufacturing business.

Fifth, District has significantly negative coefficients at the 10% and 5% levels for the regression using all samples and for the regression using the sample without subsidiary sales, respectively. These results show that the target experiences comparatively greater M&A wealth effects when the acquirer is a mainland Chinese company than when it is based in Hong Kong. This contrasting effect between 'Hong Kong' and 'Mainland' may be because, as discussed in sub-section 6.1.3, the development of overseas M&As by mainland Chinese acquirers may have been slower than that of Hong Kong acquirers and, consequently, such mainland acquirers are likely to lack experience in negotiating prices. This may result in paying a larger acquisition premium for an overseas M&A, and this in turn may have a greater upward impact on the share price of the target.

Sixth, among variables controlling for financial conditions, Equity Ratio does not have significant coefficients whose signs are not the same for two regressions. In other words, we do not obtain evidence that a target's capital adequacy ratio is connected to stock price responses to the announcement of China-Japan M&As.

In contrast, Asset and ROA have significant results for both regressions, but the signs of their coefficients are not consistent with our predictions. Asset has significantly negative coefficients at the 5% level for regression using all samples and at the 10% level for regression using the sample without subsidiary sales. These results are not consistent with our prediction, as they indicate that the bigger the target the lower the economic effects it obtains from an M&A. A possible explanation is that the smaller the target, the easier it is to improve business efficiency, resulting in bigger economic effects.

ROA has significantly positive coefficients at the 5% level for regression using all samples and at the 10% level for regression using the sample without subsidiary sales. These results are not consistent with our prediction, as they indicate that the higher the target's profitability, the greater the economic effects it will obtain from an M&A. The possible explanation to support our results may be that the higher the target's profitability, the better its position in M&A negotiations and the higher the acquisition premium it can demand from the acquirer.

7 Sensitivity analysis

To guarantee robustness, we conduct a sensitivity analysis by estimating the following equation for targets, instead of equation (1):

$$R_{it} - R_{ft} = \alpha_i + \beta_i\left(R_{mt} - R_{ft}\right) + \gamma_i SMB_t + \delta_i HML_t + \varepsilon_{it} \quad (10)$$

Equation (10) is based on the basic unconditional Fama-French's three-factor model (Fama and French 1993), which comprises the following three factors: the value-weight excess market returns over a risk-free rate (R_{ft}), the size factor spread portfolio (SMB), and the book-to-price ratio factor spread portfolio (HML). We obtain the data for R_{ft}, SMB, and HML from Financial Data Solutions, Inc., which sells the data related to the Japanese version of Fama-French's three-factor model, following Kubota and Takehara (2010). The results are not much different between the two models.

8 Concluding Remarks

We study the growing number of China-Japan M&As in recent years, and analyze the effect of China-Japan M&As on the firm value of the both the acquiring firm and the target firm, based on standard event study methodology. This trend indicates a remarkable change for Japanese firms, which have few experiences in being a target of acquirers from developing countries. As there are relatively few prior studies that examine the economic impact of cross-over M&As by firms from developing countries, we attempt to investigate whether previously accepted hypotheses are applicable to China-Japan M&As.

By using the 66 listed acquirers and 107 listed targets in China-Japan M&As between 1990 and 2009, we examine how M&A practices and firm characteristics are associated with stock price reactions to the announcement of M&As. We find that as a whole, M&A announcements have a greater positive effect on targets compared with the effect on acquirers. We also observe the following tendency: 1) the lower the management efficiency of the target, the greater stock price reactions to the M&A; 2) the economic effect on targets via a bailout M&A is greater than that of a non-bailout M&A; 3) capital participation imparts a greater economic effect on the target than that of other forms of M&A; and 4) targets gains fewer economic benefits from the sale of subsidiaries than from other forms of M&A. The first finding is consistent with hypotheses previously accepted by studies on M&As between firms located in developed countries, while the other three findings are not.

Other findings include: 5) M&As by acquires located in mainland China exert a greater economic effect on targets than that of acquirers located in Hong Kong; 6) the larger the size of the target, the lesser the stock price reactions to an M&A of that firm; and 7) the greater the profitability of the target, the greater the market reactions to the M&A of that firm. Our results are robust as the sensitivity analysis using the Fama-French's three-factor model provides similar results to our main results.

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BANK MERGERS AND ACQUISITIONS IN GREECE & THE STATE OF EMPLOYEES DURING THE ECONOMIC CRISIS

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Abstract

The economic crisis has caused great changes in Greek economy, which are obvious in the banking field as well. Under the light of these unpleasant circumstances, the banking system was (and maybe still is) in danger of collapsing, a possibility that would probably affect countries abroad. In order to avoid this collapse, the sustainable banks were further supported and the non-sustainable were purged. This strategy aimed to stabilize the financial system through bank mergers and acquisitions.
The strategy chosen to support and purge the banks was to proceed to mergers and acquisitions. These mergers and acquisitions are realized by the bank employees and they are highly related to them as they intend to stabilize the employees' uncertain future.
In October 2012 a field research was realized in order to record the employees' point of view when it comes to both their profession as it is now and the case of bank mergers and acquisitions.
After processing the findings of the research, we extract the following conclusion, among others: bank mergers and acquisitions have a negative impact on the majority of the employees that seem to be worried about the limitation of their professional perspectives, the emergence of bad working conditions and ultimately a possible discharge. The findings of the research confirm the growing anxiety and uncertainty among the bank employees.
In case of merger or acquisition, the employees prefer that either of these procedures will be held with another Greek bank rather than with a foreign bank.
There is a new "wave" of mergers and acquisitions coming in the banking field in Greece, confirming thus the general sense shared by the community and the outcomes of the economic crisis.

Keywords: M&A, Bank, Greece, State of Employees, Economic Crisis

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1 The Banks in Greece

A huge fiscal shortfall caused the dept crisis that was first introduced in Greece in 2009. The Greek economy was deeply damaged by the crisis. The real annual GDP was reduced by 20% and it keeps on falling. Unemployment (originally 8%) was raised by 25% and it keeps on rising. The standard of living collapsed and it keeps on collapsing.

The banking field is not an exception to the changed brought by the economic crisis. The Greek banking system used to be internationally competitive and was characterized by healthy base units. However, the government dept crisis highly influenced the function of Greek banks. The banks found themselves in the middle of significant deposit outflow, severance from the international markets and huge loses from PSI. Consequently, the banks lost part of their funding which in turn led to a chain of negative events that ultimately damaged the financial system and the real economy of the country.

Under the light of these unpleasant circumstances, the banking system was (and maybe still is) in danger of collapsing, a possibility that would probably affect countries abroad. In order to avoid this collapse, the sustainable banks were further supported and the non-sustainable were purged. This strategy aimed to stabilize the financial system through bank mergers and acquisitions.

More particularly:

- Recapitalization (50 bil. Euros from the Loan Agreement)
- Wide consolidation of strengths in the banking field. Six banks have been purged, including ABG which is the most important example of purge so far in Europe. The rest of the banks are in a merging state.

- Supervision of Credit and Related Financial Institutions Department upgrade

The next step is full recapitalization of systematic banks.

2 The empirical research

The administrations of the Greek banks took critical decisions and proceeded in a wide range of strategic moves, completely changing the banking landscape as we knew it in Greece. However, the general recession climate has overshadowed the fundamental role of the bank employees, who have significantly contributed to the realization of these procedures by exposing their own opinions. Moreover, they did not have the opportunity to express their point of view when it comes to both their profession as it is now and the case of bank mergers and acquisitions.

2.1 The methodology of the research

In October 2012 a field research was realized in order to record the employees' point of view when it comes to both their profession as it is now and the case of bank mergers and acquisitions.

In order to meet the needs of the research, we created a questionnaire with three units. The first unit includes five questions and concerns the demographic characteristics of the bank employees that participated in the research. The second unit includes eight side questions about the participants' viewpoint of their own profession. Finally, the third unit includes seven questions that concern the participants' viewpoint of the bank mergers and acquisitions.

The questionnaires were completed through personal interview with employees in the following banks in different cities of Northern Greece: Agricultural Bank of Greece, National Bank, Emporiki Bank, Eurobank, Marfin Bank, Hellenic Postbank, Piraeus Bank, Bank Of Cyprus, Attica Bank.

110 questionnaires were completed.

2.2 The findings of the research

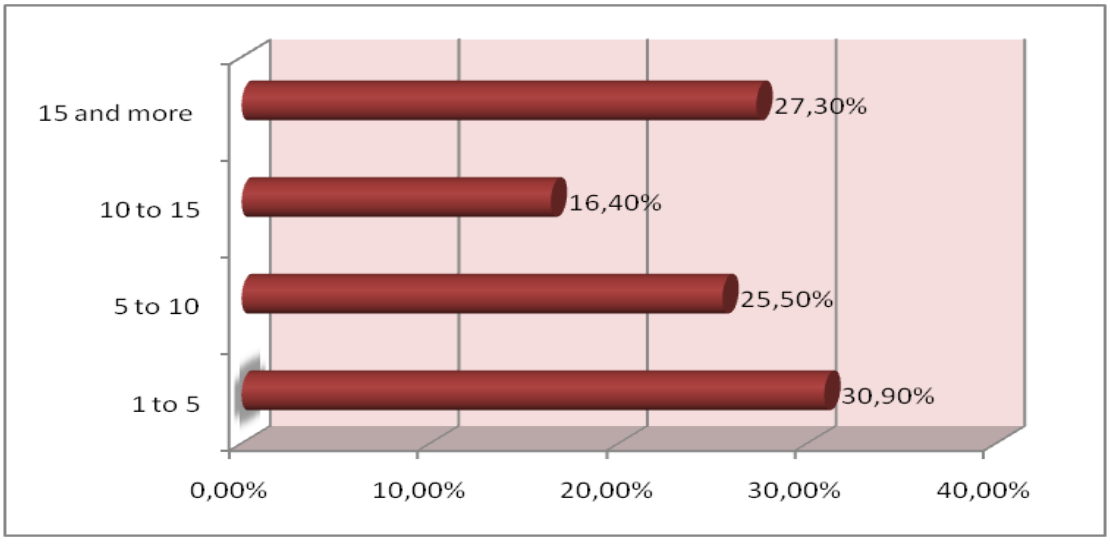
After the statistical process of the answers, we reached the following conclusions:

36, 4% of the participants are men and 63, 6% are women. 25, 5% of the respondents are between 18 and 30 years old, 49, 1% are between 30 and 40 years old and 25, 5% are beyond 40 years old. The fact that the majority of the sample (74, 6%) is relatively young, up to 40 years old, means that the working space in the banks has been renewed during the past 10-15 years by employing young people and by running projects of voluntary exits.

30, 9% of the participants have been working in the banks from 1 to 5 years, 25, 5% from 5 to 10 years, 16, 4% from 10 to 15 years and 27, 3% for more than 15 years.

The participants' working experience is recorded in the following graph:

Figure 1. Working Experience



32, 7% of the respondents have been employed in more than one bank institutes while 67, 3% have been employed only in one.

Most of the Greek banks have adopted high admission criteria during the past 10-15 years. This is illustrated by the high educational level of the employees. To be more particular, 12, 7% of the respondents acquire a secondary education. 18, 2% are Technological Education graduates, 45, 5% are college degree graduates and 23, 6% own postgraduate degrees.

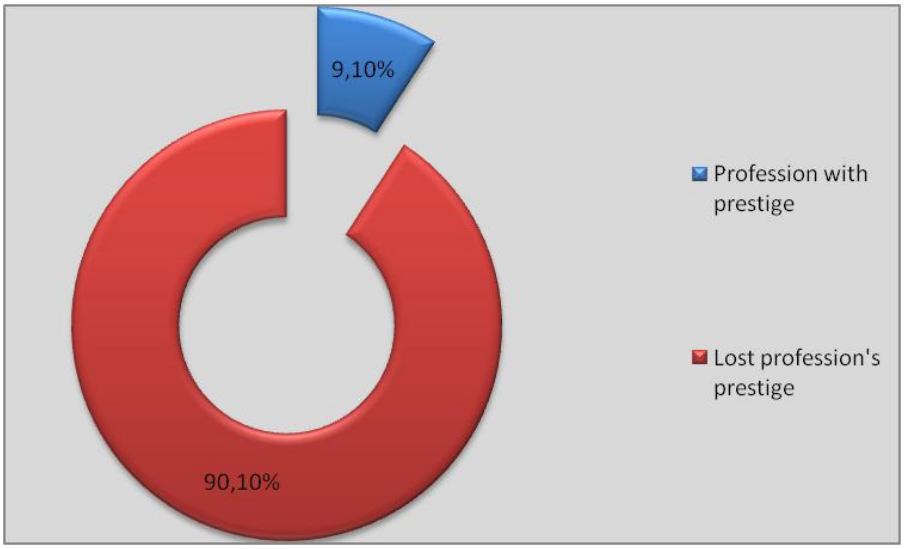
29, 1% of the participants are working in banks that include the state's participation in the capital stock or management while 70, 9% are

working in banks that are purely of private interest. These percentages reflect the respective analogy of public and private banks.

Finally, 49, 1% of the participants said that they hold a position of high responsibility while the rest 50, 1% hold regular positions.

Only 9, 1% of the respondents consider that their profession has the value and the status that it used to have. That leaves the rest 90, 1% to consider that the value and status of the profession has been lost. Basically, these answers present a hard reality for the bank employees. There are two basic explanations for this change. On one hand, there is a great number of banks that offer pretty much the same products to prospective customers. On the other hand, the fact that the bank employee has turned into an advisor-accountant has a negative impact on the image of modern bank employees. The modern bank employee is not in the position of providing sophisticated services (eg. Provision of bank loans before the liberation of the credit system). Bank employees' counsels used be very respected and valued. This is not the case anymore as the customers have access to a wide range of information, especially on the internet.

Figure 2. Evaluation for the prestige of the profession



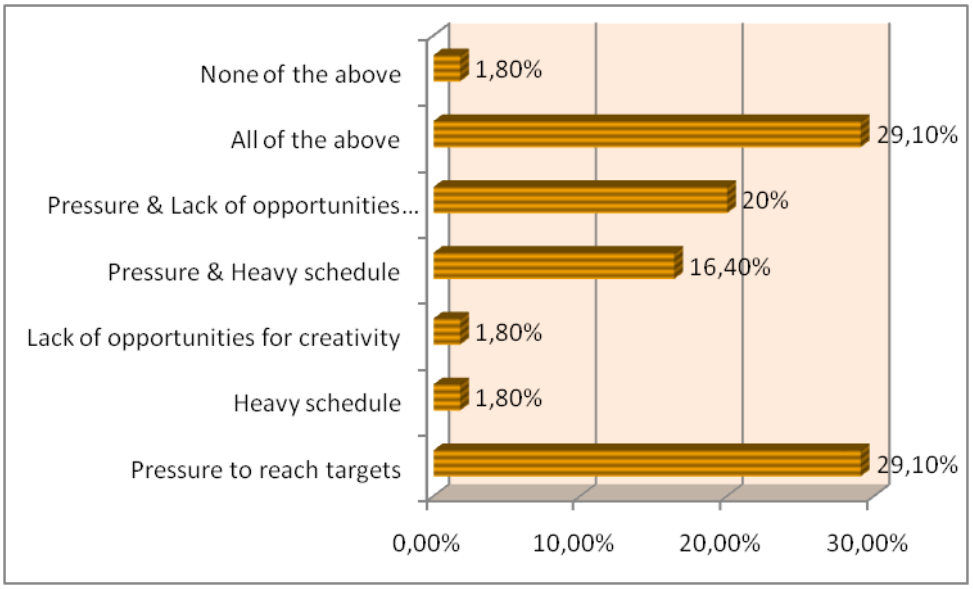
Despite the admitted lose of prestige, 72, 7% of the bank employees answered that they are satisfied with their profession, taking into consideration their studies. 27, 3% are not satisfied. This answer is most probably determined by the fact that the salary of a bank employee is relatively bigger than that of another employee. Bank employees are given services that include health insurance, special leaves according to the labour law such as leaves for young mothers, grants for underage children and grants for nursery school.

As far as the level of education required for this profession is concerned, 41, 8% of the participants answered that the level should be high while 58, 2% answered that there is no such requirement. This can be explained by the fact that the average employee, not those in executive positions, is just expected to efficiently promote the products of the bank, which are not difficult to comprehend. What prevails in the domain of the banking system is the notion of "product promotion" and not the scientific aspect of it.

When it comes to the difficulty of the profession, the majority of the respondents (89, 1%) consider that it is a rather tough profession compared to other non-menial ones. Only 10, 9% share a different point of view.

When asked about the negative aspects of their profession, 29, 1% of the bank employees answered that there is great pressure to achieve the goals set by the administration. 1, 8% of the participants consider the heavy schedule as a main drawback and another 1, 8% the lack of the opportunity to be creative. 16, 4% opted for both pressure and heavy schedule, 20% opted for both pressure and lack of creativity and 29, 1% answered that they consider negative all the above factors and 1, 8% answered that they do not see any negative aspect in their profession.

Figure 3. Negative Aspects



The three negative aspects that seem to concern more the participants in the research are the pressure to reach goals, the heavy schedule and the lack of opportunity to be creative. It is only rational that these are the factors that make them characterize their profession "tough". It worths noting that most of the respondents consider that the pressure to reach goals is the main negative aspect of their profession. It is true that this pressure is applied by the administration of almost all the Greek banks. There are even cases where the goal-setting is applied individually and not collectively. Thus, the pressure in case of not reaching the goals becomes unbearable causing great stress and anxiety.

In the last question of the first unit, the participants were asked whether they would change their profession for a civil servant position. 12, 7% of the sample said that they would rather be civil servants. 47, 3% answered that they would leave if the same salary was guaranteed. 1, 8% said that they would leave no matter what and 38, 2% answered that they would not leave their position. It seems that 61, 8% of the respondents would leave their profession as bank employees to be civil servants under certain circumstances. This means that the bank employees face several difficulties in their working environment including the pressure mentioned above. The fact that many of their employees, given the opportunity, would leave their positions should definitely be alarming for the administration of the banks. Hiring and training new employees is not an easy job. Not to mention that losing a trained employee and training a new one means a certain deal of money wasted.

57, 5% of the participants in the research have experienced some kind of merger or acquisition while 42, 5% have not. Besides, some of the banks that participated in the research, such as the Bank of Cyprus and Attica Bank, have not proceeded in any kind of merger or acquisition. Consequently, the participants working in those banks cannot have experienced any of these procedures.

28, 1% of those who have experienced a merger or an acquisition think that the procedures had a positive impact on them while 71, 9% believe the contrary. Obviously, this tendency is connected to how they consider a merger or an acquisition would influence their advancement and their future perspectives in the working environment.

More particularly, when asked if they have a positive, negative or indifferent outlook on a possible merger/acquisition, the bank employees answered in the following way: 13, 6% believe that a merger/acquisition is a positive evolvement, 74, 5% consider it negative and the rest 11, 8% are indifferent towards this issue. This shows that most of the participants in the research feel very stressed and insecure about a possible change in their working environment due to a merger or acquisition.

There are various reasons why the participants seem to be worried in the case of a merger or acquisition. 3, 6% of the respondents are mostly worried about the limitation of their future prospects. 13, 2% believes that a merger/acquisition would bring about unfavorable working conditions, 15, 3% fear a probable dismissal. The rest of the respondents combined two answers: 14, 5% opted for the limitation of their future prospects and the unfavorable working condition. 3, 6% opted for the limitation of future prospects and a probable dismissal. 18, 2% are mostly afraid of the unfavorable working conditions and a probable dismissal and finally 27, 3% worries about all the

reasons mentioned above while 4, 3% do not worry at all.

The findings clarify the fact that the bank employees are feeling anxious and insecure. The reasons for feeling anxious in case of merger/acquisition are presented in the following board:

Table 1. Reasons for anxiety in case of merger/acquisition

Reasons for concern in the case of acquisition / merger	
Limiting future prospects	3,6%
Unfavorable working conditions	13,2%
Probable dismissal	15,3%
Limiting future prospects & Unfavorable working conditions	14,5%
Limiting future prospects & probable dismissal	3,6%
Unfavorable working conditions & probable dismissal	18,2%
All above reasons	27,3%
None of above reasons	

63, 6% of the respondents would rather their bank to be acquired by another Greek bank than by a foreign one. Only 36, 4% answered that they would prefer the acquisition procedure to be held by a foreign bank. This seems to contradict the participants' dissatisfaction by the administration of Greek banks expressed previously in the research. Such a contradiction can be explained by the fear of the unknown represented by foreign banks.

Finally, all the participants believe that a new wave of mergers and acquisitions is coming in the near future. This belief is shared by the Greek community as a whole and it seems to be inevitable under the current economic circumstances.

The vast majority of the respondents think that the administrations of most of the Greek banks sacrifice its employees' and costumers' interest in the name of profitability. 14, 2% answered that the administrations combine the interest of their employees and costumers with their own. The respondents judge rather tough the administrations of the banks. This is explained by the fact that banks have uncontrollably raised the percentages of their profits by exploiting and pressing their human resources. Such a strategy has made the employees suspicious and has created a huge gap between them and the administration.

After the interconnection that emerged from the application of control x in the statistical program SPSS, we extract the following conclusions:

There is an interconnection between the years of employment in the banks, the level of satisfaction and the background studies. Except from the younger employees (1-5 years working) that have not formed a solid point of view yet, all the others (5-10 years working) are not particularly satisfied with their choice. This can be explained by the fact that younger employees posses more qualifications than older ones and thus they have greater requirements and they are more strict in their judgment. Besides, this group of employees has experienced the change in the mentality from the beginning. They were already aware that the profession is now directed to the promotion of products. However, some of them may have based their decision to follow this profession influenced they way this profession used to be.

There is another interconnection between the years of employment and the experience of a merger or acquisition. More particularly, the employees that have been working for few years have not experienced a merger or an acquisition yet. On the contrary, the employees that have been working for more years seem to have a greater insight on the issue. This interconnection makes perfect sense as the 90' were characterized by a wave of mergers and acquisitions.

The other interconnection that emerged from the statistical program is between the level of education and the level of satisfaction for the choice of the profession. The higher the level of education, the higher the sense of satisfaction. It is only the owners of postgraduate degrees that seem to be less satisfied. Their more qualifications create higher requirements related to those who have a lower level of education. This is exactly what makes the postgraduates less satisfied by their profession.

The level of education is also related to the negative aspects of the profession of a bank employee. To be more particular, school graduates consider that the pressure to reach goals and the heavy schedule are the most negative aspects. The Technological education graduates believe that only the pressure to reach goals is the main negative aspect while the higher education graduates argue that both the pressure by the administration and the lack of opportunity to be creative are the most negative aspects of their professions.

The owners of postgraduate degrees have higher standards. They consider that the pressure to achieve goals set by the administration; the heavy schedule and the lack of opportunity to be creative are all important negative aspects of the professions.

One final interconnection that emerged from the statistical program is the level of education and the results of past or future mergers and acquisition. School graduates and owners of postgraduate degrees hold the view that the mergers or acquisitions of the past had positive impact on them. On the other hand, Technological education and higher education graduates believe that they had negative impact.

Conclusions

It is an undeniable fact that Greece is the middle of a deep recession. The economic crisis has severely damaged all the economic domains and especially the financial system. The deeper root of the problem is probably the unique financial dismantle faced by the international financial corporations.

It was unavoidable for the banks all over Europe to merge due to their urgent need to rise their capital stock and their competitiveness. Furthermore, the expected low rate of development in the future creates further need to decrease the functional cost and to search for economies of scale.

The Greek banks as well, are in the middle of this unpleasant situation that they had never seen before. Under the light of these unpleasant circumstances, the banking system was (and maybe still is) in danger of collapsing, a possibility that would probably affect countries abroad. In order to avoid this collapse, the sustainable banks were further supported and the non-sustainable were purged. This strategy aimed to stabilize the financial system through bank mergers and acquisitions.

These mergers and acquisitions are realized by the bank employees and they are highly related to them as they intend to stabilize the employees' uncertain future.

The profession of the bank employee has lost its former prestige and the majority of the respondents would happily leave their position, since they consider it a tough profession as well. The basic negative aspects of this profession are the pressure to achieve goals set by the administration, the heave schedule and the lack of the opportunity to be creative.

The bank mergers and acquisitions in Greece have a negative impact on the majority of the employees that worry about the limitation of their prospects, the unfavorable working conditions and a probable dismissal. This sense of discomfort and insecurity is dispersed among the bank employees.

The employees in general prefer that the procedures of merger and acquisition will be realized within the country's borders.

A new wave of mergers and acquisitions is coming in the near future. This belief is shared by the Greek community as a whole and it seems to be inevitable under the current economic circumstances.

The bank employees believe that the administrations of most of the Greek banks sacrifice its employees' and costumers' interest in the name of profitability. The respondents judge rather tough the administrations of the banks. This is explained by the fact that banks have uncontrollably raised the percentages of their profits by exploiting and pressing their human resources. Such a strategy has made the employees suspicious and has created a huge gap between them and the administration.

To conclude, the Greek banks and the profession of a bank employee are being introduced to a whole new and interesting phase. History will prove whether the "giant" that is called banking system has rotten roots or solid bases that will help it survive these difficult circumstances and come out even stronger.

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CORPORATE GOVERNANCE AND SHAREHOLDER VALUE IN LISTED FIRMS: AN EMPIRICAL ANALYSIS IN FIVE COUNTRIES (FRANCE, ITALY, JAPAN, UK, USA)

Barbara Monda*, Marco Giorgino**

Abstract

In this paper, we design a multi-dimensional index to measure the quality of Corporate Governance systems adopted by firms and use it to investigate the correlation between Corporate Governance quality and firm value.
Unlike most studies that examine the relationship between only one dimension of Governance and firm value, we present a complex index (CGI) composed of 39 variables referable to four dimensions: Board, Remuneration, Shareholder Rights and Disclosure.
By analysing a sample of 100 large companies listed on the main stock markets in five different countries over three years (2009-2011), we confirm the widespread hypothesis of the existence of a positive and statistically significant relationship between Corporate Governance, as measured by a subset of 12 variables, and firm value.

Keywords: Corporate Governance, Corporate Governance Index, Firm Value

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1 Introduction

Corporate Governance can be defined as the system used to manage and control firms; it consists of a set of market and regulatory mechanisms which indicate how to manage a company, including the relationships among different stakeholders and the objectives of the company.

The main parties involved in Corporate Governance include authorities and regulators, markets, management, Board of Directors and shareholders. Other relevant stakeholders are financiers, suppliers, employees, creditors, clients and the external community in general. All these parties invest some kind of capital in the company (financial, physical, human, etc.), therefore they are interested in the financial and social performances of the company. A key factor in their investment decision is the level of their confidence on the ability of the firm to reach its goals, or expected results, and for this reason they are interested in how the company is managed and controlled.

Discussion is often focused on the effects of Corporate Governance mechanisms on economic efficiency, with an emphasis of shareholders' interests protection. In public companies characterized by a separation of ownership and control, Corporate Governance should be designed to solve the principal-agent problems by trying to align the interests of the two parties and design an effective control system to ensure that the Board of Directors acts respecting shareholders' rights.

This latest issue is of great relevance in the recent debate on regulatory policies: in the last decade, a renewed interest has raised towards Corporate Governance as a results of sensational defaults in 2001-2002, some of which due to financial frauds, and especially after the 2007-2009 financial crisis.

In fact, the various scandals of different nature have brought corporate Governance issues not only to the attention of regulators and policy makers, but also to the public opinion, thus increasing pressure on firms to improve their governance and disclosure mechanisms. The greatest push towards better Corporate Governance probably comes from institutional investors, who these days often, if not always, include Corporate Governance quality in their investments selection criteria.

The first evidence that institutional investors consider Corporate Governance parameters in their investment decisions come from the *Global Investor Opinion Survey* of more than 200 institutional investors in 31 countries, published by McKinsey and the Global Corporate Governance Forum in 2002.

Later studies, published by the magazines *Fortune* and *BusinessWeek*, have confirmed these evidences.

The relationships between Corporate Governance and firms value and between Corporate Governance and firms performances feed an important stream of scientific research, where our work finds place.

The contribution of our study is mainly the design of a Corporate Governance Index (CGI) that can be used to measure the quality of Corporate Governance systems in different countries. In fact, most studies use data which is characteristic of a single country; to our best knowledge, the only previous study which analyses multiple countries is the one conducted by Klapper and Love (2004); while they focus on emerging countries, our study analyses Corporate Governance systems in the largest firms in mature markets.

2 Literature Review

The literature on Corporate Governance is vast and still expanding.

In the years 2000, authors began to investigate the relationship between different discretional governance mechanisms and firms value. The main variables used in the first studies include ownership structure and concentration, the market for corporate control (M&A and hostile takeovers), managers compensation and incentives schemes, the number of board members and board composition (in terms of incidence of independent members) (Gupta, et al., 2009).

More recently, scholars have started to investigate the impact of Corporate Governance on firm value using more comprehensive measures than a single governance mechanism or specific variables. For this purposes, several indexes have been proposed to measure the quality of Corporate Governance systems adopted by firms.

One of the first studies in this direction is the one by Patel and Dallas (2002). They investigate transparency and disclosure of the main global firms by using the T&D ranking, an index composed of 98 questions grouped in three categories: "*ownership structure and investor rights*", "*financial transparency and information disclosure*", and "*board and management structure and process*". They find that firms with a higher value of the index have a lower market risk and higher price-to-book value, therefore firms should improve disclosure and transparency in order to lower their cost of equity.

Gompers et al. (2003) are the first authors to build a comprehensive index able to evaluate Corporate Governance in all its aspects. Their G-Index is composed of 24 distinct Corporate Governance provisions and grouped in 5 categories, all related to anti-takeover defence. The index measures the practices limiting shareholders rights, therefore to higher values of the index correspond worse governance systems. The authors investigate the relationship between G and firms performances for a sample of 1500 listed firms in the period 1990 to 1999 and find that G is strongly correlated with stock performances, Tobin's Q, net profit margin and sales growth, while the correlation with ROE is not significant. Therefore they argue that firms with better shareholders rights have higher valuations, higher sales growth and lower capital expenditures.

Core et al. (2006) criticise these results, arguing that it is not true that a better governance determines higher extra-returns, and that in other periods this relationship is inverted: firms with poor governance have low operating performances, but higher extra-returns if compared with firms with better governance. They believe that the extra-returns documented by Gompers et al. (2003) are specific of the period of their study.

An approach similar to Gompers et al. (2003) is employed by Bauer and Günster (2004), who analyse firms of the FTSE Eurotop 300 index in 2000 and 2001 using the "*Deminor Corporate Governance Ratings*", an index composed of 300 criteria grouped in four categories: "*Rights and Duties of Shareholders*", "*Range of Takeover Defences*", "*Disclosure on Corporate Governance*" and "*Board Structure and Functioning*". Contrary to Gompers et al. (2003), Bauer and Günster (2004) find a negative but insignificant relationship between the Corporate Governance standards and firm performances measured by the net profit margin and the return on equity.

In 2008, Bauer et al. replicate the study for Japanese firms and find that, after adjusting for market risk, dimension and book-to-market effect, a portfolio composed of well-governed firms obtains an extra-return of 15% higher than a portfolio made of bad-governed firms. More in details, investigating the relationship between six categories of governance variables and stock performance, the authors find that only financial transparency, internal controls, shareholders' rights and compensation schemes have a significant impact on financial performances on the Japanese market.

Another study which moves from the results of Gompers et al. (2003) is the one performed by Bebchuk et al. (2008), who identify a subset of the 24 governance practices composing the G-index which are significantly correlated with value. The authors build an "*Entrenchment index*" (E-index) using only 6 variables which are correlated with Tobin's Q and demonstrate that an increase in the index value (which corresponds to worse governance performances) is associated with sensibly negative extra-returns in the period from 1990 to 2003. They show that the remaining 18 variables are not correlated with firm value. The

authors argue against complex indexes which use a large number of variables, because many of them may not be correlated with value, or they are determined by other variables. They go further explaining that such complex indexes which include variables not correlated with value may be wrong measures of the quality of governance and that using them may induce firms to adopt counter-productive governance mechanisms.

While the studies conducted by Gompers et al. (2003) and by Bebchuk et al. (2008) use only variables connected to anti-takeover practices (external governance), the Gov-Score index designed by Brown and Caylor (2006) includes variables regarding both internal and external governance practices, grouped in eight categories: "*audit*", "*board of directors*", "*charter/bylaws*", "*director education*", "*executive and director compensation*", "*ownership*", "*progressive practices*" and "*state of incorporation*". The authors find that the Gov-Score is positively and significantly correlated with the firm value measured by Tobin's Q for a sample of 1868 US firms in 2002. They also find that not all the variables are equally significant, thus supporting the argument that the governance practices really impacting on firm value are few, as proposed by Bebchuk et al. (2008). Brown and Caylor (2006) and Bebchuk et al. (2008) agree on the identification of two governance practices which are correlated to firm value: "no poison pill" and "no staggered board". Brown and Caylor (2006) demonstrate that their results are robust, not affected by endogeneity or reverse causality and that their index is more correlated to value than the entrenchment index created by Bebchuk et al. (2008).

The studies already illustrated rely on proprietary data which are not publicly available; on the contrary, the Report on Business (ROB), published by Globe and Mail in October 2002, calculates governance scores using an aggregated index for firms listed on the Toronto Stock Exchange and make them freely available. A number of empirical studies use the ROB as a measure of the quality of Corporate Governance, thus investigating the relationship between Corporate Governance and value for the Canadian market. One of the first studies in this sense is proposed by Foester and Huen (2004), who find that in the short term Corporate Governance is important for Canadian investors: the market reacts to the news about governance ranking in a way which is statistically significant. The Corporate Governance is relevant also in the long term, but only after adjusting for risk and only if the period considered is sufficiently long.

An important contribution comes from the work of Drobetz et al. (2004), who investigate the relationship between Corporate Governance and value on the German market, using a multidimensional Corporate Governance rating (CGR) based on answers to a questionnaire. They find that CGR is strongly and positively correlated with firm value and negatively correlated with stock returns, thus confirming the results obtained by Gompers et al. (2003). They also prove that an *investment strategy which buys firms with high values of CGR and short-sells firms with low values of CGR firms earns abnormal returns of around 12% on an annual basis during the sample period.* However, Drobetz et al. (2004) use cross-sectional data and are unable to solve issues connected to endogeneity or reverse-causality.

Following Drobetz et al. (2004), Cheung et al. (2007) build a Corporate Governance Index (CGI) based on publicly available information and use it to investigate the relationship between Corporate Governance and value for the 168 largest firms listed on the Hong Kong market. They find that to higher values of the CGI correspond higher market-to-book values, a proxy of firm value.

Black et al. (2003) and later Black et al. (2006) find the same result for the Korean market; their contribution is particularly relevant because their study is one of the rare cases in which the endogeneity problem is solved with the use of instruments, and the authors prove the causality of the relationship. The identification of proper instruments has always been a great concern for scholars investigating the relationship between Corporate Governance and value; Black et al. (2003, 2006) are able to find an appropriate instrument by exploiting the peculiarities of the Korean market, but their solution cannot be replicated in other markets.

A different solution to endogeneity problems is provided by Beiner et al. (2005). They build a Corporate Governance index for Switzerland and analyse the impact of different governance mechanisms on firm value. In order to consider the inter-relation of the six different mechanisms they have identified, the authors use a set of seven equations solved simultaneously, where the dependent variables are the different governance mechanism in six cases, and Tobin's Q in the seventh case. They find a positive and significant correlation between Corporate Governance and Tobin's Q.

The 2002 ROB ratings are used also in Klein et al. (2005), who investigate the effect of ownership concentration on the correlation between the Corporate Governance score and firm value for a sample of 263 Canadian firms. They find that not all governance dimensions are significant and that the effects are different for different ownership structures; they also find that the aggregate measure is not correlated with value, regardless of ownership concentration. In particular, the authors do not find any relationship between the Board

composition and independence – a variable with a considerable weight (40%) in the aggregate index - and firm value. Instead, they find that strong shareholders rights, proper compensations plans and a transparent disclosure are appreciated by investors. Supporting the thesis suggested by previous studies (Dulewicz and Herbert, 2004; Dutta and Jog, 2004; Park and Shin, 2004), they conclude that firm value is not affected by Board composition and structure.

The most recent study employing ROB scores is performer by Gupta et al. (2009). However, they do not find any significant correlation between value or firm performances and the aggregate index or any sub-index, with the only exception of the relationship between value, measured both by Tobin's Q and market-to-book ratio, and "*Board and CEO compensation score*", which is negatively correlated with value, thus confirming the results obtained by Klein et al. (2005). The authors point out that ROB scores may not be true indicators of the quality of Corporate Governance, and that the effect of governance on value may be expressed in a longer period of time, thus requiring longer time series to be properly investigated.

Additional contradictory arguments are provided by Bhagat and Bolton (2008), who claim that a better Corporate Governance as measured by the G-Index developed by Gompers et al. (2003) or by the E-Index developed by Bebchuk et al. (2008) is positively correlated with better contemporaneous and subsequent operating performance, thus confirming the results obtained by Gompers et al. (2003), but not with future stock market performance, contradicting previous findings. They argue that the different results of the investigations of different authors on this relationship depend on whether or not they take into account the endogenous nature of the relationship between governance and stock performances.

3 The Corporate Governance Index

The review of the literature highlights that many empirical studies focus on the relationship between a single governance variable and firms' value. For example, Yermack (1996) uses only the dimension of the Board, Hermalin and Weisbach (1991) and Bhagat and Black (2002) its composition, Demsetz and Lehn (1985) use block-holders' participations, Gompers et al. (2003) use anti take-over mechanisms. On the contrary, we believe that Corporate Governance is a complex phenomenon and, as such, it should be measured by a multi-dimensional variable.

For this reason, in order to assess the quality of the Corporate Governance systems implemented by firms, we build the Corporate Governance Index (CGI), which is composed of 39 variables belonging to 4 categories: *Board of Directors*, *Compensation*, *Shareholders' rights*, *Disclosure.*

The variables are chosen based on the recommendations of the Corporate Governance codes of 5 countries and with the intention of being of general applicability, therefore any criteria specific of the regulation in a given country has been excluded.

The codes which have been analysed are the following:

- *Code de Gouvernement D'Enterprise des Sociétés Cotées* (FRA)
- *Principles of Corporate Governance for Listed Companies* (JAP)
- *Combined Code* (UK)
- *Codice di Autodisciplina* (ITA)
- *NACD Key Agreed Principles* (USA)

Each variable can have a value comprised between 0 (worst governance practice) and 1 (best governance practice), therefore all variables have the same weight.

The index is calculated by adding the values of all the variables and normalising the sum to 100 in order to express CGI as a percentage. The value of the CGI for a firm is therefore comprised between 0 and 100.

4 Variables

In order to investigate the relationship between the quality of the Corporate Governance systems as measured by the CGI and firms' value, an econometric model is implemented with firms' value as dependent variable and CGI as independent variable.

The measure we choose for firms' value is Tobin Q defined as (Market Cap + Liabilities + Preferred Equity + Minority Interest) / Total Assets.

The model includes other independent variables that are reported in previous studies to influence firms' value.

Firm size

Following several authors, including Bauer and Günster (2004), Bebchuk et al. (2008), Beiner et al. (2005), Black et al. (2006) Brown and Caylor (2006), Bubbico et al. (2012), Drobetz et al. (2004), Gompers et al. (2003), Klein et al. (2005), we use the natural log of assets as a measure of firm size.

Firm size may be positively correlated with value because of economies of scale, or negatively correlated with firm size because of organisational inefficiencies (Leibenstein, 1966) or worse agency problems (Klapper and Love, 2004).

Firm age

Following Aboav et al. (2010), Gompers et al. (2003) and Shin and Stulz (2000), we include the

number of years passed after firm's IPO to accounts for firm's age. Drobetz et al. (2004) argue that companies listed more recently have higher growth rates and therefore better governance mechanisms and performances. We expect a negative coefficient for this variable.

Growth

Another variable that previous studies, such as Aboav et al. (2010), Beiner et al. (2005), Black et al. (2006) and Yermack (1996), have included in the model, is growth. We therefore include annual sales growth.

Operating performances

Following Aboav et al. (2010), Bebchuk et al. (2008), Beiner et al. (2005), Black et al. (2006), Bubbico et al. (2012), Daines (2001), Gupta et al. (2009) and Yermack (1996), we include ROA as a measure of operating performances and we expect it to be positively correlated with value. We perform robustness check with alternative measures such as EBIT/Sales and Capex/Assets to measure operating performances and growth opportunities respectively.

Floating shares

Following Beiner et al. (2005) and Bhagat and Bolton (2008), we include the percentage of floating shares to account for the ownership structure, which is expected to be correlated with value as well as with governance quality. The sign of the relationship between the ownership structure and value is not clear; the presence of a large shareholder is reported to impact negatively, due to low minority shareholders' protection, by Barclay and Holderness (1989) and Dyck and Zingales (2004); on the contrary, according to the "monitoring hypothesis" advanced by Shleifer and Vishny (1986), the higher concentrations favours better monitoring, with a positive effect on value.

Leverage

Following Black et al. (2003), Drobetz et al. (2004) and Klein (2005), we include leverage because several theoretical and empirical previous studies show its relationship with firm value.

Jensen (1986, 1993), Stulz (1990) and Hart and Moore (1995) suggest that debt discourages managers from over-investing the free cash flows and improves performance thanks to the monitoring exercised on managers by the banks.

However, the effect on debt seems to vary according to other conditions, such as the availability of profitable investment opportunities. McConnell and Servaes (1995) empirically find that leverage is positively correlated with value for firms with poor investment opportunities, confirming that debt solves the problem of excessive investments. Anyway, Agrawal and Knoeber (1996) and Beiner et al. (2004) do not find any relationship between leverage and firms' performances and argue that leverage is used at its best in conjunction with other governance mechanisms. Jensen (1986) argues that mature firms with stable cash flows should use more debt in order to discipline managers, but for firms with high growth opportunities debt service limits the ability of the management to pursue profitable investments, thus creating an "underinvestment" issue (Myers, 1977), which has a negative effect on value.

5 Data analysis

5.1 Sample

The original sample we choose is made of the 20 firms with the highest market capitalisation in each of the 5 countries analysed: France (Euronext), Italy (Borsa Italiana, part of the LSE group), Japan (Tokyo Stock Exchange), UK (London Stock Exchange) and USA (Nasdaq and New York Stock Exchange).

For each firm we collect Corporate Governance data for three years, 2009, 2010 and 2011, thus obtaining panel data, and calculate the CGI. Governance data is obtained from publicly available documents such as the "*proxy statement*" and the "*form-20*" for the US firms, the "*document de référence*" for French firms, the "*annual report*" and the "*notice of shareholders meeting*" for British firms and for Japan, and the "*Report di Corporate Governance*" for Italian firms.

Data source for all other variables data is Bloomberg, except for the years from IPO for which the source is Datastream.

From the original sample of 100 firms, 4 firms (China Southern Airlines, China Mobile Hong Kong, Royal Dutch Shell and Petroleo Brasileiro) are excluded because data is not available in Bloomberg, and 1 firm (Fanuc) is excluded because data on Corporate Governance is not available. Table 1 reports the main descriptive statistics of the CGI for the sample firms in the 5 countries for the period 2009-2011.

Table 1. Statistics for CGI in France, Italy, Japan, UK and USA (2009-2011)

CGI	Average	Min	Q1	Median	Q3	Max	St. Dev
Total	65.297	35.557	56.201	67.580	74.388	87.612	12.722
France	69.307	56.427	65.746	69.283	73.765	83.650	6.0303
Italy	56.651	37.606	51.259	55.961	61.971	74.453	8.1777
Japan	52.184	35.557	41.665	51.923	62.645	75.098	11.071
UK	76.189	44.674	72.119	79.986	83.218	87.612	10.410
USA	73.047	62.483	69.216	73.507	76.457	84.308	5.3876

5.2 Corporate Governance and Firm Value

To investigate the relationship between Corporate Governance, as measured by the CGI, and the firm value, we perform four different econometric analysis.

First, we apply an OLS model to cross-sectional data for each of the three years 2009, 2010 and 2011. We find that variables are correlated with the residuals, thus violating one of the basic assumptions of the linear regression model. We conclude that OLS estimates are unreliable and we do not report them.

Second, in order to tackle the endogeneity problem, we apply a two-stage least squares model (TSLS) using the percentage of independent board members, a well accepted proxy of good governance, as instrumental variable. We recall that proper instruments should be significant and exogenous: they must be correlated with the replaced variables and uncorrelated with the model error term ε_i. In our case, we use the Wald test to prove that the instruments are significant, but we fail to identify additional instruments to investigate whether the chosen instrumental variable is exogenous. We proceed to estimate a TSLS model, but the poor results of the Hausman test do not support the hypothesis that TSLS estimates are better than OLS. As we cannot prove that all instruments are exogenous, we consider TSLS results unreliable and do not report them.

Third, we analyse the data for the three years together, applying data panel techniques. In particular, first we apply Pooled OLS regression, Fixed Effects (FE) model and Random Effects (RE) model, then we use a WLS estimator because of the persistence of heteroskedasticity. Panel data results are reported in the next section.

Finally, we eliminate unimportant components of the CGI index using the Wald test and identify a reduced CGI with only 12 variables and use it to replace CGI in the WLS regression, obtaining a positive and strongly significant correlation between Tobin's Q and reduced CGI.

5.3 Panel data analysis

Our data is longitudinal, that is it is characterised by a large number of individuals N and a small number of periods T. In this cases, the econometric model should focus on the heterogeneity among individuals, eventually cleaning from the effects of time which are common to all individuals.

Therefore, to analyse panel data we start from the general equation

$$y_{it} = \alpha_{it} + \beta_{it} \cdot x_{it} + \varepsilon_{it}$$

and use three different models: Pooled OLS, Fixed Effects (FE) and Random Effects (RE), which use different assumptions on the error term ε_{it}, while the coefficients vector β_{it} is invariant.

The Pooled OLS model can be written as

$$\alpha_{it} = \alpha \text{ e } \beta_{it} = \beta \rightarrow y_{it} = \alpha + \beta \cdot x_{it} + \varepsilon_{it}$$

It assumes that the intercept and the regressors coefficients are constant over time and across firms, while the differences among firms are captured by the error term.

The FE model, which considers the intercept varying across firms (one way), while the slope is constant, can be written as follow:

$$\alpha_{it} = \alpha + \mu_i \text{ e } \beta_{it} = \beta \rightarrow y_{it} = \alpha_i + \beta \cdot x_{it} + \varepsilon_{it}$$

Finally, in the RE model the intercept varies across firms and time (two-ways), while the slope is constant. It can be written as:

$$\alpha_{it} = \alpha + \mu_i + \tau_t \text{ e } \beta_{it} = \beta \rightarrow y_{it} = \alpha_{it} + \beta \cdot x_{it} + \varepsilon_{it}$$

5.3.1 Pooled

$$\begin{aligned} Q_{TOBIN_{it}} = \alpha &+ \beta_1 \cdot ITA_i + \beta_2 \cdot JAP_i + \beta_3 \cdot UK_i \\ &+ \beta_4 \cdot USA_i + \beta_5 \cdot ln(Assets)_i \\ &+ \beta_6 \cdot ln(Age)_i + \beta_7 \\ &\cdot Growth_i + \beta_8 \cdot Floating_i \\ &+ \beta_9 \cdot ROA_i + \beta_{10} \\ &\cdot Debt\_to\_Eqy_i + \beta_{11} ln(CGI)_i \\ &+ \beta_{12} \cdot ITA\_CGI_i + \beta_{13} \cdot J\_CGI_i \\ &+ \beta_{14} \cdot UK\_CGI_i + \beta_{15} \\ &\cdot USA\_CGI_i + \varepsilon_i \end{aligned}$$

This model ignores the differences among firms and time and uses an OLS estimator on all the observations. Given the results of the cross-sectional analysis, we expect from the pooled

regression significant coefficients and a good R^2, but very low levels of the Durbin-Watson test, indicating the presence of autocorrelation or an incorrect specification of the model.

The output results reported in Table 2 confirm our expectations. In fact, some coefficients are significant, R^2 (0.62125) is acceptable, but Durbin-Watson statistics is low (0.419514).

This model ignores the panel structure using restrictive hypothesis, but it is to be recalled that N individual observations for T periods are not the same as NT different individuals. Instead, considering the panel structure of the data allows to decompose the variability into two components, one due to time and referred to as "within", and one due to heterogeneity among individuals, referred to as "between".

Table 2. Pooled OLS model

Model: Pooled OLS, Nr obs: 285, inc. 95 cross-section units
Periods: 3
Dep var: TOBIN_Q

	Coeff	std err	t	p-value	
Const	1.95451	0.830220	2.354	0.0193	**
l_Assets	-0.0404045	0.0141991	-2.846	0.0048	***
l_Age	0.0639278	0.0372334	1.717	0.0871	*
ROA	11.5600	0.664259	17.40	2.42e-46	***
DEBT_TO_EQY	0.0418098	0.0132396	3.158	0.0018	***
Growth	0.168112	0.325133	0.5171	0.6055	
Floating	-0.265421	0.155375	-1.708	0.0887	*
l_CGI	-0.0309536	0.170070	-0.1820	0.8557	
Av. Dep var	1.495459	Std dev dep var	0.816459		
R-squared	0.621250	Adj R-squared	0.611678		
F(7, 277)	64.90749	P-value (F)	8.62e-55		
Rho	0.808087	Durbin-Watson	0.419514		

5.3.2 Intercept varying across individuals (one-way): FE and RE models

$$Q_{TOBIN_{it}} = \alpha + \sum_{k=1}^{94} (\mu_k \cdot D_{ki}) + \beta_1 \cdot ln(Assets)_{it} + \beta_2 \cdot ln(Age)_{it} + \beta_3 \cdot Growth_{it} + \beta_4 \cdot Floating_{it} + \beta_5 \cdot ROA_{it} + \beta_6 \cdot Debt\_to\_Eqy_{it} + \beta_7 ln(CGI)_{it} + \beta_8 \cdot ITA\_CGI_{it} + \beta_9 \cdot J\_CGI_{it} + \beta_{10} \cdot UK\_CGI_{it} + \beta_{11} \cdot USA\_CGI_{it} + \varepsilon_{it}$$

This model allows to consider the variability among firms by allowing the intercept to vary for the different individuals, while keeping the regressors coefficients constant. The intercept is modelled as $\alpha_{it} = \alpha + \mu_i$, and μ_i has to be investigated.

Two cases are possible: μ_i can be deterministic or stochastic. In the first case we apply a Fixed Effects model (FE), in the second case a Random Effects model (RE).

5.3.3 Intercept varying across individuals (one-way): FE model

The FE model eliminates the individual characteristics (μ_i) using the so called *within transformation* (or *fixed effect transformation*), which regresses $(y_{it} - y_i)$ against $(x_{it} - x_i)$, where, in our case, y_{it} is Tobin's Q, while x_i are the averages of the variables during the three time periods.

In the FE model we use an estimator which is robust for the covariance matrix. Given that panel data has characteristics common to time series and to cross-section, in general it should be expected that the robust estimate of the covariance matrix should deal with heteroskedasticity and with autocorrelation (HAC approach). Additional points of attention include the possibility that the variance of the error term varies among cross-sectional units

and that the covariance of the errors among the units can be not null in a given period.

We therefore use the estimator suggested by Arellano, which of data with large N and small T, like in our case, is HAC. Arellano estimator is

$$\widehat{\sum_A} = (X'X)^{-1} \times \sum_{i=1}^{n} (X'_i \, \hat{u}_i \, \hat{u}'_i \, X_i) \times (X'X)^{-1}$$

where X is the regressors matrix, $\hat{u}_i$ is the residuals vector for the unit i, and n is the number of cross-sectional units. The output of the FE model is depicted in Table 3.

The same results can be obtained with the Least-Squared Dummy Variable regression model (LSDV), which we apply by introducing 94 dummy variables (for 95 observations), one for each firm except for one firm, Wells Fargo, which is considered as the base case intercepts are referred to. LSDV results are provided in the Appendix, Tables I and II.

LSDV gives an improved R^2 (0.935102) and a higher Durbin-Watson statistics (1.385729).

Table 3. Fixed-effects model

Model: FE, Nr obs: 285, inc. 95 cross-section units
Dep var: TOBIN_Q
Robust std err (HAC)

	Coeff	std err	t	p-value	
Const	13.5606	7.82849	1.732	0.0849	*
l_Assets	-0.479993	0.299313	-1.604	0.1105	
l_Age	0.0525902	0.165929	0.3169	0.7516	
ROA	3.54808	1.71803	2.065	0.0403	**
DEBT_TO_EQY	0.0638691	0.0333923	1.913	0.0573	*
Growth	0.0828064	0.194636	0.4254	0.6320	
Floating	-0.237868	0.201694	0.1567	0.8756	
l_CGI	0.0316125	0.201694	0.1567	0.8756	

Av. Dep var	1.495459	Std dev dep var	0.816459
R-squared	0.935102	Adj R-squared	0.899283
F(101, 183)	26.10681	P-value (F)	2.67e-72
Rho	-0.204721	Durbin-Watson	1.385729

Test for the difference in the group intercepts
Null hp: groups have a common intercept
Test stats: F(94, 183) = 9.41485, with p-value = P(F(94, 183) > 9.41485) = 1.28526e-37

Wald test for heteroskedasticity
Null hp: units have error variance in common
Asymp stats test: Chi-square (95) = 1.9176e+10, with p-value = 0

Although the FE and the LSDV models give always the same numerical results, an advantage given by LSDV is that with this model it is possible to obtain the α_i for each firm, while FE reports a single intercept, which is usually the average of all the individual α_i.

The constant terms α_i capture the effect of variables varying from firm to firm, but are time invariant; the within estimator therefore considers only heterogeneity among different individuals (within), but not heterogeneity in the same individual in different periods of time (between). An evident limit of this approach is that it is not possible to include in the model regressor with a value constant over time for an individual such as, for example, the industry.

It is interesting to notice that in our model the coefficients of the first 20 dummy variables, corresponding to the French firms, are significant with a 5% confidence level and their effect could be captured by a single country dummy variable, thus reducing the number of variables used in the model.

The test in Table 3 reports that the use of the robust estimator is not sufficient to eliminate heteroskedasticity. For this reason, we apply the method of the Weighted Least Squares (WLS), whose results are summarized in Table 4.

Table 4. WLS model

Model: WLS, Nr obs: 285, inc. 95 cross-section units
Dep var: TOBIN_Q
Weights based on unit error variance

	Coeff	std err	t	p-value	
Const	1.59798	0.232695	6.867	4.30e-11	***
l_Assets	-0.0337498	0.00489815	-6.890	3.75e-11	***
l_Age	0.0574554	0.0125529	4.577	7.13e-06	***
ROA	10.1264	0.334275	30.29	6.61e-90	***
DEBT_TO_EQY	0.0236623	0.00450021	5.258	2.91e-07	***
Growth	-0.0362783	0.0928283	-0.3908	0.6962	
Floating	-0.0990942	0.0433952	-2.284	0.0232	**
l_CGI	-0.00915840	0.0486073	0.1884	0.8507	

Statistics based on weighted data

R-squared	0.862971	Adj R-squared	0.859509
F(2, 277)	249.2109	P-value (F)	1.4e-115

Statistics based on original data

Average dep var	1.495459	st dev dep var	0.816459

5.3.4 FE model vs. RE model

The Random Effects model (RE) treats individual effects as part of the error term, as stochastic components uncorrelated with regressors. It is therefore possible to include in the matrix X variables that vary between different individuals, although they remain constant within the same individual; this is not possible with the FE model.

The most appropriate model to describe the relationship between Corporate Governance and firm value can be chosen with the aid of three statistical tests, reported in Table 5. The first test investigates the presence of significant individual effects; in our case, the p-value is very low (1.28886e-35) and the null hypothesis - the absence of combined significance of the group averages – is rejected. For this reason, the FE model is considered more appropriate than the Pooled OLS regression.

The Breusch-Pagan test is used to compare the RE model with the OLS pooled. Also in this case the p-value is very low (3.13866e-27), favouring the RE model.

Finally, the Hausman (or Durbin-Wu-Hausman) test compares the FE and the RE models and its results indicate that the FE model is more appropriate to describe the phenomenon under investigation.

Before analysing the results of the FE model, we verify if heterogeneity due to time should also be considered, along with fixed effects. We therefore include dummy variables to investigate differences in the intercepts due to time.

As expected due to the very low differences in CGI average values for the three years, we find that there are not significant differences between the time periods. In fact, the coefficients of the two dummy variables are not significant and, performing the Wald test, we cannot reject the null hypothesis of combined significance of the two dummy variables (Table 6).

These final results confirm that the FE model is appropriate to describe the relationship between CGI and firms' value, as illustrated in the next section.

Table 5. tests for the choice of the appropriate model

Diagnosis: hp of balanced panel with 95 cross-section units for 3 periods

Fixed-effects estimator
Allows different intercept for each cross-section unit
Std err of slope in round brackets, p-value in square brackets

Const	13.561	(4.4107)	[0.00243]
l_Assets	-0.47999	(0.17861)	[0.00787]
l_Age	0.05259	(0.27344)	[0.84770]
ROA	3.5481	(0.98546)	[0.00013]
DEBT_TO_EQY	0.063869	(0.028146)	[0.02442]
Growth	0.082806	(0.20644)	[0.68909]
Floating	-0.23787	(0.27657)	[0.39088]
l_CGI	0.031612	(0.28616)	[0.91216]

95 group averages have been subtracted from data

Residuals variance: 12.2863 / (285 – 102) = 0.0671384
Combined significance of different averages in groups:
F (94, 183) = 9.41485, with p-value 1.28526e-37
(a low p-value rejects the hp that pooled OLD model is appropriate, in favour of FE)

Breusch-Pagan test
LM = 110.078, with p-value = prob (chi-square (1) > 110.078) = 9.42314e-26
(a low p-value rejects the hp that pooled OLS model is appropriate, in favour of RE)

Variance estimators:
Between = 0.201557
Within = 0.0671384
Theta used for quasi-demeaning = 0.666784

Random-effects estimator
Allows different error term for each unit
Std err of slope in round brackets, p-value in square brackets

Const	2.5688	(1.0652)	[0.01654]
l_Assets	-0.075253	(0.021533)	[0.00055]
l_Age	0.080494	(0.058586)	[0.17057]
ROA	7.5345	(0.73898)	[0.00000]
DEBT_TO_EQY	0.032172	(0.017666)	[0.06967]
Growth	0.01409	(0.21148)	[0.94693]
Floating	-0.1355	(0.19102)	[0.47870]
l_CGI	0.060744	(0.20456)	[0.76672]

Hausman test:
H = 54.6344, with p-value = prob (chi-square (7) > 0.54.6344) = 1.76146e-09
(a low p-value rejects the hp that RE is appropriate, in favour of FE)

Table 6. FE model with time dummy variables

Model: FE, Nr obs: 285, inc. 95 cross-section units
Periods: 3
Dep var: TOBIN_Q
Robust std err (HAC)

	Coeff	std err	t	p-value
Const	10.2658	7.17463	1.431	0.1542
l_Assets	-0.408688	0.279289	-1.463	0.1451
l_Age	0.420594	0.349102	1.205	0.2299
ROA	3.95032 **	1.85382	2.131	0.0344
DEBT_TO_EQY	0.0620889	0.0360549	1.722	0.0868 *
Growth	0.104956	0.204766	0.5126	0.6089
Floating	-0.272276	0.502466	-0.5419	0.5886
l_CGI	0.103372	0.188444	0.5486	0.5840
dt_2	-0.0559186	0.0481140	-1.162	0.2467
dt_3	-0.0901423	0.0575925	-1.565	0.1193

Av. Dep var	1.495459	Std dev dep var	0.816459
R-squared	0.935926	Adj R-squared	0.899464
F(101, 183)	25.66861	P-value (F)	2.29e-71
Rho	-0.209918	Durbin-Watson	1.393454

Test for the difference in the group intercepts
Null hp: groups have a common intercept
Test stats: F(94, 181) = 9.33256, with p-value = P(F(94, 181) > 9.33256) = 4.30736e-37

Wald test for combined significance of time dummies
Asymp test statistics: chi-square (2) = 2.67425 with p-value = 0.2626

5.4.5 FE results

The results of the WLS model (Table 4) brings the following considerations.

The variable which has the highest effect on firms value is ROA: its coefficient is positive and high (10.1264), with p-value much lower than 1% (6.61e-90). This confirms, as we expected, that operating performances are highly relevant for investors.

Other variables which have a positive and significant correlation with value are the natural logarithm of years from IPO (coefficient: 0.0575, p-value: 7.13e-06) and leverage (coefficient: 0.0237, p-value: 2.91e-07), this latter result being coherent with the findings in Jensen (1986), Stulz (1990) and Hart and Moore (1995), who argue that debt can create value through an improved monitoring on management exercised by banks and the reduction of the free cash flows employed in unprofitable investments.

The only negative and highly significant variable (99% confidence level, p-value < 1%) is the firm dimension as measured by the natural logarithm of assets (coefficient: -0.0337, p-value: 3.75e-11); the negative effects of the organisational inefficiencies suggested by Leibenstein (1966) appears more relevant than the positive effects due to the economies of scale suggested by Baumol (1959).

The Floating coefficient is also negative, but less significant (95% confidence level; p-value: 0.0232)

The coefficient of the Growth variable, measured by the average annual sales growth, is negative but not significant.

Finally, the coefficient of the natural logarithm of CGI, the variable measuring the quality of Corporate Governance systems adopted

by firms, is low and positive (0.0092), but not significant, with p-value equal to 0.8507. This finding can be interpreted in one of the two following ways:

1. The Corporate Governance is not correlated with firm value
2. The CGI is not a proper measure to evaluate the quality of the Corporate Governance from investors' perspective.

We proceed to investigate if it is possible to identify a subset of the 39 governance variables used to build the CGI which are correlated with firms value.

5.4 Reduced CGI

In order to identify the variables which are most correlated with value, we estimate a linear regression model where the dependent variable is Tobin's Q and the CGI as dependent variable is replaced by its 39 components; the other independent variables of the previous model are also included: ln(Asset), ln(Age), ROA, Debt to Equity, Growth and Floating. The output of the Pooled OLS and the FE models with the 39 governance variables is shown in the Appendix, Tables III, IV and V. Also in this case, FE is deemed the most appropriate model.

We use a testing-down approach and find that the Wald test indicates that the variables with a negative coefficient in the FE model are unimportant and can be omitted, therefore we eliminate these variables and estimated the model again (Tables VI and VII in the Appendix). The procedure is repeated for the variables with negative coefficients in this second estimates; the Wald test allows again to eliminate such variables. The result of this process is the identification of 12 relevant variables, which are used to compose the reduced CGI, or CGI_12, which is then used in the regression, whose output is shown in the Appendix in Table VIII.

It is interesting to notice that the 12 variables still represent all of the original 4 macro areas: variable 1-6 refer to the Board area, variable 7 to compensation, variables 8-11 to Shareholders' rights and variable 12 to Disclosure, thus confirming our hypothesis that Corporate Governance is a complex phenomenon and should be measured by a multi-dimensional index.

The FE model is applied using the reduced CGI, made of 12 variables (Table 6); also in this case, the robust estimator is not able to eliminate the heteroskedasticity, thus requiring the use of the WLS estimator, whose output is reported in Table 8. The output of the WLS model using the reduced CGI is coherent with the previous results obtained using the complete CGI (Table 4), as the signs and the significance of the coefficients of the control variables are preserved, and the R^2 is still high (88.1%). In addition, using the reduced CGI, the coefficient of the variable l_CGI becomes strongly significant, with p-value equal to 0.0003, as expected.

Table 7. FE model, reduced CGI (12 parameters)

Model: FE, Nr obs: 285, inc. 95 cross-section units
Periods: 3
Dep var: TOBIN_Q
Robust std err (HAC)

	Coeff	std err	t	p-value	
Const	14.5968	7.10839	2.053	0.0415	**
l_Assets	-0.536437	0.285228	-1.881	0.0616	*
l_Age	0.0224268	0.159639	0.1405	0.8884	
ROA	3.62420	1.67263	2.167	0.0315	**
DEBT_TO_EQY	0.0600735	0.0283717	2.117	0.0356	**
Growth	0.0899109	0.192840	0.4662	0.6416	
Floating	-0.393546	0.528584	-0.7445	0.4575	
l_CGI	0.398815	0.192571	2.071	0.0398	**
Av. Dep var	1.495459	Std dev dep var	0.816459		
R-squared	0.937069	Adj R-squared	0.902336		
F(101, 183)	26.97955	P-value (F)	1.77e-73		
Rho	-0.222156	Durbin-Watson	1.416912		

Test for the difference in the group intercepts
Null hp: groups have a common intercept
Test stats: F(94, 183) = 9.68836, with p-value = P(F(94, 183) > 9.68836) = 1.81634e-38

Wald test for heteroskedasticity
Null hp: units have error variance in common
Asymp stats test: Chi-square (95) = 1.2.77967e+06, with p-value = 0

Table 8. WLS model, reduced CGI (12 parameters)

Model: WLS, Nr obs: 285, inc. 95 cross-section units
Dep var: TOBIN_Q
Weights based on unit error variance

	Coeff	std err	t	p-value	
Const	1.51577	0.129348	11.72	5.00e-26	***
l_Assets	-0.0376355	0.00486135	-7.742	1.85e-13	***
l_Age	0.0674218	0.0121588	5.545	6.85e-08	***
ROA	10.1048	0.337421	29.95	7.61e-89	***
DEBT_TO_EQY	0.0287139	0.00359160	7.995	3.54e-14	***
Growth	-0.0156248	0.0858647	-0.1820	0.8557	
Floating	-0.179490	0.0484463	-3.705	0.0003	***
l_CGI	0.121311	0.0334525	3.626	0.0003	***
Statistics based on weighted data					
R-squared	0.881008	Adj R-squared	0.878001		
F(2, 277)	292.9848	P-value (F)	4.7e-124		
Statistics based on original data					
Average dep var	1.495459	st dev dep var	0.816459		

6. Conclusions

The objective of the present work is to investigate the relationship between the quality of Corporate Governance systems adopted by firms and their value, and to answer o the question Are firms which adopt better Corporate Governance systems, all else equal, have a higher market value?

While most of the previous studies focus on a country, our study analyses and measures the Corporate Governance in five different countries, namely France, Italy, Japan, UK and USA.

As a measure of the quality of Corporate Governance, we build the Corporate Governance Index (CGI), a scoring model based on 39 variables grouped in 4 macro-areas: Board, Shareholders' rights, Compensation, Disclosure.

The original sample is made of 100 firms, 20 in each if the 5 countries, then reduced to 95 for a lack of data of 5 firms, observed for 3 years, from 2009 to 2011.

Statistical analysis based on average scores shows that the most advanced countries in terms of Corporate Governance are UK and USA. In addition, it has to be noted that the average score is following an increasing trend in all the 5 countries.

One of the strengths of our research is the use of panel data, which allows more robust analysis. Typical Panel data techniques allow to considerably reduce the omitted variables issue, which is very common with cross-sectional data. A confirmation to this statement comes from the data analysis presented in the paper. First, we estimate OLS models for each of the three years and find incoherent results over time. A possible explanation is an endogeneity nature of the governance variable. We them estimate a TSLS model, using the percentage of independent board members as an instrumental variable. However, the poor results of the Durbin-Wu-Hausman do not confirm is appropriate for this analysis. Finally we analyse the data as panel, using the Pooled OLS, Fixed-Effects (FE) and Random Effects (RE) estimators. Three different specification tests, including Breusch-Pagan and Hausman's test, indicate the FE model as the most appropriate model to represent this data. The results do not confirm a correlation between CGI and Tobin's Q (the coefficient is positive but not significant).

The last part of the study focuses on the search of a subset of the 39 governance variables composing the CGI which are positively correlated with value in a statistically significant way.

Applying omit tests (Wald tests), we identify 12 variables that are strongly correlated with value, and use them to compose a reduced CGI.

Our study confirms the findings of Bebchuk et al. (2008), who argue that only some aspects of Corporate Governance impact on value; It is interesting to note that, differently from Bebchuk et al. (2008), the 12 variables we find belong to all the 4 areas originally considered in the CGI: Board, Compensation, Shareholders' rights and Disclosure. This results confirm our belief that Corporate Governance is complex and requires a multi-dimensional measure.

We conclude by offering some considerations for future developments.

First of all, our sample is made of only the largest 20 firms in the five markets we have considered, and cannot be considered representative of all the listed firms. Extending the study to include a larger number of firms with different sizes can increase generalizability.

In addition, increasing the number of periods included in the analysis will allow to consider also dynamic panel analysis.

Finally, the search for appropriate instrument variables in Corporate Governance research is still an open issue, which requires further studies to be solved.

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A MODEL FOR SELECTING NON-EXECUTIVE DIRECTORS: THE CASE OF SOUTH AFRICAN BANKS

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Abstract

In the United States, an accusation was made that incompetent boards were ruining some of the once great American companies as the financial crisis of 2008 was a failure of corporate governance. The reason given was that the boards of these companies were private clubs and not representative democracies. Increasing levels of boardroom regulation and risk have also placed greater demands on the non-executive directors of companies meaning that selecting the candidates with the right knowledge, experience and skills is of the upmost importance. A study was conducted amongst South African banks and no consistent model of selecting non-executive directors was found. In this study a model is proposed to select the candidates with appropriate knowledge, experience and skills in the banking industry.

Keywords: Banks, Non-Executive Directors, Executive Directors, Companies, Regulation, Policies, Selection Criteria, Chartered Accountants, Succession Planning

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Introduction

In the United States, an accusation was made that incompetent boards were ruining some of the once great American companies as the financial crisis of 2008 was a failure of corporate governance (Gross, 2010). The reason given was that the boards of these companies were private clubs and not representative democracies.

According to Duff (2012), shareholders are responsible to vote for the board of directors. In addition, shareholders entrust certain responsibilities to the board, such as setting policies and giving direction to the company and its activities. The members of the board therefore represent the shareholders and in return receive compensation paid by the company. The members of the board may not necessarily be shareholders.

The boards of companies normally consist of both executive and non-executive directors. In terms of their responsibilities towards the company and its stockholders, there is no difference between an executive director and a non-executive director. The executive directors are employees of the company and play an active role in managing the company to the benefit of the shareholders.

In contrast, non-executive directors have a supervisory and consultative role whilst controlling the activities of the board and in particular the executive directors. Oaff (2003) is also of the opinion that a non-executive director is employed to offer strategic, specific and objective advice at board meetings. Even though non-executive directors do not participate in the day-to-day running of the company they are expected to monitor the performance of the company's executive directors, management and staff. In addition, non-executive directors are equally liable as the executive directors with regard to statuary requirements and laws (Business dictionary, 2012a).

The Chartered Institute of Management Accountants (CIMA) (2012) is of the opinion that selecting a balanced team of directors can be more difficult than what it appears to be. The appointment of a non-executive director is an important task in the life of any company. The board must be clear about the particular skills a new non-executive director should possess. In addition, the board must be clear as to what other attributes they are looking for in a non-executive director. These attributes could include integrity, diplomacy, tactfulness, experience of the business, good judgment as well as financial and commercial capabilities.

CIMA (2012) is also of the opinion that a non-executive director must not depend on the appointment to supplement his or her income. He or she should be independent in every way and should not owe any particular allegiance to any member of the board. In the selection of a non-executive director, the board must be clear about the personal

and commercial qualities of the individual that is being sought as well as the particular skills that the board is in need of.

According to CIMA (2012), companies do not adopt a formal approach when recruiting a non-executive director. Companies are most likely to acquire a non-executive director through informal personal contacts, family and friends, the company's auditors or from other trusted sources. Some companies use an external third party, such as a specialist recruitment service, to perform this task. Some companies even resort to lowering the retirement age of employees. The result is that there are retired or semi-retired people with the appropriate qualifications and experience available to hold non-executive directorships.

Duff (2012) further states that the board and chairperson of the board are elected by vote at the company's annual meeting. Companies around world however employ different methods when electing a board of directors (Peters, 2012).

Cumulative voting is the first method, which allows minority shareholders to take part in the election process of the directors of the company. The shareholder's number of shares is multiplied by the number of directors to be elected. The votes can then be used for one candidate or be split amongst the other candidates. The candidate with the most votes gets elected. The second method is general consent. This means there is overall agreement amongst the company's shareholders on the nominations presented by the board. The election is therefore virtually uncontested. Plurality voting is the third method, and this implies that the number of affirmative votes is used to select the directors. The nominees receiving the most "for" votes get elected irrespective of the total numbers of votes cast. The last method is majority voting, which is a widely used election method. The nominee with the most votes gets elected (Peters, 2012).

CIMA (2012) is of the opinion that the independence of non-executive directors in terms of the selection to the board has also become an area of concern. Since the Enron corporate scandal and others of the early 2000s, the US Congress and the Securities and Exchange Commission (SEC) have increased the legal liability of the boards (Duff, 2012).

According to a report tabled in the United Kingdom House of Commons (UK, 2009), the worldwide financial crisis has exposed serious flaws and shortcomings in the system of non-executive oversight of bank executives and senior management. It was also suggested in the report that many non-executive directors have failed in their duties. It was found that too often non-executive directors in the banking sector operate too leniently instead of fulfilling their role of being effective checks and balances on the executive members of boards.

As a result of the statements made by Gross (2010), CIMA (2012) and the report tabled in the United Kingdom House of Commons (UK, 2009), a study was conducted amongst the banks in South Africa with the objective to ascertain how candidates are selected for possible election as non-executive directors for South African banks.

The second objective was to use, amongst other, the results of the study to develop a model that can be used specifically to select the candidates with appropriate knowledge, experience and skills in the banking industry.

An international perspective

An international perspective on the selection of non-executive directors was researched with the purpose of identifying international trends in the selection of non-executive directors, which could possibly be used in South Africa. The following trends in the selection of non-executive directors were identified:

Selection criteria

A number of international companies have a board of director's policy and guidelines. However, these policies and guidelines are silent on the selection criteria for non-executive directors. As an example, Coca Cola (2012) states that assessment should include issues of diversity, age, business or academic background and other criteria that the board regards as relevant. Coca Cola (2012) states, "A variety and balance of skills, background and experience is desirable."

A review of some of the financial regulators' policies revealed that these regulators also provide guidance on selection criteria but little in the form of detailed selection criteria. For example, the Securities Commission New Zealand (the Commission) (2004) is of the opinion that non-executive directors often do not have the advantage of prior knowledge of an entity. The need to choose directors who can make an appropriate contribution, makes director selection vitally important. The commission suggests that rigorous selection, nomination and appointment processes are needed to achieve this.

In the banking world, the view on the selection of non-executive is not much different to that found in other companies. Generally banks state in their banking policies that non-executive directors would be evaluated for their qualifications and experience to become directors. For example, the Bank of America (BOA) (2012) states, "To discharge their duties in identifying and evaluating individual nominees for directors, the Corporate Governance Committee and the Board shall consider the overall experience and expertise represented by the Board as well as the

qualifications of each candidate." BOA however does not mention which specific criteria should be used to evaluate the non-executive directors.

Internationally, it is thus found that the procedure and criteria for selecting non-executive directors vary depending on the particular company and on the circumstances and needs of the company at a particular point in time (QR National, 2011). It was found that the following are mainly considered when evaluating non-executive directors:

- the non-executive director's qualifications, skills, experience and personal attributes;
- the non-executive director's ability to match the needs of the company;
- the extent to which the non-executive director is likely to contribute to the overall effectiveness of the company; and
- the non-executive director's number of existing directorships.

However, little evidence was found that there are specific and consistent criteria that companies and financial institutions use to evaluate and select non-executive directors.

Qualifications and experience

Internationally, it was observed that the boards of companies require experienced and academically qualified directors to ensure that the board of directors provides proper oversight of activities of the company. Boards require expertise in areas such as legal, financial management and human resources.

Colgate-Palmolive (Colgate) (2012), for example, places a high value on qualifications and experience in the selection of non-executive directors. Colgate (2012) states that a non-executive director should have extensive experience in business, education or public service. Colgate (2012) also states that it is preferable that the ideal non-executive director should have experience in more than one of these areas. A non-executive director should also fully understand the legal and other responsibilities of a non-executive director of a public company.

Number of non-executive directors on a board

Bainbridge (2009) mentions that there is evidence that the number of directors on the boards of companies vary considerably across the world. In a survey conducted by the National Association of Corporate Directors (NACD), Bainbridge (2009) found that slightly less than half the corporate boards had seven to nine members, with the remaining boards scattered evenly on either side of that range.

Evans (2010) is of the opinion that small boards (7 to 9 members) are generally preferable to larger boards (more than 9 members) for small to medium-sized companies. Evans (2010) agrees that companies can function well with nine directors or more but that it should have an odd number of directors to avoid deadlocks.

Internationally, the statuary requirements of the different countries for the number of directors on the board of a company vary. Krumme (2012) mentions that in Canada, the Toronto Stock Exchange, for example, does not require a board to have a specific number of members.

In contrast, the corporate governance codes of some member countries of the European Union (European Commission, 2004) prescribe precisely how many non-executive directors should be present on the board of a company. In these countries, the requirements range from non-executive directors that should account for half the members of the board in one country to at least one third in another country.

Companies around the world face a growing shortage of non-executive directors as the risk, responsibilities and time commitments of the job deter suitable non-executive directors. Research conducted by Deloitte & Touché (2005) found that governance changes have also put pressure on individuals to hold fewer non-executive positions. Together with the requirement in some countries that 50 per cent of the board be made up of non-executive directors, the demand for high-quality individuals is ever increasing. This emphasises the need for a structured selection method of selecting non-executive directors.

Retirement age of non-executive directors

The current study has found that the retirement age of non-executive directors varies between 60 and 75 with some companies allowing the board to waive the retirement age for certain directors. Romanek and Lynn (2011) are of the opinion that a waiver may allow a company to keep a valuable director but that such a waiver could cause the board of directors to become divided over whether to grant a waiver in the case of a particular director or not.

Romanek and Lynn (2011) also mention that a possible solution is to grant limited waivers to enable directors to serve for just one more year.

In contrast, the supporters of mandatory retirement ages for non-executive directors argue that to force a board to replace non-executive directors periodically brings new perspectives and fresh contributions to the boards of companies. These supporters are also of the opinion that to set specific retirement ages for non-executive directors provides boards with a tool for getting non-performing directors off the board without having to ask for a director's resignation.

Adding to the debate on the retirement age of non-executive directors, Lublin (2011) mentions

that in 2010, companies on the Standard & Poor's 500-stock index had the lowest number of non-executive directors on their boards since 2001. The reason for this was that companies were wary of appointing untested non-executive directors and elected to keep existing directors by increasing or waiving retirement ages.

In addition, Lublin (2011) mentions that the higher retirement ages are however the cause of considerable criticism as it may encourage keeping on the board non-executive directors who have lost their outside perspective. The risk of this practice is that long-serving non-executive directors may prohibit new thinking and fresh oversight.

Research methodology

The current research was aimed at obtaining information about the criteria used to select non-executive directors of banks in South Africa. The target population included all banks in South Africa licensed by the South African Reserve Bank (SARB, 2012). The banks interviewed included South African-owned banks and foreign-owned banks. The banks interviewed were the banks who own 80 per cent of the total banking capital in the South African banking industry, making the sample representative of the banking sector in South Africa.

The research focused firstly on a review of the international perspective on the selection of non-executive directors in banks and other international companies. Secondly, the annual reports and other relevant publications of the target banks in South Africa were reviewed to obtain specific information regarding the banks' boards of directors and other related information. Thirdly, the banks were asked about specific policies pertaining to their boards of directors and the way the selection of non-executive directors was performed. To achieve this goal, a questionnaire and semi-structured interviews were used.

The questionnaire was specifically designed to obtain information pertaining to board-related matters including, amongst other, policies, methods for selecting non-executive directors, criteria used in selecting non-executive directors and other information relevant to the selection process. The interviews conducted were strictly confidential and, at their explicit request, none of the banks or staff members interviewed were named.

The table below provides more detail on the content of the questionnaire used:

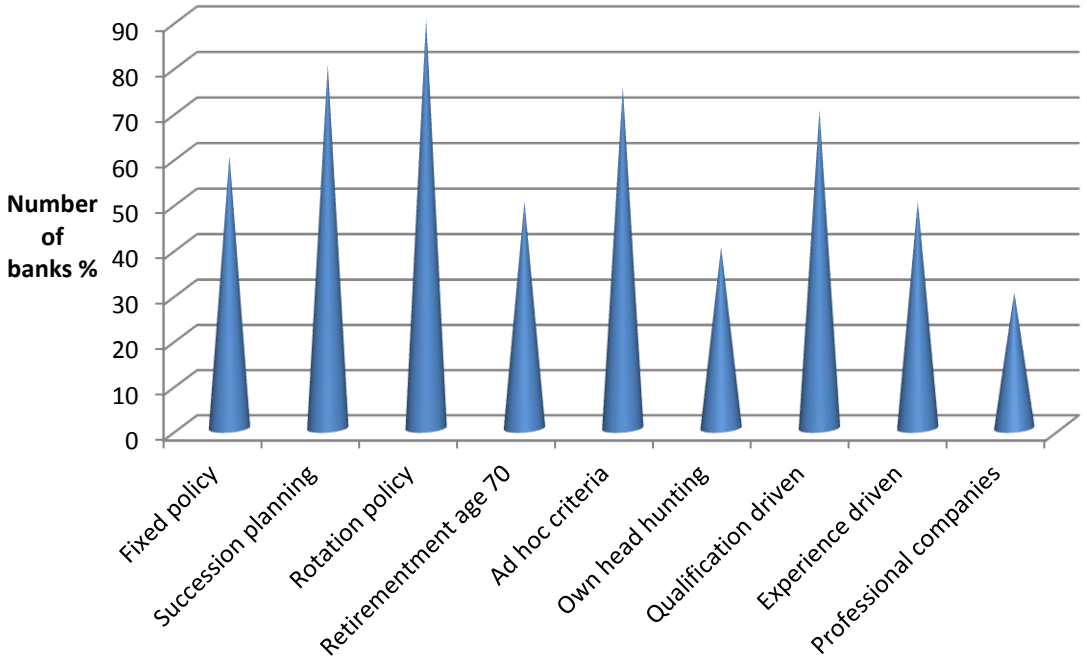
Table 1. Questions to participants

Topic	Rationale
Policies	To obtain information on the existence of policies pertaining to board-related matters such as: - rotation of non-executive directors - succession planning - retirement age of non-executive directors - basis of selection of non-executive directors
Methods for selecting directors	To identify the methods used to select non-executive directors including: - internal methods - head hunting - the use of professional human resources firms - other methods
Criteria used in selecting directors	To identify the criteria used to select non-executive directors including: - in-house developed criteria - ad hoc criteria - international accepted criteria - using a professional firm's criteria
Supplementary information	To obtain other relevant supplementary information

Research findings

As mentioned in the research methodology above, research was conducted to obtain information about the criteria used to select non-executive directors of banks in South Africa. Figure 1 below depicts the findings of the study with regard to the selection of non-executive directors at the banks surveyed:

Figure 1. Research findings



Policies

On the x-axis, Figure 1 shows the types the specific issues investigated regarding the boards of directors of the banks in South Africa. The number of banks to which a particular issue is relevant is shown on the y-axis. The values on the y-axis are the percentages of the total number of banks surveyed.

Although every bank surveyed had a board of directors, only 60 per cent of the banks had comprehensive board selection policies in this regard. The other banks had policies but these were not specific in nature and acted more as general guidance.

The majority of the banks (90 per cent) had documentation such as board minutes on the rotation of non-executive directors. The banks mentioned that they endeavoured not to let a non-executive director's term exceed three years. However, amongst the banks surveyed, the average time spent as a director was six years. It was found that, at the time of the research, the longest serving non-executive director had been serving as a member for 18 years.

The banks indicated that succession planning is as important as the rotation of non-executive directors. It was however noticeable that, although documentation such as board minutes did exist, little was offered in the form of policies.

A number of banks (50 per cent) indicated that the retirement age of non-executive directors was 70 years. However, it was found that some directors were older than 70 with the youngest being 34 years old.

In this category, the study found that there was no consistent basis of selection of non-executive directors based on qualifications. The banks' boards comprised a mixture of non-executive directors with different qualifications. There were non-executive members with commercial qualifications (35 per cent), chartered accountants (37 per cent) and law qualifications (5 per cent). A large section of non-executive directors (20 per cent) had qualifications in other disciplines such as science and engineering.

In addition, the study has found that only some banks (50 per cent) viewed banking experience as important when it comes to the selection of non-executive directors.

Methods for selecting non-executive directors

In this category, the study found that participating banks employed a number of methods in the selection of non-executive directors. The banks preferred to use mainly own internal methods of selecting non-executive directors. A few banks indicated the use of "head hunting" (40 per cent) whilst others preferred making use of professional firms (30 per cent) for selecting non-executive directors.

Criteria used in selecting non-executive directors

In the section on the criteria used in selecting non-executive directors, the study found that again there

was no consistency in the criteria used by the different banks. The majority of the banks (70 per cent) resorted to using ad hoc criteria in selecting non-executive directors. It was mentioned that these criteria were based on circumstances and could include any applicable criteria at the time of selection.

Possible criteria to be used in selecting non-executive directors

The banks were of the opinion that non-executive directors should preferably have banking experience and appropriate qualifications.

Recommendations on selecting non-executive directors

In selecting a non-executive director, the bank has to ensure that the specific member can add value to that specific bank, its shareholders and the community in general. The Federal Reserve (2012) mentions that there are many factors to consider when selecting experienced and qualified directors, which include leadership skills, strong and diverse banking experience, prior business experience, impeccable character, involvement in the local community and a sound understanding of the market.

The recommendations of this study focus only on how to select non-executive directors with strong and diverse banking experience as well as prior business experience. In reaching its goal, the study proposes a specific selection model.

The model explained

The selection model, as discussed below, is a step in the selection process of a non-executive director. The model is not designed to be used in isolation but is a tool that identifies non-executive directors for the selection process. The other steps in the selection process still have to be completed, such as the actual voting process and the testing of soft issues such as management skills, planning skills, boardroom skills, etc.

The model can be described as a type of competency model where competency modelling is defined as "The process of analysing and describing types abilities, knowledge and skills present in an organization or which needs to be acquired to gain a competitive advantage" (Business dictionary, 2012b).

As mentioned, the model's sole purpose is to identify those non-executive directors that portray a high level of technical competency and who can therefore contribute to the continuing success of the bank. The inputs to the model, as explained below, are provided by the candidate and are verified by the board and more specifically the chairperson of the board. The model consists of a number of variables in a mathematical formula to calculate the abilities, knowledge and skills of a non-executive director.

The competency model incorporates four components, namely industry experience, length of industry experience, level of experience and academic qualifications.

This specific model evaluating this knowledge, skills and experience can be written as follows:

$$\left(\frac{Sc \text{ x } Yt \text{ x } Ac \text{ x } Qa}{Ts}\right) \text{ x } 100$$

Where:

- Sc = type of industry in which the non-executive director has experience
- Yt = the non-executive director's number of years' experience in that particular industry
- Ac = type of activity in the particular industry
- Qa = qualifications of the non-executive director
- Ts = maximum score

Sc is calculated by allocating a factor to the non-executive director based on the type of industry in which he/she has experience

Type of industry	Executive management	Top management	Middle management
Banking	5	4	3
Financial	4	3	2
General business	3	2	1
Other	2	1	1

Example: A retired audit partner would be allocated a score of 4 (executive management and finance) and a retired bank branch manager a score of 3 (top management in banking.

Yt is calculated by allocating a factor to the non-executive director based on the years' experience in his/her specific industry.

Years of experience	Factor
10+	3
5–10	2
>5	1

Example: The retired audit partner who has been an auditor his whole life long will be allocated a score of 3.

Ac is calculated by allocating a factor to the non-executive director based on the type of banking activity, discussed above, in which he/she has experience. Allocate a factor of 5 if the non-executive director has experience in all five types of banking activities. Example: The retired audit partner who has only audited an insurance company will be allocated a score of 1.

Qa is calculated by allocating a factor to the non-executive director based on the qualifications held by the particular non-executive director.

Qualification	Score
Post-graduate qualification in banking, finance, business and law	4
Graduate qualification in banking, finance, business and law	3
Post-graduate qualification in unrelated discipline	2
Graduate qualification in unrelated discipline	1

Example: The retired audit partner will be allocated a score of 4.

Ts is calculated by allocating the top score for each factor to the non-executive director as discussed above.

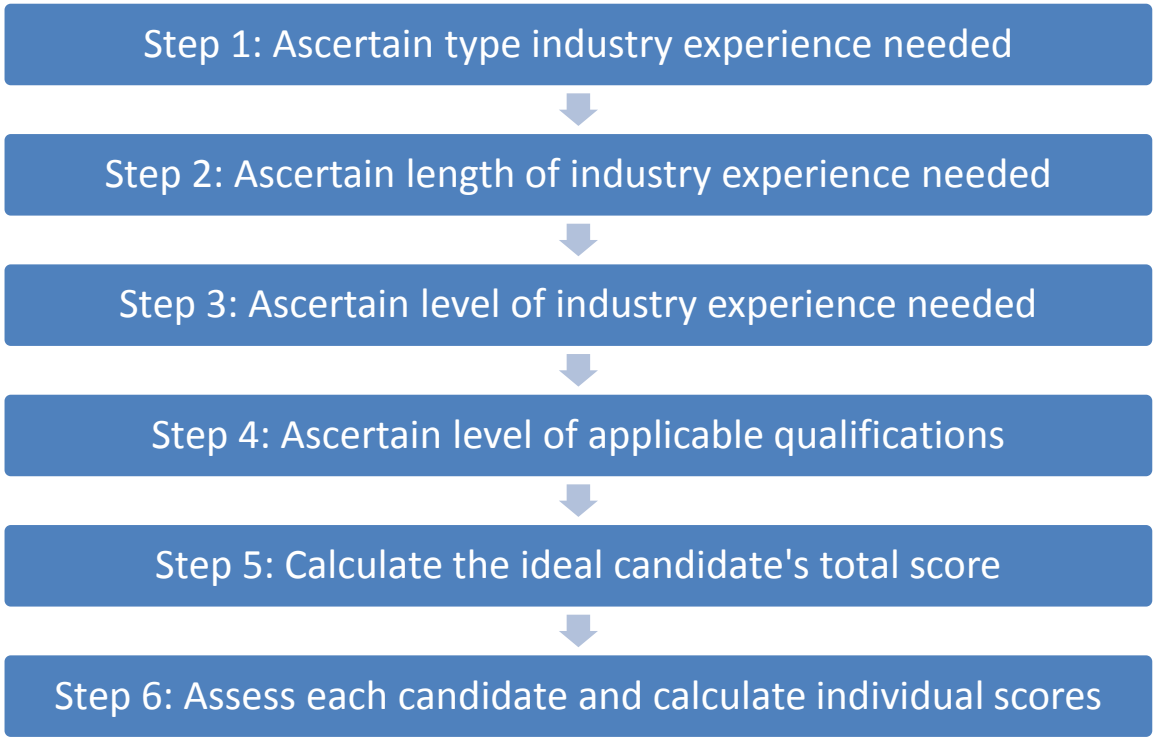
= *Sc* x *Yt* x *Ac* x *Qa*
= 5 x 3 x 5 x 4
= 300

For example, the ideal candidate will:

- be a person with executive experience in banking;
- have 10+ years of experience;
- have the most experience in the number of specific activities of the particular bank; and
- have a post-graduate qualification in, or combination of, banking, finance, business or law.

How to use the model

The use of the model is illustrated by means of an example where the board of a bank needs to appoint a non-executive director. The following are the steps that need to be followed when using this specific model to evaluate the skills, knowledge and experience of non-executive directors:



- **Step one:**

The board decides which type of industry experience is acceptable and which should ideally be part of the non-executive director's résumé. This step would be guided by the experience of current board members and the type of experience that is needed. In the example, the board might decide that general banking experience is required or, as an alternative, financial experience such as that provided by a qualified chartered accountant. A score of 1 to 5 is set.

- **Step two:**

The board decides which length of the applicable industry experience is acceptable and which should ideally be part of the non-executive director's résumé. In the example, the board might decide that a fairly senior non-executive is required and could state that at least ten years' banking experience are required. A score is set for this component as explained above.

- **Step three:**

The board decides which level of the applicable industry experience is acceptable and which should ideally be part of the non-executive director's résumé. In the example, the board might decide that a fairly senior non-executive is required and could state that at least ten years' relevant experience at a manager level is required. A score is set for this component as explained above. A score is set for this component as explained above.

- **Step four:**

The board decides which level of the applicable academic qualifications is acceptable and which should ideally be part of the non-executive director's résumé. In the example, the board might decide that a professionally qualified non-executive is required and could state that a chartered accountant is required. A score is set for this component as explained above.

- **Step five:**

The board decides on the ideal candidate by calculating Ts.

- **Step six:**

Each of the candidates can now be scored using each component of the model. The candidates with a score closest to the ideal acceptable score (Ts) will be the candidates who will be evaluated further in order to select the most applicable candidate using the most applicable method.

Once the six steps have been completed, a number of possible candidates can be selected. These selected candidates can now be evaluated further by whichever means the particular company sees fit.

An example of the use of the model

Assume a board of directors has set the criteria for selecting new non-executives as follows:

- a person with executive experience in banking (score of 5);
- should have 10+ years' experience (score of 3);
- should be the candidate with the most experience in the number of specific activities of the particular bank (score of 5); and
- should have a post-graduate qualification in, or combination of, banking, finance, business or law (score of 4).

The total score is 300.

Assume further that the board has to decide between the following two candidates:

Candidate A, a qualified accountant, has been an executive manager in a bank for 12 years in three main activities: credit, treasury and administration of the bank.

Candidate B, a lawyer, has been middle manager in a bank for 6 years in the compliance division.

The candidates will score as follows:

Component	Candidate A	Candidate B
Type of industry (Sc)	5	3
Years' experience (Yf)	3	2
Type of activity (Ac)	3	1
Qualifications (Qa)	4	3
Total score	180	18

Using the model the results are:

Candidate A scores 180/300 = 60

Candidate B scores 18/300 = 6

Based on the above, candidate A is the preferred candidate.

Conclusion

Following the world-wide financial crisis in 2008, serious accusations were levelled at the boards of companies. Boards were being accused of incompetence and ineffectiveness. There were also accusations about the non-executive members of boards. It was alleged that the non-executive board members were not competent enough to fulfil their duties.

In addition, increasing levels of boardroom regulation and risk have also placed large demands on the non-executive directors of companies meaning that selecting the candidates with the right knowledge, experience and skills was of the upmost importance.

The review of the international perspective on the selection of non-executive directors has revealed certain international trends in the selection of non-executive directors. From the literature review, it was gathered that there is no consistency and agreement between companies worldwide on how the selection of non-executive directors should be conducted. In addition in their annual reports, these international companies were silent on the selection criteria of non-executive directors.

However, from the literature review there seems to be a shortage of non-executive directors in the corporate with the main reason being cited as the increase in compliance with the corporate governance rules in countries around the world.

In view of the accusations, a study was conducted amongst banks in South Africa aimed at obtaining information about the criteria used to select non-executive directors of South African banks. The target population included all banks in South Africa licensed by the South African Reserve bank. As was the case internationally, it was found that there were no consistency and agreement between the banks in South Africa on how the selection of non-executive directors should be conducted.

In response to this situation, the recommendations of this study focused on how to select non-executive directors with strong and diverse banking experience as well as prior business experience. In reaching its goal, the study proposed a specific selection model, the use of which could contribute to selecting the most appropriate new non-executive member of the board. This specific model is used to assess a non-executive director's knowledge, experience and skills.

The model is not designed to be used in isolation but is a tool that identifies non-executive directors for the selection process. The other steps in the selection process still have to be completed, such as the actual voting process and the testing of soft issues, such as management skills, planning skills, boardroom skills, etc.

The use of this model could contribute towards the boards of banks and companies being true representative democracies and not private clubs.

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CORPORATE SCANDAL: BAD APPLES OR BAD DESIGN OF CORPORATE ENVIRONMENT, THE CASE OF PROTON BANK

Themistokles Lazarides*

Abstract

Corporate scandals during the last years have been proven to be stigmata on the corporate environment. Greece has been the focus point for its public financials, but it has its share of corporate scandals. The last thirty years a rapid reform has taken place in Greece. The legal, regulatory and capital market framework has changed in order to create a more comparable, compatible and isomorphic European business environment.
Initiatives like the introduction of IFRS (2003-2004), corporate governance best practices (2002-2003), monitoring and auditing reforms, were some of the main tools of creating a new business environment in Greece. The paper argues, using specific data that these initiatives weren't efficient enough, not by designers fault but because they weren't appropriate for the fundamental characteristic of the social, political, legal and economic business environment of Greece. The paper, using the Proton bank case, shows these inefficiencies and highlights the fallacies of the policy makers in Greece and in Europe.

Keywords: Banks, Greece, IFRS, Corporate Governance

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1 Introduction

The occurrence of corporate scandals throughout the previous fifteen years has been without a doubt numerous and the causes identified are also numerous. A discussion has started to identify the causes. This has lead to a philosophical discussion about the role corporations in the current business environment and the mechanics of the occurrence. Studying the causes of these scandals can help academics, executives, shareholders, regulation and public policy makers to redesign – reinvent a more stable system of values, procedures, methods, controls. The crisis hasn't been isolated in USA, evidence of a systemic meltdown (scandals, corporate defaults, etc.) is found all over the world. Corporate ethics, auditing procedures and methods, regulation, organizational structure, corporate culture, market inefficiencies, etc. have highlighted by many as the areas of the systemic meltdown of 2002 and 2008.

During the last two decades a significant effort has been made to establish an isomorphic business environment around the world. Initiatives like the introduction of IFRS, corporate governance good practices, common provisions in the regulative and legal framework, etc. aimed to help to create a more efficient market environment worldwide. Although these initiatives were in right direction, there are no panaceas to the issues of transparency, equitable treatment of shareholders, stakeholders' right recognition, shareholders' rights protection, effectiveness of corporate governance (as these issues or principles are cited by OECD (2004)).

Greece was one of the European Union countries that participated in this effort. Major changes in Greece are: the introduction of corporate governance in 2002 (Law 3016/2002 and voluntary initiatives mainly focused on best practices), the introduction of International Financial reporting Standards (IFRS) in 2003-2004 and mandatory opening of money and capital markets. All these changes have been initiated by outside stimuli, mainly European Union (EU), which was promoting legal harmonization of all regulation in EU members.

The banking sector has a significant impact on the economy. Many of the corporate scandals during the last decade have at their center a bank. Banks have some unique characteristics (Capital structure, Risk structure, Ownership structure, Management and governance structure, Product cycle, Impact on society and economy, etc.). These unique characteristics and their size and role in the economy distinguish them from manufacturing and other service corporations. Their product life cycle

may be extremely long term and extremely short term. Furthermore, the banking sector faces risk very differently and very different risks and its dependence of managerial effectiveness, skill and knowledge is higher from other sectors of the economy. Finally, the product and services provided by the banking sector are in many occasions too complex for a non specialist to comprehend their managing and evaluation processes. Hence, corporate governance and financial reporting is crucial for this sector.

Issues like asymmetry of information and moral hazard due to the special nature of the banking sector. A special characteristic of the sector is its interconnection (interbanking lending and their monitoring and lending relation with the central bank). "Given the level of asymmetric information between banks and its prospective creditors and shareholders, and the importance of a stable banking system, the capital levels of commercial banks are subject to substantial regulation" (Akhigde, et al., 2012). The problem with this statement in Greece is that although the regulation exists, the inability or ineffectiveness of monitoring authorities leaves the regulation provisions inert.

The recent corporate scandals and the inability of the public policy makers to present a stable and feasible plan to exit the crisis are phenomena of the inability to control the power and influence of the banking sector. Even after ten years from the scandals, the role of banks and their operational – regulating framework is still under debate. Regulating the balance of interests of the banking sector is a difficult task. Difficulty factors are: the complexity of the products, the extremely small product cycle, the variety of stakeholders and the high political influence that the banking sector has.

The paper argues that the banking sector in Greece has some characteristics that differentiate it from the banking sector of other countries. The Proton Bank scandal highlights these characteristics and reveals the flaws of regulation and the mismatch of the fundamentals of the business environment and the framework (operational, legal, social, etc.) that has been established. Especially the paper focuses on the IFRS introduction and the introduction of corporate governance principles and practices in Greece.

2 The Banking System in Greece

The differences of the banking in Greece with the perspective sectors in other European are many. The banking system in Greece is mainly characterized by high concentration. Ownership concentration in the Greek banking sector is twice or thrice the concentration of the mean in Anglo-Saxon countries and other European developed countries and their asset portfolio and capital mix is also very different. Hence the banking sector in Greece has unique characteristics that need to be addressed in order to analyze the causality of the phenomena regarding the banking scandals. The notion that one theory can explain universally the behavior and ethics of the banking sector is deeply flawed. When the organizational, cultural, legal-political, economic (mainly structure and development of markets) fundamentals are diverse the same diversity must be for the theoretical approach of any misconduct, ethical divergence or scandals. The top five banks hold the 68.45% of the total assets in the banking sector, they have the 72.43% of the loans and the 73.59% of deposits (see Table 1). The Hellenic Banks Association (2010) reports a 69.5% Herfindahl – Hirschmann index (in assets) for 2008, 67,7% for the year 2007 and 66.9% for the year 2003. The data shows that throughout the last decade the banking system in Greece has been concentrating. The last mergers (of ATE Bank and General Bank with Piraeus Bank, the intension to sell Post Bank and the default of Aspis Bank) contribute to the concentration of the Greek banking system. Greece is not an international financial centre and the cooperative banking has not been as successful as in other countries (Germany, Austria, Spain and Italy)

Table 1. Market Share (in Assets, Loans and Deposits)

Bank	Assets	Loans % to Total	Deposits % to Total
NBG	17,60%	19,58%	24,68%
Eurobank	12,80%	16,74%	13,10%
Alpha Bank	11,20%	15,54%	14,50%
Piraeus Bank	9,30%	12,47%	11,58%
ATE	6,60%	8,10%	9,74%
Commercial Bank	5,80%	9,30%	7,14%
Marfin	3,90%	5,47%	4,33%
TT	3,70%	3,28%	5,95%
Cyprus	3,30%	4,16%	4,76%
Citibank	1,60%	0,00%	0,00%
Milennium	1,40%	2,08%	1,52%
Attica Bank	1,10%	1,53%	1,62%

RBS	1,10%	0,00%	0,00%
General Bank	1,00%	1,75%	1,08%
HSBC	0,80%	0,00%	0,00%
Cooperative banks	0,80%	0,00%	0,00%
Probank	0,80%	0,00%	0,00%
Proton	0,70%	0,00%	0,00%
Aspis	0,50%	0,00%	0,00%

Sources: Bank of Greece, UBS

Table 2. A taxonomy of systems of corporate governance

	Market-oriented		**Network-oriented**	
Country class	**Anglo-Saxon**	**Germanic**	**Latin**	**Japan**
Concept of the firm	Instrumental, shareholder-oriented	Institutional	Institutional	Institutional
Salient stakeholder(s)	Shareholders	Industrial banks, employees, in general oligarchic group	Financial holdings, the government, families, in general oligarchic group	City banks, other financial institutions, employees, in general oligarchic group
Importance of stock market in the national economy	High	Moderate/high	Moderate	High
Active external market for corporate control	Yes	No	No	No
Ownership concentration	Low	Moderate/high	High	Low /moderate
Performance-dependent executive compensation	High	Low	Moderate	Low
Time horizon of economic relationships	Short term	Long term	Long term	Long term

Source: Weimer and Pape (1999)

Contrary to what happens in the product market, ownership in Greek banks is relatively (to the other sectors of Greek economy) dispersed according to the Greek standards to ownership concentration (the average sum of ownership above the threshold of 3% of the equity is quite high). Ownership concentration varies from bank to bank and two groups of can be identified. The first group has high ownership concentration and involve foreign banks that have acquired banks in Greece (Commercial Bank and General Bank) or they are state owned banks (TT, ATE). The second group (NBG, Piraeus Bank, Alpha Bank) are banks that evolved through the capital market and show the same characteristics of an Anglo-Saxon corporate governance system corporation (see Table 2). But these characteristics do not apply to all Greek banks. The five largest in size banks do have these characteristics. Smaller banks seem to retain the characteristics of the Germanic or Continental Europe system. Greece's legal framework comes from a mix of German and French law (Lazarides, 2011) the market for corporate control has been relatively active during the last 10 years and the largest banks have shown, during the last two decades, a dynamic in acquiring firms-banks abroad and extending their activities in the neighbouring countries, eastern Europe and western Europe.

Table 3. Average Ratios (2011-2008)

	National Bank of Greece SA	Eurobank Ergasias SA	Alpha Bank AE	Piraeus Bank SA	Marfin Egnatia Bank SA	Emporiki Bank of Greece SA	Millennium Bank SA	Proton Bank S.A.	AVE-RAGE	Divergence
Loan Loss Res / Gross Loans	3,33	2,83	2,95	2,24	2,75	7,14	1,45	3,36	3,26	3%
Loan Loss Prov / Net Int Rev	27,80	42,27	79,75	77,57	35,34	105,62	23,99	32,97	53,16	-38%
Loan Loss Res / Impaired Loans	56,86	57,79	50,50	47,03	52,65	43,25	35,07	136,77	59,99	128%
Impaired Loans / Gross Loans	6,13	6,21	6,37	4,90	5,05	16,89	4,78	3,31	6,70	-51%
Impaired Loans / Equity	44,21	60,78	62,60	55,57	63,37	415,02	66,94	10,55	97,38	-89%
Tier 1 Ratio	10,90	9,83	10,35	8,82	7,55	7,02	8,82	14,06	9,67	45%
Total Capital Ratio	11,38	11,76	12,35	10,32	10,61	9,22	9,65	12,82	11,01	16%
Equity / Tot Assets	8,82	6,99	7,78	6,24	5,71	3,96	5,51	16,07	7,63	110%
Equity / Net Loans	14,32	10,54	10,33	9,28	8,64	5,16	7,30	29,12	11,83	146%
Equity / Cust & Short Term Funding	10,95	9,40	9,95	7,87	6,67	5,03	6,78	20,68	9,67	114%
Equity / Liabilities	9,71	7,59	8,60	6,77	6,15	4,25	5,87	19,59	8,57	129%
Net Interest Margin	3,12	2,54	2,36	2,56	2,24	2,38	2,61	3,53	2,67	32%
Return On Avg Assets (ROAA)	0,78	0,67	0,66	-1,65	0,16	0,58	0,22	0,57	0,25	130%
Return On Avg Equity (ROAE)	10,63	10,34	9,63	-44,62	3,11	0,49	3,17	5,92	-0,17	-3678%

Source: Bankscope

3. The IFRS Introduction, Auditing Standards and Corporate Governance in Greece

The IFRS introduction in Greece has taken place in 2003-2004. The introduction was mandatory due to the compliance with a European Directive. Hence it was not an initiative that began endogenous. The introduction of IFRS in Greece "may prove to be an immaterial change if it is not combined with parallel improvements in other factors that influence the financial reporting system" (Karampinis and Hevas, 2010). The reporting of financial or other information is not related with financial performance (Lazarides et al. 2009) and it is more related with the costs (direct or indirect costs such as the loss of control) related to the introduction of IFRS (Sykianakis, Naoum and Tzovas, 2012).

IFRSs' scope and perspective are broader. Central to the argument by the paper is the IAS 24 provisions. IAS 24 states that "The objective of this Standard is to ensure that an entity's financial statements contain the disclosures necessary to draw attention to the possibility that its financial position and profit or loss may have been affected by the existence of related parties and by transactions and outstanding balances, including commitments, with such parties". IFRS require information disclosure that goes well beyond accounting and financial information. For example: "The disclosures required shall be made separately for each of the following categories:

(a) the parent;

(b) entities with joint control or significant influence over the entity;

(c) subsidiaries;

(d) associates;

(e) joint ventures in which the entity is a venturer;

(f) key management personnel of the entity or its parent; and

(g) other related parties" (IAS 24)

Information under the new financial – accounting standards and under the new auditing standards (which refer directly to the international auditing standards as alternatives to the Greek ones) has the potential to be more accurate, timely and detailed. Greece in 2002 has enacted a corporate governance framework that facsimiles the European framework (introduction of the institution of the independent directors, board committees, etc.). These frameworks can be efficient when the organizational and motivational scheme can facilitate the goal of transparency and rational decision making process.

The auditing standards in Greece are adequate because they were designed to be compatible (see Greek Auditing Standard 1120) with the International Standards on Auditing (ISA). ISA can be used as an alternative or supplementary to the Greek standards if the auditor thinks that the ISA standards are more suitable to conduct an effective and efficient audit. The auditing firms in Greece are subsidiaries or partners with the most prestigious international auditing firms. Hence, auditors in Greece have the same tools, methods and restrictions as in any European country.

The final piece of the information cycle is corporate governance framework and market for corporate control. Corporate governance in Greece is different than the one in Anglo-Saxon countries. The fundamental characteristics of ownership, management and capital market structures and finally the product market is characterized as oligopolistic. Greek firms have high ownership concentration (>52%) and they are mainly family firms or controlled by a group of stockholders (Lazarides, et al., 2009). Free float is relatively small in percentage (20-50%) and the ability to achieve control through the capital market is limited. The members of the family or the controlling group are actively involved in management and normally, there is no distinction between management and ownership. Management and the Board of Directors are closely related to the dominant shareholders. Managers and the majority of the directors that are not members of the family or the controlling group are closely connected with these groups and their decisions are subject to their control and monitoring.

The Greek business model does not favor Mergers and Acquisitions (M&As). Dominant shareholder group are not willing to lose power and control over the firm. Controlling the firm has been made a goal for the governing group. As long as ownership concentration remains high there is no motive for any M&As to take place. Potential buyers cannot acquire a substantial portion of the firm's equity capital to actively participate in governing the firm. But, even so, M&As during the last decade have been a strategy that Greek firms didn't abolish, on the contrary an inclination towards has been observed.

The business environment in Greece is not characterized by high frequency and value of transaction in M&As. M&As in a country like Greece have a different scope-goal and determinants, than in a typical Anglo-Saxon country. The main impediments for the lack of M&As are the ownership structure and the relatively undeveloped capital market (the costs of a M&A remain high and the capital necessary for the transaction is rarely obtained by the banking system). Greek firms' M&A activity depends mainly on the balance of power within the firm, rather than performance or the existence of an active market for corporate control. Fundamentally, M&As in Greece are the result of product market competition (Tsagkanos et al. 2008) and

opportunity (Lazarides, Drimpetas and Pitoska, 2010) and managerial incentives (Tampakoudis, Subeniotis and Eleftheriadis, 2011).

4. The Proton Bank Case

In this environment the exploitation of minority shareholders and other stakeholders like government, depositors and other capital providers can be exploited by the dominant group. This is the case of Proton Bank.

Proton Bank was founded in 2001 by John Markopoulos, a stock broker. After his death in 2004, ownership has changed many times. In 2005 Proton Bank was listed in Athens Stock Exchange (ASE) and acquired Omega Bank (a small bank with many financial problems at the time). In 2007 Piraeus Bank acquired (exchanging shares) the 31.3% of the equity capital and took over the management of Proton Bank. Two and a half years after that (December 2009) Piraeus Bank sold its shares to Mr. Lavrentiadis (the cost of the transaction was 70.6 mil. € or 3,6 € per share). On December of 2010 the bank had 32 branches and 577 employees. On March 2011 business loans increased by 70.7%.

The equity share price (see Graph 1) reveals the organizational and financial and ownership turmoil that the firm had gone through. From 10 € per share in the beginning of 2008 the price has fallen to 1 € per share before the end of 2008. At 7/10/2011 the price was 0,18€ per share. The total amount of capitalization was 11,28 million €. During the next working day ASE has stop any trading for Proton Bank stocks as a precaution to protect the shareholders!

Figure. Proton Bank share price

It took only eighteen months for the bank to fail. The failure was the result of a series of transactions that lead the bank to insolvency. Bank of Greece intervened when the Proton Bank's shareholders refused to provide more capital to cover the bad loans. Bank of Greece in its report suggested that are a numerous of evidence that involve money laundering and misappropriation of funds. On November of 2011 a new bank was created to transfer deposits and loans. The new bank was recapitalized (with 250 million €) by EFSF and the Hellenic Deposit & Investment Guarantee Fund (in total the amount needed to recapitalize the bank was 500 million €) in order to be sold to another bank later. At the same time the provisions of the Law 4021/2011 have been activated. Under the new law a new bank must be founded to receive any "healthy" assets and this bank must be sold to a third party in two years. The shareholders of the old bank will receive nothing after the liquidation of the rest assets and the payment of the Hellenic Deposit & Investment Guarantee Fund. It is estimated that the total cost for the bail out of Proton Bank could be up to 1,5 Billion Euros.

The string of transactions that lead to failure and collapse of the bank are a series of M&A and sales. Although a small number of the transactions have been analyzed by auditors and the Bank of Greece, it seems that the dominant shareholders

have taken advantage of the absolute decision making right. The basic mechanism is best described by Jesover and Kirkpatrick (2005). They argue that when control pyramids or cross shareholdings are active in a corporation or group of corporations this may lead to a separation of cash and voting rights. This separation leverages the private benefits of the dominant group. The risk of ownership is diffused and at the same time total control of the subsidiary corporations is ensured. The benefits of power and control emanates from the control of assets.

The Proton Bank dominant group has been involved in a series of sales using the bank to obtain the capital to acquire the profitable subsidiaries at book value or even less. The Alapis Corporation owned by Mr. Lavrentiadis bought in 2008 Gerolimatos S.A. at the cost of 200 million Euros. The next year the corporation bought the 100% of the equity of Beauty Works. On July of 2009 Gerolimatos Cosmetics is founded to absorb the cosmetics operations of Gerolimatos and Alapis. On June 2010 Alapis sales eight subsidiaries of the group at the price of 144,7 million Euros, in order to focus only in pharmaceuticals products. Amongst the companies that have been sold are Gerolimatos Cosmetics and Beauty Works. The buyer was Ballis Home Care that is owned by a former employee of Mr. Lavrentiadis. The purchase was funded by Proton Bank. This is an example of the series of transactions. The loans were approved on the day of application or even without any application or business plan. No guarantees (personal or otherwise) have been given as collateral to mitigate the credit risk of the bank.

The total amount of loans was 2,4 Billion Euros. Thirty per cent of these loans have been given to firms that seem to be related to Mr. Lavrentiadis. The operations of these firms are extremely connected Many of them have solely supplied one the other with products.

The Hellenic Financial Intelligence Unit has pressed criminal charges against Mr. Lavrentiadis. The independent unit has accused Mr. Lavrentiadis that he used the bank to accumulate deposits, using high interest rates, to give loans to corporations that were owned by him, or sold but continued to be under the influence of him.

According to Proton Bank's annual report, the bank had two independent board members and three non executive members (in accordance with the local corporate governance law) and an additional member, representing the state, could attend all board meetings. The positions of the president of the board and the CEO were held by different persons. One member of the board (with long tenure, more than 5 years) was the former president of the Athens Stock Exchange, university professor with specialty in finance and corporate governance. The board of directors had many committees i.e. audit, remuneration, executive and risk assessment was conducted by the audit committee and the department of internal control.

As Table 3 shows Proton Bank has reported a set of financial statements that didn't alarm any investor. On the contrary the ratios show a bank that is relatively in better financial position than other banks in Greece. Proton Bank's statements have been audited by a very prestigious auditing firm and by two monitoring agencies (Hellenic Capital Market Commission and the Bank of Greece). None of them have identified any risk factors or the possibility of false reporting in their studies or reports. The safeguards placed to ensure that the Greek corporate environment is safe to invest, in the case of Proton Banks, failed.

5. Fallacies and fundamental errors

Although IFRS introduction is an improvement of the reporting standards the introduction per se is not adequate to mitigate the problems of misreporting or taking advantage of the inside information and power accumulation. The main problem is not the IFRS per se. They were designed to facilitate a specific type of corporation, with specific characteristics, organizational dynamics, capital market conditions and especially goals.

Ownership concentration, organizational development paradigms, regulation – monitoring framework and inefficiency are the main factors of corporate failures in Greece. Hence a mix of endogenous and exogenous variables contributes to the creation of a business environment that doesn't have the necessary mechanisms to prevent corporate failure and the exploitation of the relatively weak protection minority shareholders position. The enactment of laws and regulations isn't adequate to prevent any failures or misappropriations. On the other hand the lack of an efficient capital market can create opportunities and threats.

Any initiatives to reform the business environment had little impact in Greece. The problems are that these initiatives were designed for a different type of economic activities and fundamental corporate characteristics. Initially these initiatives (IFRS, corporate governance best practices, monitoring and auditing standards, capital market provisions, etc) were designed for countries with Anglo-Saxon characteristics. These initiatives, although they weren't panacea for the prevention of corporate failures and misappropriations, they were a good start to begin discussing the issues that lead to ones.

6. Conclusions

Corporate collapses or failures do not happened in an instance. Usually the causes of the collapse or

failure have existed long time before the collapse. The causes may be systemic and not and they may not be easy identified. Corporate culture, ethics, incentives failure, organizational and governance failure, etc. are some of the main reasons. Introduction of regulations and policies that is not suited for the characteristics of the corporations and the historic development of the business environment could be another source of failure and corporate collapses. Policy making failures and the other causes may coexist.

The Proton Bank case can or should be a wakeup call for the policy makers in Greece. The scandal has already cost the taxpayers a lot of. The main fallacies and errors of the banking system are still present. During the last two decades all the initiatives to establish a more isomorphic corporate environment in European Union failed. There is a need to create a new set of respective initiatives to address the special issues of the corporate environment.

The Proton Bank case is a failure of business ethics, legislation, regulation, auditing and monitoring authorities. The main question is: Should banks be bailed out by tax payers? This question troubles the whole financial and political system. The fact that banks are a crucial – integral part of a globalized economy cannot justify by itself the socialization of losses.

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VALUES-BASED MANAGEMENT IN COOPERATIVE BANKS: BALANCING SELF-PERCEPTION WITH PUBLIC PERCEPTION?

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Abstract

The main target of cooperative banks is not to maximize profits but to jointly manage a business. With this in mind, assuming a stakeholder-oriented behavior of cooperative banks, we address whether cooperative banks consider multiple stakeholder values and take a sustainable governance approach. We conduct a content analysis of the annual reports of German cooperative banks, with reference to two research questions: Are the basic principles and values of cooperatives optimally realized and communicated to external stakeholders? Can cooperative banks comply with the requirements of the triple bottom line, namely the economic, environmental and social responsibility? We find that cooperative banks do not effectively communicate their cooperative values and thus inadequately manage to demonstrate the implementation of their core values. Yet cooperative banks avail of a sustainable business model that offers the potential of sustainable business conduct.****

Keywords: Corporate Social Responsibility, Sustainability, Cooperative Banks, Values-Based Management

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Introduction

"Cooperatives are a reminder to the international community that it is possible to pursue both economic viability and social responsibility" (United Nations, 2012). With these words, the Secretary-General of the United Nations Ban-Ki Moon explained the UN's decision to declare the year 2012 as the International Year of Cooperatives. In doing so, he dignified the economic form that counts over 800 million members in over 100 countries worldwide and that provides more than 100 million jobs (United Nations, 2011). In terms of the number of members, cooperatives are the largest economic organization with about 20 million members in Germany. Cooperatives are thus a fundamental part of the German society and economy with over 7,500 branches and 800,000 employees (Wieg, 2012).

The need for organizations to be responsible and accountable has become increasingly important in recent years. The impact of globalization and growing stakeholder activism have forced companies to become social entities that hold economic, environmental and social responsibilities (the so-called triple bottom line) to the well-being of society. Consequently, organizations are not only expected to comply with economic and legal obligations but to meet certain responsibilities to society beyond profit-maximization and legal compliance (McGuire, 1963). Moreover, the implementation and communication of accountable and transparent corporate social responsibility (CSR) initiatives is nowadays perceived as a strategic driver of businesses rather than just an option (Baron, 2001). Research by Ringle (2010) revealed that the characteristics, principles, and values of cooperatives represent a crisis-resistant foundation, promote long-term success and therefore make cooperatives the most sustainable form of business. Since cooperatives sincerely integrate their fundamental ideas, namely the three S-principles self-help and identity, self-government and democracy, and self-responsibility into their sustainable business model, they are able to align their economic interests with social needs and demands (Wieg, 2012). From this, a positive image of cooperatives results and Germans associate the term cooperative with features, such as long-term economic thinking, proximity, regionality, and

social responsibility (Jungmeister, 2012). German Chancellor Angela Merkel even referred to cooperatives as being the business model for the future, because "cooperatives are examples of how to integrate economic, social and environmental goals" (International Co-operative Alliance, 2012).

In Germany, cooperative banks represent the largest group of cooperative companies with 17 million members and 190,000 employees. Especially in the banking industry, competitive pressure, that leads to price competition (Porter, 2008), is very high and can only be tackled with an attractive business model and the communication of a business approach that does not only consider economic (short-term gains) but also long-term social, ecological and economic longevity (Helmbrecht, 2012). One possibility to communicate a sustainable business model is the disclosure of information on financial performance, corporate conduct and corporate culture to the relevant stakeholder groups. Keller (2006) thus emphasizes the importance of the annual report as an instrument of corporate communication, which also serves the marketing of corporate shares, reputation and socially responsible initiatives. Moreover, effective reporting is assumed to improve the communication of membership benefits as well as to increase the reputation of cooperative banks as a sustainable and value-oriented business model (Wendler, 2011).

This raises the question of what constitutes the specificity of cooperatives in the 21st century. Do cooperatives' make their characteristics, principles and values transparent and are they actually suited to advance or conduct sustainable business? If so, where and how are these values with respect to economic, ecologic and social responsibility implemented in practice? The objective of this study is thus, to conduct a content analysis of annual reports of German cooperative banks (all situated in the German federal state Bavaria) in order to investigate, how cooperative banks put their traditional principles and values into practice, whether they use these principles as a basis for their corporate conduct, and whether they adequately communicate this to their external stakeholders. Finally, a possible compatibility of the cooperative values with the principles of corporate social responsibility is reasoned. Based on this research objective we try to highlight the following two research questions:

- Do cooperative banks optimally realize their basic principles and values and communicate them adequately to external stakeholders?
- Does cooperative banks' business conduct comply with the requirements of the triple bottom line, namely the economic, environmental and social responsibility?

1 Theoretical concepts and principles of German cooperative banks and corporate social responsibility

1.1 German cooperative banks

The foundations of the cooperative thinking and the emergence of the legal form of registered cooperative (eG) in Germany were laid by Victor Aimé Huber, Hermann Schulze-Delitzsch, Friedrich Wilhelm Raiffeisen and Wilhelm Haas. These initiators and organizers of the German cooperative movement were not only responsible for the development and spread of cooperative principles but also for the current cooperative law (Engelhardt, 1990). The activities of the cooperative pioneers ranged from promoting housing cooperatives and non-profit housing by Huber, the formation of urban and rural credit and goods cooperatives by Schulze-Delitzsch and Raiffeisen, and the organization of cooperatives in central cooperative association structures by Haas. In this context, Victor Aimé Huber, one of the first and most important cooperative theorists, coined the idea of *self-help* (Jenkis, 1990). Friedrich Wilhelm Raiffeisen advocated that the members of cooperative banks and the local environment would personally benefit from their joint effort based on moral values, such as *charity* and *social responsibility*.

In Germany, 7,842 cooperatives were registered at the end of 2011 counting around 21.2 million members. As cooperatives are owned by their members, their main target is not to maximize profits but rather to manage a joint business (Stiglbauer, 2012). There are five sectors of cooperatives in Germany. Whereas rural cooperatives are the biggest sector with 2,407 cooperatives in late 2011, industrial cooperatives amount to 2,329, housing cooperatives to 1,921, cooperative banks to 1,121, and consumer cooperatives to 30 companies. However, the sector that counts most members in Germany are cooperative banks with 17 million members, followed by housing cooperatives with 2.85 million members, rural cooperatives with 0.55 million, industrial cooperatives with 0.41 million members, and consumer cooperatives with 0.35 million members (Stappel, 2011a).

Cooperative banks play a significant role in the cooperative sector, and therefore also in the German banking sector. Of all 2,080 registered banks in Germany, there are 1,126 cooperative banks, 436 public-law banks, and 388 private credit/commercial banks. Although cooperative banks dominate other banks significantly in number, no new foundation of cooperative banks has occurred since 2001 in Germany. Despite a slight decline in the number of cooperative banks from 1,138 in 2010 to 1,126 in 2011, the

cooperative banking sector is still the major pillar of the German banking system (German Federal Bank, 2012). Looking at the total assets of all German universal banks, cooperative banks and their two central banks (see below) held a market share of 16.7% in mid-2010 and of 17.4% in mid-2011 through the expansion of their secure funding. In the retail-banking sector, cooperative banks had a market share of 24.6% in mid-2011 due to their close customer relationships. In the lending and deposit-taking market, cooperative banks achieved a market share of 29% for lending to small businesses and self-employed in 2011, which expresses the effectiveness of their regionally oriented business model. Overall, about a quarter of all investors in Germany held their deposits at cooperative banks and their two central banks in 2011 (Stappel, 2011a).

German cooperative banks offer a nationwide branch network with 13,350 branches and serve about 30 million customers (about 17 million or 56% of them are members). Even if the number of branches has fallen by 35% (from 20,735 to 13,350) since 1993, this can be explained by the increasing importance of online banking, and the therefrom-resulting structural change in the banking distribution channel (National Association of German Cooperative Banks, 2011). Since the number of online banking accounts has outreached 11.7 million in 2010, cooperative banks have specialized in the provision of electronic direct banking and now hold a market share of more than 25% of all electronic direct bank connections in Germany. Although critics argue that the quality of personal counseling has suffered due to the shift toward online banking, cooperative banks register a continuous increase in the number of members of approximately 1% to 2% per year (Stappel, 2011b).

All German cooperative banks are organized in two central institutes, the Deutsche Zentral-Genossenschaftsbank (DZ Bank) and the Westdeutsche Genossenschafts-Zentralbank (WGZ Bank). Both central banks represent clearing bank, liquidity manager and service provider for the local cooperative banking sector (National Association of German Cooperative Banks, 2011). The central organization of the cooperative banking group (National Association of German Cooperative Banks - BVR) acts like a statutory auditor to check cooperatives' accounting, auditing, management quality and management practice (Stiglbauer, 2012). Another benefit of the membership in the BVR is the BVR protection scheme, which secures the credit standing of the member institutions by averting or remediating imminent financial difficulties or insolvencies. What is more, the BVR's guarantee fund and guarantee network represents the "world's oldest privately funded deposit-guarantee scheme for banks" (Götzl and Gros, 2010, 34). Consequently, neither any affiliated bank nor any depositor have registered insolvency or lost their deposits. Since cooperative banks' focus on value creation, regionality and members proves to be robust and reliable, the rating agency Standard & Poor's raised the credit rating of the BVR from A+ to AA- in December 2011. Hence, the BVR avails of the highest credit rating of all state-owned banks in Germany (Stappel, 2011a) and is therefore able to create trust among its members and to provide a crisis-resistant business model as well as stability within the German financial sector. This is also evident in the fact that cooperative banks have the smallest rate of insolvencies beyond all German organizations of less than 0.1 % (Wieg, 2012).

At the end of 2011, there were 296 local cooperative banks in Bavaria, which served 6.7 million customers, of whom 2.45 million (about 37%) are also members. These customers and members accessed long-term, medium-term and short-term loans worth € 71.6 billion in 2011 while depositing savings worth € 99.9 billion. The Bavarian cooperative banks offered the densest branch network with 3,066 branches in 2011 and provided jobs to 35,151 employees (Cooperative Banks of Bavaria, 2011). Although Bavarian cooperative banks are considered to take an old-fashioned approach to banking by relying too much on their conservative investment strategy, their regionally oriented business model proved stable and reliable against the backdrop of the sovereign debt crisis. Due to their characteristics of preferring a transparent, long-term-oriented and regional business model, Bavarian cooperative banks increased their number of members by 34,000 members from 2010 to 2011. In terms of the number of members, all local cooperative banks in Bavaria represent the largest economic organization in Bavaria that accumulated a balance sheet total of € 128.5 billion in 2011, equaling an average balance sheet total of € 434 million per cooperative bank. Moreover, the liable capital of all Bavarian cooperative banks amounted to € 11.6 billion in 2011. Hence, the Bavarian local cooperative banks already meet the required equity-to-assets ratio of Basel III before its mandatory introduction (Cooperative Banks of Bavaria, 2011).

1.2 Characteristics, principles and values of cooperative banks

The characteristics, principles and values of cooperative banks have evolved over decades. Even though most of these principles have remained largely consistent during the last 125 years, a synthesis of tradition and change has caused them to adjust to society's demands and needs in order to foster the fundamental values of cooperatives (Ringle, 2010). In the following, we specify the

most important principles and characteristics of cooperative banks.

The principle of *member promotion* is a central principle of cooperative banks. Besides representing the guiding maxime of cooperatives, member promotion also reasons their right to exist (Ringle, 1994). According to German legislation, cooperative banks are either considered to be general economic associations (§ 22 German Civil Code) or non-commercial associations (§ 21 German Civil Code) that primarily focus on the promotion of their members. The peculiarity of cooperative banks is that the promotion of their members happens in the form of community *self-help* through economic business operations (Cooperative Act: § 1 I GenG). More precisely, cooperative banks follow the principle: "What the individual cannot achieve can be achieved by many" (Sylla, 2012, 26), and thereby establish a good negotiating position with suppliers, trade partners and financial institutions for their members. Consequently, the main target of cooperative banks is not the maximization of profits but rather the management of a joint business and the establishment of mutually beneficial relationships with their members (Stiglbauer, 2012). Besides promoting their members, cooperative banks can also get involved in reciprocal transactions with non-members (Beuthien et al., 2008a). Through business relations with non-members, cooperative banks are able to utilize spare capacities to keep the turnover constant, to improve their market position, and to stay competitive by turning satisfied customers into members. However, cooperative banks are not entitled by law to exclusively serve non-members, because their business model must always focus on the benefits of their members (Beuthien et al., 2008b). Member promotion in cooperative banks should thus primarily be achieved through the provision of banking products and services of the same quality but with better conditions than competing banks. Other possibilities of member promotion by cooperative banks take the form of dividend payments, special conditions at other companies, indirect benefits through social and regional engagement, and the provision of a platform for networking and information exchange (Grosskopf, 1990).

The cooperative structure principles, namely the three S-principles, extend the already explained *member promotion principle* of cooperatives with the *self-help and identity principle*, the *self-government and democracy principle*, and the *self-responsibility principle*. In addition, also the *principle of economic efficiency* represents a guiding principle to cooperative banks (Wieg, 2012; Beuthien et al., 2008b). The *self-help principle* emphasizes the objective of cooperative banks to achieve economic benefits for each single member through the cooperation with all members. This principle is also called the principle of collective self-promotion and is closely related to the *identity principle* (Beuthien et al., 2008a). As members are in most cases customers of cooperative banks, they contribute to the generation of profits, and thus promote themselves and the entire cooperative bank. Hence, the *identity principle* is not only closely linked to the *self-help principle* but also to the *self-management* and *self-responsibility principle* (Beuthien et al., 2008b). To obtain membership, a customer has to buy a minimum of one cooperative share, which also guarantees a vote for the Members' Meeting (Cooperative Act: § 7 No.1 GenG). The *self-government principle* is based on the idea that each member takes part in the management of the cooperative bank and is involved in executive decisions of the management board and the supervisory board due to decision or veto rights. Moreover, the members' meeting represents the top executive for decisions inside cooperative banks and is responsible for the election of the members of the supervisory board. The supervisory board is finally in charge of naming the members of the management board. Since only members are assumed familiar with their conveyance needs, all executive managers must be members (Cooperative Act: § 9 II GenG). From this, the *democracy principle* within cooperative banks shall be derived. The *democracy principle* is also evident in the fact that all members have one vote independent from the amount of capital investment (Cooperative Act: § 43 III GenG). However, the cooperative principles do not only encompass certain rights but also entail control duties and the duty of personal liability in case of liquidity problems of the cooperative bank (Stiglbauer, 2012). Even though the above explained cooperative principles form the essential core of cooperative banks, these principles are not legally binding and are sometimes even mitigated by the German law. However, it becomes evident that cooperative banks' business model is based on principles and values that have gained importance within the last few decades and that have commendably already been practiced for almost 125 years in cooperative banks.

1.3 Current state of the art of corporate social responsibility and corporate social responsibility reporting

In recent years, the role of business in society has changed, with companies taking on responsibilities that were formerly borne by governments and becoming providers of philanthropic services in areas like health, education, infrastructure, and community development. Due to this shift, companies increasingly conduct moral management and reflect the interdependence between business

and society by working jointly toward a stable environment and an educated workforce (Cannon, 1992). However, the concept of how companies should manage their corporate responsibility has remained "a fuzzy one with unclear boundaries and debatable legitimacy" (Lantos, 2001, 595). Moreover, no universal definition of the concept of corporate social responsibility (CSR) exists in the corporate and business realm (Dahlsrud, 2008). CSR is thus understood as a conceptual idea or harmonizing instrument that is based on corporate ethical values. Its main purpose is to link the economic interests of a company to its environmental and social context, while also considering the needs and concerns of stakeholders and the external environment. The concept of the triple bottom line emphasizes this request for sustainable business approaches and encourages companies not only to measure their performance with respect to their economic efficiency but also to take into consideration the environmental and social impacts of their business conduct (Elkington, 1997).

The demand for reliable and accountable forms of CSR has grown globally due to business scandals, the 2008 global financial crisis, the growth of multinational companies, and increases in stakeholder activism. It is hence important for companies to implement effective CSR practices and communicate them appropriately. In line with the increasing awareness of CSR, CSR reporting has equally gained momentum. By intending not only to disclose financial figures but also social and environmental impacts of business activities, CSR reporting is a voluntary initiative of organizations to offer increased transparency to their stakeholders (Global Reporting Initiative [GRI], 2011). Moreover, well-elaborated CSR reporting helps to convey the roles of companies in society, transparency and accountability while also effectively communicating CSR activities, approaches, and processes. Research by Esrock and Leichty (1998) also shows that CSR reporting can serve as a means to establish a positive public image and to gain legitimacy from stakeholders. Since Watzlawick et al. (1967, 48) proclaim that "one cannot not communicate", it is crucial for companies to realize that they always communicate either intentionally or unintentionally by everything they do or do not, report or do not report. It is therefore useful to explore the different types of stakeholder groups and their expectations about an organization in terms of CSR to determine the appropriate content of annual reports (Finch, 2005).

Since companies that demonstrate their commitment to CSR and CSR reporting are not perceived as focus only on short- and medium-term increases in profits, Anderson and Frankle (1980) reveal that they are considered more credible and trustworthy (so did also Du et al., 2010; Simmons and Becker-Olsen, 2006) while also being better borrowers that generate higher returns. Consequently, investing in a company that reports "good" CSR may pay economic and social dividends in the long run. To fulfill the information needs of different stakeholder groups with respect to CSR, the ISO 260000 guidelines recommend companies to publish CSR related information in annual reports, separate CSR reports, annual shareholders letters, organizational codes of conduct or codes of ethics and on corporate websites (International Organization for Standardization (ISO), 2010). According to a study by KPMG, the annual report is considered the most popular instrument to disclose integrated reporting of financial, corporate governance and CSR related information (KPMG, 2012). In this context, it is crucial to consider that CSR reporting should be strategically planned and represent a long-term commitment to CSR. Once stakeholders are aware of CSR, they expect companies to keep this level of corporate involvement. The framework for effective CSR communication should therefore be a continuous interplay between corporate behavior, CSR reporting, and public perception (Schlegelmilch and Pollach, 2005). The fact that cooperative banks are inherently rather small and mostly act locally and regionally (Bolsinger, 2001) affects the extent and intensity of their general and specific CSR reporting. Cooperative banks thus tend not to disclose much CSR-related information, do not publish a separate CSR report but include the CSR information in the annual report and keep the annual report as precise as possible (Sassen, 2011).

Although transparent and accountable CSR reporting relies on certain standards, it is a voluntary business approach, which is not regulated by law in Germany. However, in the course of time, some voluntary standards were developed that serve as CSR reporting guidelines. Among these voluntary reporting standards, the UN Global Compact, the Eco-Management and Audit Scheme (EMAS), the Greenhouse Gas Protocol (GHG Protocol) as well as the Global Reporting Initiative (GRI) represent the most commonly accepted reporting standards (KPMG, 2012). Due to the consideration of the relevant stakeholders and the three dimensions of the triple bottom line, the guidelines of the GRI have become the most often applied reporting guidelines both internationally and in Germany (KPMG, 2012). Hence, we use the GRI guidelines, and in particular the economic, social and environmental performance indicators of the GRI, in this study to analyze the link between cooperative banks' principles and values and the requirements of cooperative banks to meet their corporate responsibilities.

1.4 The link between the principles of cooperative banks and corporate social responsibility reporting

Based on the statement from the Chairman of the German Cooperative and Raiffeisen Confederation Eckhard Ott: "With cooperative associations, the economic and social challenges of our times can be tackled with joint initiative" (Sylla, 2012, 28) we examine how the economic, social and environmental performance indicators of the GRI are reflected in cooperative principles and values, and how they are implemented in the business conduct of German cooperative banks.

According to the G3 Guidelines of the GRI, *economic performance indicators* measure the economic outcomes of organizations' activities and the effect of these outcomes on a broad range of stakeholders as well as on the economic environment surrounding the company at local, national and international level. These include aspects of the immediate economic performance, market presence and indirect economic impacts. In this context, financial figures are less important, because the focus lies on the nature of the effect on the stakeholders (GRI, 2006a). Cooperative banks are predominantly active in a relatively small local area, which also narrows their economic impact to a rather limited local economic environment. Due to cooperative banks' regionally oriented business model, they favor CSR in the form of corporate citizenship activities, such as donations, sponsorships and volunteering for the direct benefit of the local community. By firmly focusing on retail clients and small and medium-sized corporate customers at the local level, cooperative banks invest in regional companies and therefore contribute to the development of their local environment. A survey of the National Association of German Cooperative Banks in 2011 finds that 88.6% of all cooperative banks primarily invest in and promote their regional environment (National Association of German Cooperative Banks, 2012). This direct support for the local and regional environment is directly linked to the *principle of member promotion*. Besides the regional economic impact, cooperative banks also affect the national economic performance through tax payments. In doing so, they also contribute decisively to a sound environment and a good public infrastructure at a national level. Furthermore, cooperative banks have a direct economic impact on their members, because these also represent investors. Hence, members receive a dividend in return for their capital contribution as well as member-value in the form of special member conditions and member bonus systems. By providing the protection scheme of the National Association of German Cooperative Banks, cooperative banks establish a sustainable business model that offers stability and reliability against the backdrop of the European sovereign debt crisis and the general weakness of the global economy. With respect to the market presence, cooperative banks positively contribute to the local environment by providing employment (GRI, 2006a), which is also ensured by the articles of association of cooperative banks and the *principle of self-government*. The provision of safe employment results in the payment of wages and pensions, which affects the purchasing power of the entire region (National Association of German Cooperative Banks, 2011).

The *social dimension* of CSR is an organization's responsibility towards society. According to the GRI, society performance indicators refer to the impacts organizations have on the communities in which they operate. By acting responsibly in the social environment, organizations cannot only strengthen the company's image in a positive way but also promote their own human capital. Aspects involved in the social environment are labor, human rights, and product responsibility (GRI, 2006b). As German cooperative banks are required to comply with the German law and the German labor law, it is ensured that they do not violate human rights nor impose unlawful working conditions. However, this refers to the public law and is not particularly stated in cooperative principles. Due to cooperative banks' sustainable business model, their protection scheme and guarantee network in case of liquidity problems (Cooperative Act: § 7 II GenG), they hold responsibilities for each member as well as for the entire society in which they operate. Cooperative banks hence apply the *self-help* and *self-responsibility principle* in practice. Moreover, cooperative banks' protection scheme and guarantee network also takes into account their product responsibility to their customers and members. The principle of self-help is also visible with respect to cooperative banks' employees that have access to continuous training programs and are therefore able to offer qualified service. Consequently, many local cooperative banks have been voted one of Germany's top 100 employers for several years (National Association of German Cooperative Banks, 2011).

The *environmental indicator set* of the GRI aims to reflect the inputs, outputs, and modes of impact an organization has on the environment. As such, the environmental indicators examine the energy, water, and material consumption while also considering the emissions, effluents, and waste aspects (GRI, 2006c). Since the cooperative principles primarily focus the people, or the members, it appears difficult to link them to the environmental responsibility. Yet the *principle of self-help* and *member promotion* can be interpreted to equally apply to the ecological environment, because the promotion of joint business operations

can only be fulfilled in intact business environments. This implies that the conservation and provision of the necessary resources is part of successful business operations. This is also stated in the Brundtland Report, which emphasizes that the world's resources should not only meet the needs of the present generation but also enable future generations to have access to resources (World Commission on Environment and Development, 1987). As cooperative banks primarily offer services, they are not directly involved in production, transport or waste management processes. However, they also have an environmental impact with respect to energy, water and other materials consumption in its operations and therefore cannot evade their environmental responsibilities (Giuseppi, 2001).

2 Methodology

2.1 Research objective and research design

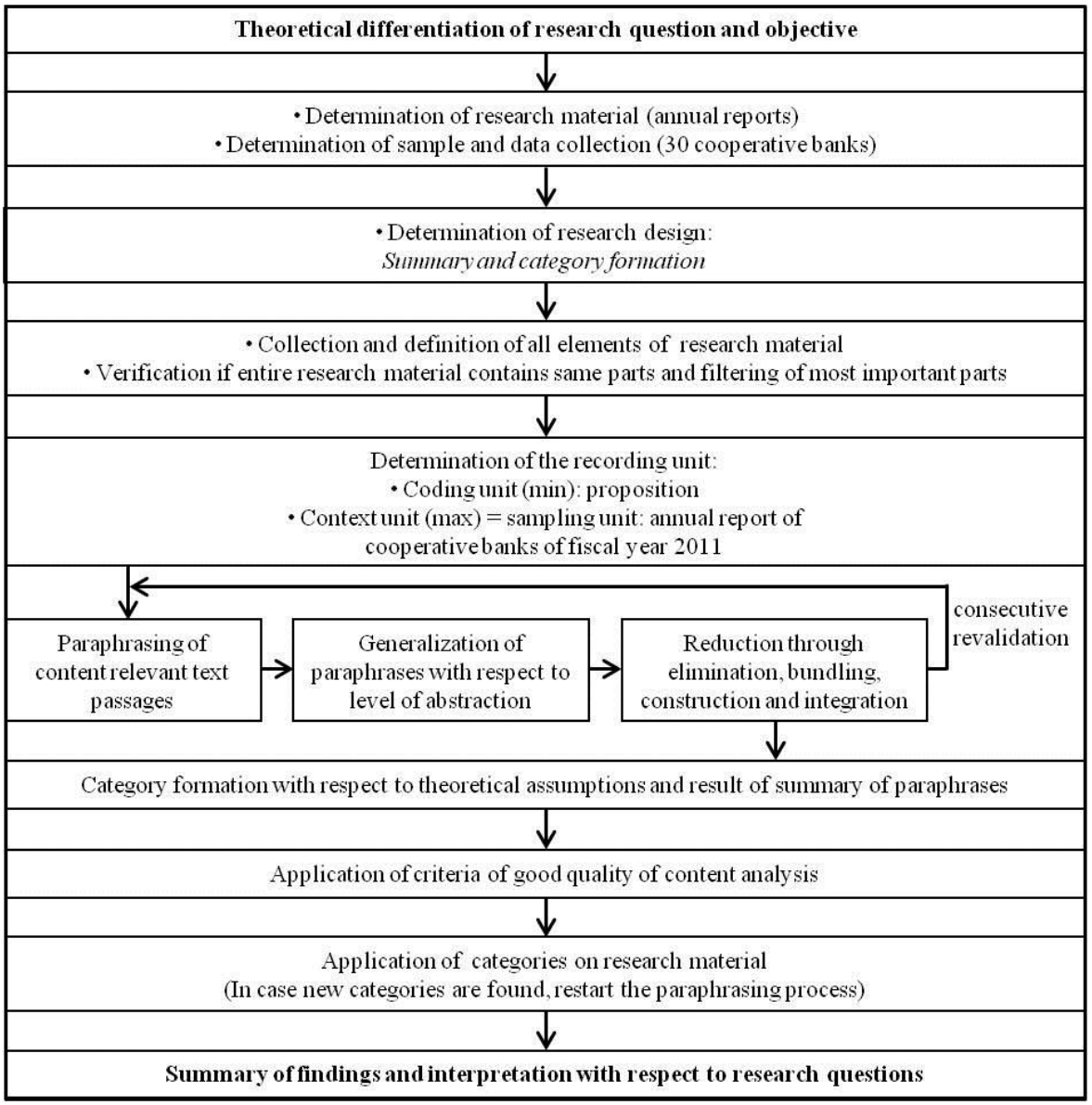
Cooperative banks are obliged to publish an annual report. However, besides legal binding to disclose information on the financial performance, Keller (2006) and Wendler (2011) indicate that a good way to communicate a sustainable business model is to disclose information on financial performance, corporate conduct and corporate culture to the relevant stakeholder groups. Moreover, they encourage companies to employ annual reports as an instrument of corporate communication, which also serves the marketing of corporate shares, reputation and socially responsible initiatives. In order to investigate the communication of cooperative principles and cooperative banks' sustainable business conduct, we examine the annual reports of German cooperative banks. The first research objective of this study is to ascertain the nature and extent to which German cooperative banks communicate their cooperative principles and values to their external stakeholders. The second objective is to analyze whether cooperative banks' initiatives and communication comply with socially responsible policies and practices, more precisely with the triple bottom line of economic, environmental and social responsibility. However, the emphasis of this study is not the investigation of the actual motivation behind cooperative banks' value-oriented and socially responsible business conduct, but instead the perception of that motivation that is induced by corporate public communication, specifically by annual reports. An additional rationale for analyzing the extent and quality of cooperative banks' annual reports is that annual reports target a wide variety of stakeholders and are publicly available in printed versions or accessible online. So far, no study has analyzed cooperative banks' annual reports with the aim of investigating whether the communication of their cooperative principles and values complies with the requirements of socially responsible reporting. As it is difficult to evaluate the communication of cooperative principles on a large-scale quantitative basis, the analysis of cooperative banks' annual reports seems to be a good proxy to measure cooperative banks' communication of cooperative principles and CSR.

In order to investigate whether cooperative banks are able to use the potential of values-based and socially responsible communication through annual reports, we conduct a content analysis according to Mayring (2010). By systematically coding and categorizing text data into groups of words with similar meanings or connotations, this qualitative research technique scrutinizes the characteristics of language as a communication tool while also interpreting meaning based on the content of text data (Stemler, 2001). Based on theoretical content referring to cooperative principles of cooperative banks, we develop a system of categories in order to answer our main research questions (Mayring, 2010). Figure 1 depicts the course of action of the content analysis and illustrates each step of the qualitative investigation to ensure the inter-subjective verifiability of our investigation. Before proceeding with the content analysis, we define the coding, context and sampling units. The 2011 annual report is not only the context unit but also the sampling unit. The coding unit is represented by one proposition or one sentence. Moreover, in order to guarantee the validity and reliability of the research results, the two assumptions hold: 1) all annual reports are independent of each other, and 2) the research criteria developed are mutually exclusive and exhaustive (Stemler, 2001).

Content analysis according to Mayring (2010) is composed of four essential steps to develop the research criteria: (1) *paraphrasing*, (2) *generalization*, (3) *reduction*, (4) *categorization*. Firstly, *paraphrasing* deals with the restatement of the meaning of one relevant coding unit using other words. In doing so, we drop all components that are not important for the transmission of relevant content. We also omit repetitive text components and content that is not relevant with respect to the two research questions. Moreover, we do not use financial statements (balance sheet and income statements), statements by the management and schedules for paraphrasing. As a result, we get short, content-bearing word groups or grammatical short form sentences. In the next step, we *generalize* all previously detected paraphrases to a fixed level of abstraction. This generalization takes into account cooperative principles and values and leads to the formulation of key words instead of entire sentences. The goal of this step is to filter out paraphrases that have the same content. *Reduction*

is divided into two steps. Firstly, all detected paraphrases which have the same content in the generalization step should be reduced to one paraphrase. Additionally, paraphrases without bearing with respect to the research questions should be excluded. As a result, only selected statements that are central to the investigation remain. Secondly, paraphrases that refer to the same content should be bundled to form a new statement. *Categorization* means the formation of research categories. In order to develop the research categories, the theoretical research questions, the assumptions as well as the communication medium examined are considered.

Figure 1. Course of action of the content analysis according to Mayring (2010)



Consequently, to analyze the communication of cooperative banks' principles, values and corporate social responsibility through a qualitative content analysis, the following four research categories were developed: (1) *member promotion* (divided in the two subcategories: a) member promotion in a narrow sense and b) member promotion in a broader sense), (2) *self-help and identity*, (3) *self-government and democracy*, and (4) *self-responsibility*. Table 1 summarizes the four categories and their associated operationalization.

In order to ensure the reliability of the empirical study, the method of inter-coder reliability was applied (Mayring, 2010). Consequently, the material was independently coded by two independent persons. As the second coder identified slightly different paraphrases and research categories, both codes were attuned to each other and combined in a final version. In doing so, we achieved a certain stability of the final coding scheme.

Table 1. Categories of the content analysis

Category	Operationalization
1 Member promotion	
1.1 Member promotion in narrow sense	Special conditions, banking products only for members, bonus systems, reimbursement, investment funds for members, service quality (density of branches, investment in branches and in homepage, quality management, complaint management, awards and certificates)
1.2 Member promotion in broader sense	Dividend payments, member value-added programs, auxiliary service
2 Self-help and identity	Social and regional promotion based on donations and sponsoring, non-financial promotion through activities and events, training and education of employees, promotion of local/regional companies
3 Self-government and democracy	Involvement in decisions, Advisory Board, task forces, committees, Members' Meeting, Supervisory Boards
4 Self-responsibility	Protection scheme, equity guarantee network, risk management, credit rating

2.2 Sample and data collection

Using this study as a preliminary study to develop the coding scheme and to make the coders familiar with material and the coding scheme our sample covers 30 German cooperative banks (all situated in the German federal state Bavaria). These cooperative banks were opted for as they unite most members and non-members in Germany and serve as a good proxy for German cooperative banks (Sassen, 2011) to conduct training for a bigger sample. Moreover, we selected these cooperative banks, since they are part of the same regional and control union, namely the Bavarian cooperative GVB, and have the same central banking authority, the DZ Bank (Stappel, 2011a).

Since the main objective of this study is to conduct a qualitative content analysis of annual reports, we reduced the sample to cooperative banks that published annual reports in the fiscal year 2011. Prior research has shown that cooperative banks that are larger in size disclose more information in their annual reports. We find that only cooperative banks with total assets of above € 220 million publish their annual reports online. This could be explained by the fact that larger companies often benefit more from increased transparency, because they must satisfy the information interests of a larger amount of stakeholders (Cormier et al., 2005). In addition, larger cooperative banks can devote more money to voluntary reporting, because they avail of more financial resources. In contrast, most small cooperative banks do not disclose social and environmental information in their annual reports or in separate CSR reports. They might share the opinion that the financial cost of social reporting would exceed its benefits. In order to create a representative sample that considers the possible influence of the size of the cooperative bank on the social reporting, the sample is composed of random cooperative banks with a minimum of total assets of € 250 million. Annual reports are the main communication medium examined in this study. We downloaded all annual reports of the year 2011 independently from the companies' websites between June 1 and August 1, 2012. If the annual report of a cooperative bank did not exist or did not contain the relevant information for the research, we excluded the specific cooperative bank from the sample. Of the 30 randomly selected cooperative banks, only 19 published their 2011 annual reports online. With respect to the predominant importance of electronic channels for modern corporate reporting and communication (Meckel et al., 2008), we excluded those cooperative banks who didn't provide their annual report online assuming that a majority of stakeholders does not order the annual report paper based and thus isn't able to perceive a clear picture on those cooperative banks' state of sustainable business. The original sample and the final population (excluded cooperative banks highlighted in grey) are shown in Table 2.

Table 2. Sample

	Name of the cooperative bank	Total assets in thousand €	Annual report downloaded online	Total members	Total clients
1	Münchner Bank eG	2,927,106	yes	42,609	109,552
2	VR Bank Rosenheim-Chiemsee eG	2,450,287	yes	41,954	119,477
3	VB RB Bayern Mitte eG, Ingolstadt	2,040,776	yes	45,082	100,00
4	VR meine RB eG, Altötting	1,790,697	yes	n.a.	80,000
5	Genossenschaftsbank eG München	1,668,647	no	n.a.	n.a.
6	VR-Bank Rottal-Inn eG, Pfarrkirchen	1,644,735	yes	25,000	70,000
7	VR-Bank Lech-Zusam eG, Gersthofen	1,638,468	yes	35,890	n.a.
8	VB RB Würzburg eG	1,621,289	yes	35,288	90,000
9	VB RB Dachau eG	1,574,434	yes	30,557	n.a
10	VR Bank Starnberg-Herrsching-Landsberg eG	1,563,059	yes	16,362	64,000
11	R-VB Donauwörth eG	1,341,719	no	n.a.	n.a.
12	Augusta-Bank eG Raiffeisen-VB, Augsburg	1,299,354	yes	35,000	117,000
13	VR Bank Erlangen-Hochstadt-Herzogenaurach	1,070,134	yes	32,000	n.a.
14	RB Aschaffenburg	1,050,311	yes	21,234	65,000
15	VR Bank Neu-Ulm/ Weißenhorn eG	839,475	yes	17,580	n.a.
16	VR-Bank Schweinfurt eG	791,784	no	n.a.	n.a.
17	VR-Bank Uffenheim-Neustadt eG R-VB	779,513	no	n.a.	n.a.
18	Genossenschaftsbank Unterallgäu eG, Mindelheim	776,073	yes	19,347	n.a.
19	VR-Bank Taufkirchen-Dorfen eG	654,533	no	n.a.	n.a.
20	VR-Bank Kitzingen eG	654,434	yes	17,121	n.a.
21	VB Günzburg eG	460,641	no	n.a.	n.a.
22	RB Bad Gögging eG	410,401	no	n.a.	n.a.
23	R-VB Kronach-Ludwigstadt eG	374,690	no	n.a.	n.a.
24	RB Hemau-Kallmünz eG	372,615	no	n.a.	n.a.
25	RB Bobingen eG	325,562	no	n.a.	n.a.
26	R-VB Fürth eG	322,681	yes	n.a.	n.a.
27	RB Heilsbronn-Windsbach eG	277,044	yes	9,896	n.a.
28	RB Waldaschaff-Heigenbrücken eG	276,255	yes	6,059	n.a.
29	VR-Bank Gerolzhofen eG	269,571	yes	6,094	n.a.
30	RB Geisenhausen eG	257,309	no	n.a.	n.a.

3 Empirical findings

3.1 The communication of cooperative banks' principles, values and corporate social responsibility

Since each of the 19 sample cooperative banks puts different emphasis on different components of the annual reports, the first part of the investigation examined whether the annual reports contained the following nine components of annual reports: (1) balance and income statement, (2) annex, (3) progress report, (4) chairman's report, (5) supervisory board's report, (6) additional information relating to corporate development, (7) information on social initiatives, (8) additional components, and (9) auditor's report. As illustrated in Table 3, 94.7% of the sample cooperative banks include a balance and income statement in their annual report. This shows a strong emphasis on the economic responsibility. Moreover, 89.5% of the analyzed annual reports contained a Chairman's report and 68.4% a Supervisory board's report which demonstrates the intention of the management level to communicate to their stakeholders. However, we could not find a well-defined part dedicated to member promotion or a member report. Consequently, the central principle of cooperatives, namely the member promotion, does not receive much attention in the corporate communication in the annual reports. From this, one could already partially deny the first research question, because cooperative banks do not optimally realize and communicate the fundamental principle of member promotion to external stakeholder. Yet 78.9% of the examined annual reports contain information on social initiatives and refer to their "corporate values", "social commitment", "social and current account", "funding focus 2011", and "added value for members". We paid the least attention in annual reports to the progress report with only 10.5% disclosing this component and 5.2% including an annex in their annual reports.

Table 3. Components of the annual reports of the sample cooperative banks

Component of annual report	Frequency	Percentage
Balance and income statement (Balance and income statement short version)	18 (13)	94.7% (68.4%)
Annex	1	5.3%
Progress report	2	10.5%
Chairman's report	17	89.5%
Supervisory Board's report	13	68.4%
Additional information relating to corporate development	12	63.2%
Information on social initiatives	15	78.9%
Additional components	17	89.5%
Auditor's report	11	57.9%

In the following, we present the findings of the content analysis of the annual reports of the 19 cooperative banks according to the four research categories: (1) *member promotion*, (2) *self-help and identity*, (3) *self-government and democracy*, and (4) *self-responsibility*. Since the reporting with respect to the four categories is incomplete, we can either assume that cooperative banks do not practice such principles and values or do not report on them. Reasons for incomplete reporting can include a miscalculation of their importance, lack of space, or both.

3.2 Member promotion

Member promotion in a *narrow sense* refers to the service exchange between the cooperative bank and its members with respect to special conditions, specific banking products for members, etc. Although member promotion is a central principle of cooperative banks, only 15.8% of the examined cooperative banks directly communicated their special member conditions or banking products for members in the annual report. The bonus system was mentioned by 10.5%, investment funds for members by 5.3%, and no cooperative bank disclosed information on reimbursement options. Although bonus systems are proven as an effective tool to retain members, most cooperative banks have not implemented such bonus systems due to a relatively complex implementation process and high associated costs (Beuthien et al., 2008b). In contrast to the rather reserved disclosure of special conditions to members, 100% of the examined cooperative banks have published information with respect to their service quality. These indirect indicators of service quality include the branch density, investments in office buildings and homepage, quality management, complaint management as well as awards and certificates. The average branch density of the sample cooperative banks was 29 branch offices per cooperative bank. Another aspect mentioned in most annual reports with respect to the improvement of service quality was the increasing online presence of cooperative banks. Information with regard to awards and certificates won for service quality was disclosed in about 25% of the examined annual reports. Overall, it becomes evident that cooperative banks put a strong emphasis on the communication of their service quality and hardly take into consideration the importance of the member promotion. As service quality is also something from which clients and therefore non-members benefit, service quality is not a representative indicator for member promotion in a narrow sense. Moreover, by looking only at the other aspects of this category, the focus on members and the coverage of member specific information is very low.

The most important indicator for member promotion in a *broader sense* is dividend payments. 63.2% of the examined cooperative banks reported on their dividend payments, and the average dividend of the studied cooperative banks amounted to 4.53%. Although the average dividend was below the national average of 5.5% of all German cooperative banks in 2011, it was still significantly higher than the base rate of 1% of the same year (National Association of German Cooperative Banks, 2011). As two thirds of the sample cooperative banks effectively reported on the dividend payments and on auxiliary services, they communicated specific member advantages in a broader sense. However, only 5.3% disclosed information on member value-added programs.

3.3 Self-help and identity

Self-help and identity is the category most frequently and most intensively mentioned in the examined annual reports. This category refers to the communication on social and regional involvement in the form of donations and sponsorships, as well as moral support for the region, clients and members through the realization of social activities and events. About 89.5% of the sample cooperative banks reported on their social and regional promotion, and some of them even stated the exact amount of each donation. From the cooperative banks that specifically quantified their amount of

monetary donations, an average of € 270,000 per cooperative bank resulted. In addition to monetary donations, 57.9% of the examined cooperative banks disclosed information on non-financial promotion in the form of social auctions, donations of promotion goods, and social volunteering projects. 42.1% of the cooperative banks communicated their special focus on the promotion of local and regional companies through specific loans to local companies, the granting of development loans or regional procurement. Overall, the sample cooperative banks are found to communicate their commitment to the development of the region, create jobs in the region and promote the purchasing power of the domestic economy.

31.6% of the cooperative banks even referred to the overall tax benefit of the German society due to their business tax payments and called these payments "significant contributions to the region". Moreover, 10.5% of the examined cooperative banks published a "social and current account" or a so-called "regional power balance sheet". With respect to the training and education of employees, 78.9% of the examined cooperative banks disclosed information on their training and development programs. However, only one cooperative bank precisely quantified its training budget and the total number of training days. Although most emphasis was put on social reporting, also 15.8% of the sample cooperative banks reported on their environmental responsibilities in their annual reports. Overall, the principles of self-help and identity are the principles most often found in all sample annual reports. As such, only one cooperative bank of the sample did not disclose information on social and regional promotion.

3.4 Self-government and democracy

The offering of member participation in the management of cooperative banks and in corporate decisions was encouraged by 78.9% of the sample cooperative banks through phrases like: "You have the chance to take part in your banks' decision-making, to shape your bank and to become a real part of your bank" (Münchner eG, 2011). Consequently, direct member participation in decision-making is communicated and encouraged with respect to the distribution of profits, the election of supervisory and management board members, amendments to the statutes, and discharge of the supervisory and management board. Whereas the election and tasks of the supervisory board was mentioned in 73.7% of the annual reports, 42.1% referred to the members' meeting and 10.5% to the existence of councils, committees or project team. The average number of supervisory board members of the examined cooperative banks is nine, and 63.1% of the annual reports contained a report of the supervisory board with respect to the fulfillment of their duties. In summary, the category of self-government and democracy was the second most often mentioned research category in the examined annual reports. Whereas more than two thirds of the sample annual reports disclosed information on the participation of members in decision-making and the existence of a supervisory board, the coverage of information on the members' meeting and the existence of councils, committees or project teams was much lower.

3.5 Self-responsibility

An essential feature of cooperative banks' strength is the equity guarantee network and the protection scheme of the National Association of German Cooperative Banks. As both imply the principle of self-responsibility, the equity guarantee network was communicated in 78.9% of the annual reports and the protection scheme in 52.6%. Furthermore, 47.4% of the sample cooperative banks reported on their risk management and risk prevention programs. Since the rating agency Standard & Poor's updated the rating of the entire cooperative financial group BVG from AA- to A +, 15.8% of the sample cooperative banks informed their stakeholders about this upgrade. Table 4 summarizes the above-mentioned findings of the content analysis.

Table 4. Findings of the content analysis

Category			
1 Member promotion			
1.1 Member promotion in narrow sense	Frequency	Percentage	Mean
Special conditions	3	15.8	24.57
Bonus systems	2	10.5	
Reimbursement	0	0	
Investment funds for members	1	5.3	
Banking products for members	3	15.8	
Service quality	19	100	
1.2 Member promotion in broader sense	Frequency	Percentage	Mean
Dividends	12	63.2	45.63
Member value-added programs	1	5.3	

Auxiliary service	13	68.4	
2 Self-help and identity	Frequency	Percentage	Mean
Social and regional promotion	17	89.5	67.10
Non-financial promotion	11	57.9	
Training and education of employees	15	78.9	
Promotion of local/regional companies	8	42.1	
3 Self-government and democracy	Frequency	Percentage	Mean
Member involvement in decisions	15	78.9	51.30
Advisory Board/Task forces	2	10.5	
Supervisory Board	14	73.7	
Members' Meeting	8	42.1	
4 Self-responsibility	Frequency	Percentage	Mean
Protection scheme	10	52.6	48.68
Equity guarantee network	15	78.9	
Risk management	9	47.4	
Credit rating	3	15.8	

Besides the presentation of the findings for the four research categories, the following exemplifies more examples in which the examined cooperative banks disclosed information on their cooperative principles and values. As an illustration, two thirds of the analyzed annual reports contained a specific section with respect to cooperative values, the cooperative business model and the history of cooperatives. In these sections, the cooperative banks explained the business model of cooperative banks and outlined their value-oriented structures. In order to communicate their cooperative principles and values, the cooperative banks applied different communication channels, such as the preface, interviews with the management and supervisory board or interviews with loyal or well-known members. Especially by connecting the current business conduct to the history of cooperative banks, cooperative principles and values were emphasized and their reliability was praised nowadays and in the year to come.

In conclusion, with respect to the *first research question*, the above-mentioned findings indicate that the communication of cooperative banks' principles and values in the annual reports is shortly not pronounced enough. Although the principle of self-help and identity is most frequently emphasized with a mean of 67.1%, it is recommendable for cooperative banks to increase their overall communication of cooperative principles and values. The mean of the self-government and democracy principle accounted for 51.3%, the mean of the self-responsibility principle for 48.68%, the mean of the member promotion in a broader sense for 45.63% and in a narrow sense for 24.57%. As these means show that only about half of the examined cooperative banks have realized the potential of the communication of their cooperative principles, it is advisable for cooperative banks to foster the communication of their cooperative principles by linking them to the triple bottom line of CSR reporting while also enhancing their CSR efforts. Especially, the communication of the principle of member promotion should receive more attention in future annual reports of cooperative banks.

As far as the *second research question* is concerned, it becomes evident that the examined cooperative banks hold strong economic responsibility towards their members, customers and society. Through corporate volunteering, trust management, tax payments, and the creation of regional purchasing power through employment opportunities and wage payments, cooperative banks comply with the economic responsibility demanded by their stakeholders. With respect to the environmental responsibility, cooperative banks mainly concentrate on the reduction of waste and pollution and on the preservation of resources for current and future generations. Furthermore, cooperative banks strongly identify with their social responsibility by respecting human rights, preventing anti-competitive behavior, providing sustainable capital, securing deposit products, and continuously promoting and training employees.

While CSR reporting is widely used in large and international companies, cooperative banks tend to report less or not to report according to CSR standards due to their structure and smaller size. As no examined annual report applied the CSR guidelines, the analysis of the annual reports could not contribute much more useful results to answer the second research question. However, the sample cooperative banks clearly fulfill their economic, environmental and social responsibilities, and most sample cooperative banks disclose information on their environmental or social commitment. A few of the examined cooperative banks even published social accounts. Since cooperative banks have a unique and sustainable business model, their specific value-oriented principles provide a good basis to comply with the requirements of the triple bottom line. It can thus be concluded that cooperative banks comply with the requirements of the economic, environmental and social

responsibility although they hardly communicate their initiatives.

4 Discussion and managerial implications

The examined cooperative banks showed differences in the communication and implementation of their cooperative principles and values. The only information that was communicated by all cooperative banks was their branch density, which indirectly indicated their service quality. Besides communicating their service quality, the examined cooperative banks also put great emphasis on their social and regional responsibility. The results indicate that there is a relationship between the intensity of reporting and the size of the cooperative banks. Consequently, the bigger the cooperative bank, the more categories and aspects of the content analysis were addressed. In accordance with the analysis by Sassen (2011), cooperative banks increasingly include cooperative principles in their annual reporting. Since some aspects, however, are only slightly considered by the examined cooperative banks, the following proposes some managerial implications for cooperative banks.

4.1 Focus on member promotion

The member promotion is a central principle of cooperative banks and therefore represents an essential indicator for effective business conduct. However, the results of the content analysis reveal that the examined cooperative banks only put a slight emphasis on member promotion. By not clearly distinguishing between members and customers in their communications to external stakeholders, cooperative banks do neither encourage their customers to become members nor offer special conditions to their members, except for the dividend payments. Consequently, member promotion is not sufficiently implemented in cooperative banks' communications and corporate strategy. Yet cooperative banks only effectively generate surpluses if they have a sufficiently large number of members. Since cooperative banks highly depend on their members, they should increasingly realize the importance and potential of member promotion. Only if cooperative banks turn their customers into members, they achieve effective customer retention and comply with the cooperative principles and values (Hammerschmidt, 2000). By offering special conditions to members, cooperative banks do not only create incentives to become a member, but also improve their trade balance by fostering more banking operations with members.

An example of an initiative that leads to increased member loyalty is the member bonus program. This member bonus program gives incentives to members to become involved in more banking transactions with the cooperative bank while also establishing more member loyalty. At the same time, the member bonus program enables cooperative banks to better control the demand of banking products, and the customers have an incentive to become members (Beuthien et al., 2008b). A possible reason for the low implementation of the member bonus program is the high administrative and time-intensive investment into its implementation. Other initiatives that focus on member promotion are among others: banking products only for members, reimbursement for members, investment funds for members, etc.

4.2 Additional recommendations for the effective communication of cooperative banks' principles, values and corporate social responsibility

Although the results of the content analysis indicate that there is a link between cooperative principles and the principles of corporate responsibility and that cooperative banks already take responsibility toward their stakeholders, the following proposes further approaches to effectively communicate cooperative banks' principles, values and corporate social responsibility. One example is the supply of banking products based on sustainability criteria, such as sustainability funds in the form of "ethical funds", "environmental technology funds" or "eco-efficiency funds" (Schaltegger and Figge, 2001). Moreover, cooperative banks should not only consider economic and environmental aspects in their supply of banking products but also those that specifically concentrate on the promotion of the region in which they operate and the specific needs of their local members and clients. Such a product with regional social focus fosters the member promotion in a narrow sense while also stimulating the exchange of services between members and cooperative banks. Likewise, such a regional social banking product also takes into account the principle of self-responsibility by taking on responsibility on the region through emotional perceptibility. Another possibility to incorporate social and environmental responsibility into cooperative banks' business conduct is the inclusion of environmental and social criteria in their lending policy. However, this approach could possibly contradict the principle of free membership and the obligation to lend money to any member. In this context, it is equally important to consider that it is not enough to offer banking products that comply with the triple bottom line but also to implement the principles of social and environmental responsibility in the entire business conduct.

In line with a responsible business strategy and the supply of responsible banking products, it is recommendable for cooperative banks to regularly report on their cooperative principles and to apply standardized CSR reporting (Schaltegger and Figge, 2001). Besides implementing CSR reporting standards in their annual reports, large cooperative banks should also consider disclosing a separate CSR report. As an illustration, the GRI guidelines do not only consider economic performance indicators, but also take into account the self-help and identity principle, the self-government and democracy principle, and the self-responsibility principle by reporting on social performance indicators. However, it is advisable for cooperative banks to add specific indicators with respect to their cooperative principles in order to complement the existing GRI guidelines for their application in cooperative banks.

4.3 Limitations of the empirical study

In conclusion, our study reveals that there is a link between cooperative banks' principles and values and CSR, which is marginally communicated in their annual reports. Yet cooperative banks should be more proactive and realize the potential of CSR communication to increase their communication on their principles, values and CSR initiatives. The study does however have some limitations. First, the content analysis is based only on annual reports and does neither examine other CSR communication media nor the actual implementation of cooperative principles in the business conduct. Secondly, our conclusions and managerial implications are drawn from a sample of 19 Bavarian cooperative banks and are therefore limited to a specific geographic region. However, a similar empirical study by Sassen (2011) has found similar results with respect to cooperative banks' principles and values. It can therefore be assumed that the same empirical study conducted in other geographic regions of Germany would also lead to similar results. In order to cross-validate the findings of the content analysis, it would be worthwhile to examine cooperative banks' websites, member/customer magazines and to interview the managers of the studied cooperative banks about their consciousness of the implementation of their business principles and values as well as about the emphasis put on CSR in their business practice. It would also be useful to interview stakeholders about their awareness and perceptions of the CSR initiatives of the examined cooperative banks. Future studies could test whether cooperative banks in Europe or worldwide hold similar corporate principles, and how they are realized and communicated to their external stakeholders. In this context, it is also of scientific interest whether European or international cooperative banks comply with the requirements of the triple bottom line. Three central research questions should be addressed in future research: (1) What is the relationship between CSR communication and cooperative banks' principles and values? (2) To what extent is CSR communication able to realize and communicate the basic principles and values of cooperative banks? (3) How do national institutional frameworks affect cooperative banks' principles and commitment to CSR and CSR communication?

5 Conclusion

The first objective of this study was to investigate whether cooperative banks optimally realize and communicate their cooperative's principles and values to external stakeholders. Moreover, the second research objective analyzed the compatibility of the basic cooperative values with the demands on cooperative banks with respect to the triple bottom line, namely the economic, environmental and social responsibility. In the aim of answering the research questions, the methodological approach consisted of the investigation of the most influential theories with respect to cooperative banks' principles as well as of a content analysis of the annual reports of 19 cooperative banks based on deductively and inductively created categories. The content analysis revealed that cooperative banks take a rather reserved approach with respect to the communication of their cooperative principles and values as well as CSR initiatives. The findings further indicate that most cooperative banks do not put much emphasis on the communication and implementation of their cooperative principles and CSR initiatives in practice. Although the member promotion is the cooperative principle least often mentioned, the principles of self-help and identity, self-government and democracy and self-responsibility are more frequently addressed and are often linked to the social responsibility of cooperative banks. Furthermore, our study reveals that there is a link between cooperative banks' principles, values and CSR, which is communicated in their annual reports. Consequently, cooperative banks should be more proactive and realize the potential of CSR communication to increase their communication on their principles and values and their CSR initiatives. Moreover, cooperative banks should put more emphasis on the implementation of the economic, environmental and social responsibility in their business conduct. In conclusion, it can be said that cooperative banks are a part of an economic system whose traditional principles and values form a strong framework for effective, sustainable and responsible business conduct now and in the years to come.

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MULTIVARIATE ANALYSES OF FACTORS AFFECTING DIVIDEND POLICY OF ACQUIRED EUROPEAN BANKS

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Abstract

Dividends, particularly of acquired banks are influenced by several structural adjustments especially after mergers. The paper evaluates the various factors affecting dividend of both acquired and non-acquired banks. Using data from 120 large mergers and acquisitions in Europe, the study finds that while the levels of liquidity, risk, composition of the financial structure are pertinent factors in the dividend policy of banks, the price earning (PE) ratio is specifically fundamental to non-acquired banks. The significance of the variable in the non-acquired banks indicates that growth in bank investments and future projects exert more aggressive impact on banks that are not acquired or less likely to merge. This finding is novel as previous studies on dividend policy do not make this distinction.

Keywords: Dividend, Yield, Bank Mergers, Acquired

JEL Classification: G14, G21, G24, 34

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1. Introduction

The debate on dividend policy and its impact on the bank have been well documented in finance studies. Dividend policy is primarily concerned with the decisions regarding dividend payout and retention. Lease (2000) described it as the practice adopted by managers in making dividend payout decisions. It is a decision that considers the amount of profits to be retained for further investments and that to be distributed to the shareholders of the bank.

The objective of a firm's dividend policy is to be consistent in the overall objective of maximising shareholders wealth since it is the aim of every investor to get a return from their investment. Economist, Psychologist and the Sociologist have all attempted to explain investor behaviour in a number of ways and to relate the various corporate dividend policies to the theories on the behaviour of individual investors.

The amount of dividend to be paid out by firms could be influenced by the size of the firm. Companies that are large in size are more than likely to pay dividend more often than the small firms. Larger firms also have higher agency costs and a relatively lower transaction cost than the small firms. Dividend payout is inversely related to intrinsic business risk. Kalay (1980) opined that companies with unstable earnings pay less in dividends in attempt to maintain a stable dividend payout and to avoid the cost of borrowing from external sources.

The dividend yield and payout have been used as proxies of dividend policy in finance studies and are often influenced by both internal and exogenous factors to the bank. Both measures of policy are likely to have different results or affected by divergent factors as they are intrinsically unique variables constructed to measure specific elements. While dividend payout has the traditional focus on relating portion of the after tax profit paid to shareholders, the yield quantifies such dividends on the basis of its current market value. Most studies have used both variables in part or jointly to describe dividend policy. For instance, Chen et al (2005) used payout and yield; Gugler and Yurtoglu (2003) used payout; Johnson et al (2006) applied yield. In practice though, the yield provides an appropriate and substantive measure of dividend as it compares with the market value.

The extant literature has primarily focused on bank dividend policies but does not test the same effects on acquired and non-acquired banks. As both groups of banks are different in their managerial and financial structures, it is pertinent to suspect that their dividend policies will be different. After all, acquired banks are more cautious in formulating dividend policies that aligns with their operational and managerial strategy (Nnadi & Akpomi, 2009). The present study therefore is posit to examine whether same issues of concern by banks engaged in mergers

and acquisitions in formulating their dividend policies are same for non acquired banks. An understanding of how banks are influenced by the various factors affecting dividend policy is vital to bank management seeking acquisitions.

2. Factors Influencing Dividend Policy

The choice of a particular dividend policy by a bank is not usually accidental. It is tailored to either meet the banks and shareholders needs. Shareholders have different choice of dividend depending on their needs. Firms also adopt policies that suite their peculiarity. Some studies have identified various factors affecting dividend policy of banks as: agency costs, reinvestment required for new capital projects, existing cash levels and liquidity, market reaction to a change in dividend, tax, shareholders preference for income or capital gain etc. However, there is an identified gap in the literature; most studies do not differentiate or test the variables on samples of acquired and non-acquired banks. This is vital as banks involved in M&A deals take a different of dividend in accordance with their organisational strategy.

Finance literatures[15] have been agog on the issue of agency costs and its impact on dividend policy of firm. Rozeff (1982) used sample of US banks and found that agency costs (***Insider***) and beta have no significant effect on the dividend of banks. This result corroborates Casey and Dickey (2000) who also found that insider makes no impact to the dividend policy of banks. However, his study did not focus on the level of impact on acquired and non-acquired banks. Dempsey & Laber (1992) add that while the dividend yield is negatively related to the ***Insiders***, it has a positive significance to the proportion of the ordinary shareholders.

Studies have also shown that liquidity and beta are also very important factor in dividend. Lie (2000) asserts that cash dividend declaration is positively related to the firm's level of liquidity. Gugler (2003) and La Porta, et al (2003) assert that liquidity of a firm as very fundamental in its dividend decisions. The dividend yield follows the pattern of the beta and employs the coefficient of variation to measure the stability of the yield.

Pandey (2001) using 1729 Malaysian firms in a panel data analysis found that the level of risk, measured by beta is significant in measuring the dividend yield. Watson & Head (2004) affirmed that firms such as banks that operate in high business risk ventures, which are susceptible to cyclical swings in profit, tend to reciprocate by paying low dividends in order to avoid the risk of reducing dividend in the future.

However, previous studies relating to the tax effect on dividend decisions have produced very conflicting results[16]. Casey & Dickens (2000) affirmed that taxes have significant impact on the dividends of commercial banks in the US. Their findings concurred with an earlier study by Rozeff (1980). The assumption is that the lower the taxes, the higher the dividend payout. In addition to the dissident findings, Anil & Kapoor (2008) maintain that the imposition of taxes on dividend has no significant impact on the dividend policy of any organisation.

Wu (1996) investigated the impact of eliminating the preferential capital gain tax treatment of 1986 in the US and found some structural changes in the pattern of dividend which coincides with changes in the tax laws. The study concludes that such a shift significantly affects the aggregate corporate dividend policy. Wilkinson, Cahan & Jones (2001) recommended a reduced tax policy for firms in New Zealand as a strategy for dividend imputation. In a recent study, Pattenden & Twite (2008) evaluated the tax effect on dividend policy in Australia under different tax regimes for the period 1982-1997. They found that the increase in dividend payout and initiation differ among different firms. However, the study affirms that the higher the level of available franking tax credits, the higher the dividend initiation.

Other studies; Brunarski, Harman & Kehr (2004) and Pattenden & Twite (2008) have investigated the optimal finance structure of firms and assert that the assets and equity composition of the capital structures are very important in its decisions on dividend. When the equity/ asset ratio increases, the dividend decisions will be reviewed upwards. As the number of shareholders increase, their stake also increase in the organisation, thus this affects the review of the dividend policy of the banks. This argument will be more substantive among merged banks where the bank equity is increased as result of the mergers.

The size of banks is perceived to be influential to the dividend policy they might pursue. Large banking organisations are likely to pursue a robust dividend structure. Reeding (1997) and Fama & French (2001) argue that large firms are likely to be consistent in their dividend policy. However, Chang & Rhee (2003) and Johnson et al (2006) find no support on

[15] Many studies on the role of insiders on dividend policy have been undertaken over the past three decades. Short (1994) and Gugler (2003) present an extensive survey of studies in dividend policy cum agency costs.

[16] La Porta, et al (2000) & Poterba & Summers (1985) chronicled various studies and highlight the various divergent views among scholars of the tax effect on dividend policy. The traditional views assert that high taxes (either on personal or corporate bases) particularly in the US often serve as a bulwark to dividend payments. But this position is not without objections. Miller & Scholes (1978) held that investors employ various dividend tax avoidance techniques that make them escape from taxes. The ''new view of dividends and taxes'' proponents such as Harris, Hubbard, and Kemsley (1997), assert that taxes do not deter dividend payments. They agreed that cash must be paid out as dividend to shareholders at some point so, the payment of such dividends imposes no great burden on the shareholders.

the size argument. Their studies indicate that total assets (used as proxy for size) of the banks does not translate to operational efficiency. Thus, large banks with enormous assets may be less productive than a street bank. This position is supported by a recent study of Pattenden & Twite (2008) which observed that large firms, with their high level of debts, do not necessarily pay better dividend. Firms with many high equity capitals do not guarantee a higher dividend policy.

From a strategic point, banks dividend policy should be at tandem with their level of profitability. But empirical studies have fallen short in finding strong support for such assumption. In a recent study of Spanish banks, Bernad et al (2010) find no support for aligning performance and dividend policy. Other studies such as Change & Rhee (1990), Baker & Powell (200) support this view. The justification of their argument lies in the fact that a reduction in dividend due to a decrease in profit gives a bad signal about the bank. Banks would maintain a sustainable level of dividend such that a downturn in the organisation would not lead to a reduction in dividend. In fact, these proponents believe that firms would rather increase their leverage than reduce their dividends.

Findings supporting profitability as an influential element in dividend policy include Gaver & Gaver (1993), Fama & French (2001, 2002), Gugler (2003) and Pattenden & Twite (2008). The argument portrayed in these studies is that profit is directly related to the dividend. Thus, a fall in profitability will amount to a decrease in the amount of dividends declared and paid, and decline in the dividend yield. The argument does not however take into consideration that a reduction in dividend due to a fall in profit would send a wrong signal to the public and could thus jeopardise the growth of the bank.

Baker & Powell (2002), Anil & Kapoor (2008), Chang & Rhee (1990), Pattenden & Twite (2008) and Casey & Dickens (2000) are all in agreement that growth of a firm has no significance on its dividend policy. The dividend signal hypothesis eliminates any idea of dividend reduction. Thus, the argument is that when a bank grows, it increases both capital and finance structures at the same level with its dividend policy.

However, like in many other studies, there are contradictory findings against this view. Some studies (Gaver & Gaver 2003, Grullon, et al 2002, Fama & French 2002 and Brunarski, Harman & Kehr 2004) argue that increase in growth would potentially drain the earnings available to shareholders and thus reduce dividend. They are inversely related as increase in one causes a reduction in the other. Future investments in the strategic growth of the banks, whether through mergers or organic growth can be capital intensive which drains the banks retained earnings. This argument however fails to recognise the imperative market reaction to any significant negative impact on dividend.

The catering theory of dividend has become a front runner in the dividend model theories. The principle behind the theory is that decisions to pay dividends are usually driven by investors demand. Management therefore 'cater' for investors by paying dividends to shareholders who require it and not paying when the investors do not require dividends. Baker and Wurgler (2004) argue that investors have uninformed and time varying demand for dividend paying shares. This demand is not influenced by any arbitrage as the prices of the payers and non-payers remain unperturbed. Management would pay dividend when investors place higher prices on payers but avoid payments if investors prefer non-payers. The study used the catering dividend dynamics to support that argument that managers cater for time varying investors in an attempt to maximise share prices. Their results suggest that dividends are highly relevant to share values but in different directions and times.

3. Methodology

The study sample is drawn from twelve European countries with record of large bank acquisitions during the period 1999-2009. A benchmark of minimum acquisitions value of £50billion is used to ensure that only large acquisitions are included in the sample. Table 1 shows the list of the countries and the number of acquisitions. A total final of 120 acquisitions are used in the study with Italy, France, Spain, Germany and UK having more acquisitions.

The abnormal returns of the acquired bank samples were calculated using daily prices and cumulated using the market model of event study. The resulting abnormal returns are standardised to ensure that any country-effect variance is reduced or eliminated from the result. A two-stage regression is applied using the hierarchical regression. The dividend yield[17] is used as proxy for dividend policy while other dividend variables as well as the abnormal returns of the acquired banks constitute the independent variables.

[17] The use of the dividend yield is common in dividend policy studies; Johnson et al (2006), pang et al (2008) and other several studies have used yield as proxy for dividend policy.

Table 1. List of European countries and number of bank acquisitions

Country	**No of bank acquisitions**	**% acquisitions**
Spain	16	13
Italy	40	33
France	18	15
Germany	12	10
Austria	4	3
Slovenia	2	2
UK	12	10
Greece	6	5
Belgium	4	3
Cyprus	2	2
Portugal	2	2
Sweden	2	2
Total	**120**	**100**

We used the Rozeff model to formulate dividend regression with the following specifications:

$$\textbf{\textit{DivPolicy}} = \beta_0 - \beta_1 Beta_i + \beta_2 Liquidity_i - \beta_3 Insider_i + \beta_4 Tax_i - \beta_5 Cap\&FnSt_i + \beta_6 Size_i + \beta_7 Profit_i - \beta_8 Growth_i + \beta_9 CARs_i + \xi_i \quad (1)$$

Where :

β_0 - intercept term; β_1Beta - Estimated beta coefficient of the banks (with negative sign to indicate its expected effect)

β_2Liquidity – the availability of physical cash in the bank measured as the dividend/net cash operating,

β_3Insider – the percentage of insider shareholdings in the acquiring banks (with expected effect being negative);

β_4Tax – the total tax liabilities of the banks as well as the relevant tax ratios;

β_5CapFnSt – the bank's capital and finance structures measured by the Debt/Equity ratio (capital structure) while the finance structure is debt + equity/total assets;

β_6Size – the natural log of the total assets is used as the proxy for size of the bank;

β_7Profit – the profitability of the bank as measured by the ROE and EPS;

β_8Growth – the price earnings (PE), which also represents the market to book ratio (MBR) which is a proxy for Tobin's Q measure future growth and investment of the bank (with negative expected effect on dividend policy);

β_9CTSAR – the Cumulative total standardised abnormal returns (CTSAR) is a proxy for M&A;

ξ - error term

The event study methodology is used to capture the banks cumulative total standardised abnormal returns (CTSARs), which are the aggregate of all the abnormal returns (ARs).

The abnormal return (AR) is estimated using the market model as:

$$AR_{jt} = R_{jt} - \alpha_j - \beta_j * R_{mt} \quad (2)$$

Where:

AR_{jt} = Abnormal return on share *j* for each day *t* in the event window; R_{jt} = return on share *j* for each day *t* in the event window; α_j = intercept term for share *j* measured over the estimation period; β_j = slope term for stock *j* measured over the estimation period

R_{mt} = return on the market *m* for each day *t* in the event window

The AR was standardised to cater for the different degree of event impact. This is done by weighing the abnormal returns by the standard deviation. The purpose of the standardization is to ensure that each abnormal return has the same variance (Serra, 2002). Thus, by dividing each firm's abnormal residual by the standard deviation over the estimation period, each residual has an estimated variance of 1 and thus defined by the equation:

$$SAR_{jt} = \frac{AR_{jt}}{\sqrt{S^2 AR_{jt}}} \quad (3)$$

Where SAR_{jt} = SAR for firm *j* at time *t*. (SAR is standardised abnormal return)

AR_{jt} = AR for firm *j* at time *t*. $S^2_{AR_{jt}}$ = variance of the AR for firm *j* at time *t*.

Table 2. Univariate Statistics of Measures and Factors Affecting Dividend Policy

The table presents the results of the univariate statistics of factors affecting dividend policy. The variables are presented in different panels. Panel A consists of the bank profitability variables such as EPS and ROE. ThBoth variables being popular profitability measures in finance literature. Panel B consists of cumulative a abnormal returns of the acquired banks and risk while tax variables are in Panel C. Debt and capital structure are in Panel D, the PER, MBR which measure the bank growth are in Panel E. Bank size, which is composed of of the total assets and bank capitalisation constitute Panel F while ownership and liquidity, measured by the percentage of insiders in the board composition and the net to cash ratio, are in Panel G.

Variables	Variable Code	Minimum	Maximum	Mean	Standard Deviation	Coefficient of Variation
Panel A: Profitability						
Earnings Per Share	EPS	-4.26	41.2	3.224	4.929	1.528
Return on Equity	ROE	-42.8	45.92	10.942	9.489	0.867
Panel B: Cumulative total standardized abnormal returns	CTSAR	-48.14	29.02	-11.274	15.986	-1.418
Risk	Beta	0.6	1.55	1.108	0.236	0.213
Panel C: Taxes						
Tax	Tax	0.01	8.62	1.108	1.3	1.173
Pre-Tax Operation/ Average Assets	Pre	-5.56	67	1.055	5.207	4.935
Non operation item & T**axes**/Average Assets	Nonoptax/ Ass	-2.36	1.6	-0.134	0.389	-2.908
Panel D: Debt & Financial Structure						
Debts + equity/total assets	FNST	0.07	15.14	5.289	3.072	0.58
Total Debt/Equity	DebtEquity	1.34	16.17	5.761	2.842	0.493
Panel E: Growth & Investment						
Price Earning Ratio	PER	0.35	15.96	5.958	2.956	0.496
Market to Book Value Ratio	MBR	0.06	40.79	3.94	9.937	2.522
Panel F: Size						
Nat. Log of Total Assets	SIZE	0.01	7.43	0.42	0.98	2.33
Nat. Log Total Cap.	CAP	0.03	10.37	1.999	2.848	1.424
Panel G: Ownership & liquiidty						
% Insider holdings	INSIDER	0.07	68.5	30.116	21.617	0.717
Net Cash/Total Assets	Liquidity	-39.88	62.19	-0.14	8.034	-57.066

4 Results and discussion

The descriptive analyses presented in Table 2 shows that the CTSAR has a negative mean of -11.274 and a CV of -1.418. This result implies that the bank CTSAR is a less relative measure of dispersion in the dividend policy of the acquired banks. The EPS, Tax, MBR, SIZE, CAP and insiders have positive coefficient variation, indicating a close dispersion of the variables as measures of dividend policy.

The empirical result in Table 3 shows that liquidity variable appears consistently significant in the last 4 models. Model 5 shows a coefficient value of 0.325 and a t-statistic of 0.09, indicating that ***Liquidity*** (The liquidity is measured as the dividend / net cash operating. It denotes the cash available after all capital expenditures have been undertaken before

payment of ordinary dividend. The ratio does not take into account stock dividend payments as those do not require cash and previous period under/over provision payments) is significant in the dividend policy of acquired banks. Banks with less liquidity are less likely to maintain a pattern of dividend or create a dividend culture. Liquidity can be affected by the banks investment plans and growth potentials galvanised by its investment portfolios. This result supports La Porta et al (2003) and Gugler (2003) which assert that the liquidity and cash position of a firm are very fundamental in its dividend decision. Similarly, in a recent study, Anil & Kahoor (2008) also confirm that good liquidity position increases a firm's ability to pay dividend as those firms with unstable cash flows are less likely to have a regular dividend.

We find risk proxy; *Beta* a significant factor in the dividend policy of acquired banks with a coefficient of 0.538**.** The result indicates that the high-risk nature of large acquisitions influences their dividend formulations. Such risk factors are common among cross border acquisitions where cultural, managerial style and organisational differences pose more risk to the acquired entity. This result finds support from previous studies such as Blume (1980) and Massa & Zhang (2009) all of which found beta very significant in dividend policy.

Pang, et al (2008) posit that the dividend yield always follows the pattern of the beta and employ the coefficient of variation to measure the stability of the yield. This procedure highlights the importance of the beta variable.

Table 3. Model Summary of Hierarchical Regression of Dividend Policy: Acquired bank samples

The variables are hierarchically regressed into 5 different models. Model 5 provides the summary of the results. The coefficient values and t-statistics are reported and only 4 variables; liquidity, risk, finance structure and profitability variables are significant. The dividend yield is the dependent variable. All the other variables including CTSAR are not significant in the model results. The overall significance of the model was tested using the Wald test, which has a Chi-square ($\chi 2$) distribution. The likelihood ratio (LR) test statistic is calculated as $LR = -2(LogL_R - LogL_{UR})$, which follows $_x^2(k)$ distribution, where K the degrees of freedom equal to the number of restrictions.

Independent variable = Dividend yield					
Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Insider	-0.017#	-0.077	-0.088	-0.098	-0.131
	(-0.033)	(-0.035)	-(0.043)	(-0.029)	(-0.008)
Liquidity	0.299	0.383*	0.362*	0.325*	0.325*
	(0.087)	(0.090)	(0.098)	(0.132)	(0.09)
Risk	0.452**	0.491**	0.523**	0.519**	0.538**
	(0.131)	(0.055)	(0.149)	(0.158)	(0.143)
Tax		-0.204	-0.275	-0.291	-0.208
		(-0.145)	(-0.057)	(-0.036)	(-0.04)
TaxToTass		-0.228	-0.214	-0.237	-0.277
		(-0.039)	(-0.041)	(-0.02)	(-0.062)
NonTAX		-0.084	-0.053	-0.028	-0.010
		(-0.03)	(-0.024)	(-0.004)	(-0.019)
FnSt			-0324*	-0.328*	-0.370*
			(-0.028)	(-0.042)	(-0.044)
TotalAss			0.017	0.003	0.009
			(0.055)	(0.075)	(0.04)
CapSt			0.001	0.025	0.060
			(0.005)	(0.034)	(0.045)
EPS				0.326*	0.355*
				(0.07)	(0.035)
ROE				-0.559**	-0.570**
				(-0.164)	(-0.144)
PE				-0.046	-0.056
				(-0.054)	(-0.046)
CTSAR					0.250
					(0.097)
Constant	1.677** (1.372)	1.539** (1.336)	2.513** (1.191)	2.603** (1.281)	2.893** (1.245)
Adj. R^2 .	0.228	0.419	0.489	0.480	0.483
Observations	744	744	744	744	744
Log likelihood	-246.01	-259.24	263.11	273.30	275.45
Wald Chi^2	224.14	221.07	213.12	203.22	201.89
L R test	15.03	16.43	16.78	17.53	18.41
P Value	0.000**	0.000**	0.000**	0.000**	0.000**

*Significant at 0.05 level, **Significant at 0.01 level. # Value for each estimator is the coefficient and t-statistics are in parentheses.

Risky, as a measure of dividend policy has been often produced mixed results. Casey and Dickens (2000)[18] found no significance in the role of beta in dividend policy of banks and challenged the earlier findings of Rozeff (1982). In the same vein, Chen, Grundy & Stambaugh (1990) investigated the cross sectional relationship between the dividend yield and market risk (beta) using the market and changing risk premium approaches and find both methods insignificant. Despite the above opposing views, most contemporary studies are in agreement that beta is an important variable in dividend decisions.

The finance structure of the acquired banks as measured by the (debt + equity) / total assets ***(FnSt)***[19]**,** has a negative coefficient of ***-0.370 and*** makes a statistically significant impact. This implies that the banks' finance structure is significantly important in the dividend decisions. When the equity/asset ratio of the bank increases, the dividend decision is reviewed to reflect the increase. Most past studies on lean support to this finding. Brunarski, Harman & Kehr (2004) and Pattenden & Twite (2008) investigated the optimal finance structure of firms and assert that the assets and equity composition of the finance and capital structures as well as its fixed and current proportions are very important components in its decisions on dividend.

Our profitability measure comprise of two variables, ***ROE*** and ***EPS***[20]. The **EPS** and **ROE** have significant values of 0.355 and -0.370 respectively. The earnings per share (EPS) relate the earnings generated by the bank which is available to the shareholders to the number of shares in issue. It is measured by the after tax profit less any preference dividend divided by the number of ordinary shares. The EPS measures the absolute return delivered to the shareholders. Its negative significant result in the regression indicates that growth in the EPS of the bank will attract growth in the bank's portfolio of investment and thus affects the amount available for dividend to shareholders. On the other hand, the positivity of the ROE is linked to profit generated through operations and which can boost dividend.

Thus, our regression results have identified three major variables in the dividend policy of acquired banks; the level of risk, liquidity position and the finance structure and the profitability of the acquired banks. These results are compared with a sample of non-acquired banks in the same countries. The regression results are presented in the Table 4 below. The results of the non-acquired samples are presented in 4 models, without the merger variable. The idea is to test if the acquired variables are also affected by the non-acquired samples. The liquidity, risk, financial structure, and profitability ratios are also significant.

The non-acquired banks *liquidity* has a significant negative coefficient of -0.358 indicating that availability of cash will spur non-acquired banks into diversifying their investments. This assertion supports the free cash flow hypothesis of Lang and Litzenberger (1989); Brush, Bomiley and Hendricks (2000) that firms over investment to convince shareholders of limited cash position for dividend and restore confidence in management. Unlike the acquired samples, liquidity of the bank puts the management under no pressure for dividend as the shareholders understand the strains and challenges of the banks after a strategic merger or acquisition.

Risk maintains a positive significance in both the acquired and non-acquired samples confirming that a high risk investment attracts an additional premium in dividend. Banks are quick to refine their policy in line with level of risk. Both samples appear to have same level of risk indicating that risk is pertinent component of the bank industry which reflects in their dividend policy. The *FnSt* i.e. financial structure and the profitability variables of the non-acquired banks show similar pattern of volatility in their dividend policy. The *FnSt* and *ROE* have negative significance of -0.425 and -0.566 respectively indicating that both have negative impact on the dividend policy. The banks financial structure is composed of the short-term borrowing, long-term debts and owner's equity; indicating that a primary source of a bank's funding whether debts or equity impacts negatively on its dividend policy. The positive significance of the *EPS* is an indication of the market forces and reaction to a bank policy. The sensitivity of the market reaction on the share value of the bank puts the bank at alert on formulating its policy.

[18] Much of Casey & Dickens (2000) findings was a cross examination of the earlier study by Rozeff. They used similar variables as Rozeff and found differences in the results. Three outstanding variables were particularly of interest in their findings (the firm's growth rate, insider, and beta) all of which were insignificant and opposite of Rozeff's findings.

[19] This is often confused with capital structure. It refers to the financing of the firm's assets based on the totals of the short-term borrowing, long-term debts and owner's equity. The capital structure is primarily focused on the long-term debt cum assets.

[20] Different measures of profitability have been used in profitability studies. The ROE and EPS are the most powerful indicator of financial performance of a firm (see also studies by Kumar & Sopariwala, 1992 and Kaufmann, Gordon and Owers, 2000). At the level of the individual firms, the ROE keeps in place the financial framework for a thriving and growing enterprise and drives industrial investment, growth in GNP, employment, government tax receipts at the macroeconomic level (Walsh, 2008). Apart from the ROE and EPS, the ROCE, returns on net worth and net profit margin are also profitability measures (See Chander and Priyanka, 2007).

Table 4. Model Summary of Hierarchical Regression of Dividend Policy: Non-acquired bank samples

The variables are hierarchically regressed into 4 different models. Model 4 provides the summary of the results. The coefficient values and t-statistics are reported and only 4 variables; liquidity, risk, finance structure, profitability and PE variables are significant. The dividend yield is the dependent variable. All the other variables are not significant in the model results. The overall significance of the model was tested using the Wald test, which has a Chi-square ($\chi 2$) distribution. The likelihood ratio (LR) test statistic is calculated as $LR = -2(LogL_R - LogL_{UR})$, which follows $_x^2(k)$ distribution, where K the degrees of freedom equal to the number of restrictions.

independent variable = Dividend yield				
Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Insider	-0.215	-0.269	-0.263	-0.271
	(-0.124)	(-0.105)	(-0.128)	(-0.129)
Liquidity	-0.325*	-0.330*	-0.384*	-0.358*
	(-0.152)	(-1.241)	(-1.063)	-1.101)
Risk	0.525**	0.572**	0.584**	0.588**
	(1..274)	(1.031)	(1.123)	(1.135)
Tax		-0.211	-0.265	-0.201
		(-0.174)	(-0.341)	(-0.325)
TaxToTass		-0.222	-0.282	-0.293
		(-1.054)	(-1.132)	(-1.002)
NonTAX		-0.134	-0.139	-0.134
		(-0.002)	(-0.010)	(-0.058)
FnSt			-0.371*	-0.425*
			(-1.121)	(-1.124)
TotalAss			0.254	0.042
			(1.082)	(1.032)
CapSt			0.152	0.225
			(1.005)	(1.026)
EPS				0.349*
				(0.037)
ROE				-0.566**
				(-1.004)
PE				-0.563**
				(-2.054)
Constant	2.632#	2.957	3.501	3.587
	(1.204)	(1.030)	(2.017)	(2.561)
Adj. R^2 .	0.239	0.350	0.402	0.511
Observations	758	758	758	758
Log likelihood	174.59	189.36	168.52	189.52
Wald Chi^2	204.12	211.36	225.23	200.54
L R test	10.36	14.08	13.12	16.04
P Value	0.000**	0.000**	0.000**	0.000**

*Significant at 0.05 level, **Significant at 0.01 level. # the Value for each estimator is the coefficient and t-statistics are in parentheses.

The *PE* of the non-acquired bank samples has a significant but negative coefficient value of -0.563, indicating that the banks' growth and dividend are negatively related. The result supposes that increase in the bank growth would potentially drain the earnings available to shareholders. Gugler (2003) adds that increase in one causes a reduction in the other. The novelty of our study lies on the premise that previous studies do not test the *PE* variable on both samples of acquired and non-acquired samples. Studies such as Gaver & Gaver 2003, Grullon, et al 2002, Fama & French 2002 and Brunarski, Harman & Kehr 2004 have all observed the significance of banks growth in determining their dividend policy but failed to differentiate whether the same effect can be drawn on the acquired and non-acquired samples. As merged banks often pursue different growth strategy, it is therefore instructive not to generate results on dividend policy without recognising the structural differences in their operation and growth.

Conclusion

Studies in bank dividend policy have rarely focused on making analytical comparison of the factors affecting the acquired and non-acquired banks. The study focused on European banks during the period 1997 – 2009, a period marked by aggressive merger activities. The present study provides the link, by robustly testing the relevance and commonality of

common dividend factors as they apply to both acquired and non-acquired bank samples. The results have reveal that liquidity, risk, financial structure and profitability as common determinants of dividend policy. However, while the liquidity of non-acquired banks exerts significant negative impact on dividend policy, we find that the acquired banks' liquidity shows significant positive impact. Banks involved in M&A are often positioned to strategise their operation towards improving shareholders wealth. Available free cash flows are therefore channelled towards establishing a viable dividend policy. Whilst non-acquired banks tend to diversify their investment portfolio which drains available cash but increases their retained earnings.

The nature of the bank entails that investors would expect reasonable returns to compensate the risk inherent in the industry. The consistent positive significance of the risk variable in both samples explains the strong relationship and effect of risk on the dividend policy adopted by the bank. Banks therefore would consider the level of their risk while devising their dividend policy. While the EPS is significantly positive in both samples, the ROE is negative. Both profitability measures test different dimensions of the bank performance, as vary in impact. The earnings per share (EPS) relate the earnings generated by the bank which is available to the shareholders to the number of shares in issue. It is measured by the after tax profit less any preference dividend divided by the number of ordinary shares which is an aabsolute return delivered to the shareholders. Growth in the EPS indicates the progress and profit of the bank. It is a very powerful indicator of financial performance of a firm (Gordon and Owers, 2000). At the level of the individual firms, the ROE keeps in place the financial framework for a thriving and growing enterprise and drives industrial investment, growth in GNP, employment, government tax receipts at the macroeconomic level (Walsh, 2008).

However, we find PE of the non-acquired banks to be negatively significant to the dividend policy, which is not the case for acquired banks. The significance of the variable in the non-acquired banks indicates that growth in bank investments and future projects exert more aggressive impact on banks that are not acquired or less likely to merge. This finding is novel as previous studies on dividend policy do not make this distinction. The PE The ratio measures the future earnings growth of the bank. Increases in sales and total assets are also often used to measure growth (Easton, 2004). The argument is that when a bank grows, it requires capital for expansion. Such funds will thus reduce the available sum set outside for dividend but this is not necessarily the case in acquired banks.

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THE IMPACT OF COMPANY-SPECIFIC AND EXTERNAL FACTORS ON CORPORATE RISK TAKING: THE CASE OF EGYPTIAN INSURANCE COMPANIES

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Abstract

Using a two-way panel regression analysis with fixed and random effects and the generalized method of moment(GMM), we investigate the impact of both firm-specific and external factors on the risk taking of Egyptian insurance companies. We use hand-collected data of Egyptian insurance companies over the period from 2006 to 2011 to estimate the relationship between total and systematic risks as risk measures and the independent variables. Following Eling and Mark (2011) the extent of risk taking is quantified through variations in stock prices and these are explained by firm-specific and external factors. We find that differences in company size, interest rate level and economic development affect variations in stock prices. The analysis also highlights differences between the life and non-life insurers, with the non-life insurers exhibiting a higher level of risk (market and premium) and board independence. The pattern of results are qualitatively the same for non-life insurers but different for life insurers when we use GMM method.

Keywords: Risk Management, Corporate Risk Taking, Corporate Governance, Insurance Industry, Egypt

JEL Classification: G34, D21, D23

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Introduction

Corporate governance and measuring corporate risk taking are an important effort to ensure accountability and responsibility of every part of the organization and has been identified to mean different things to different people. It can be broadly classified into internal and external mechanisms (Denis and McConnell, 2003; Sarkar et al., 2008). Internal mechanisms or firm-specific factors are those related to board structure, management and executive compensation and ownership structure. These mechanisms are the core of corporate governance, in particular the efficiency of board, which has played a significant role in this regard due to its characteristics. External mechanisms relate to the market for corporate control and disclosure requirements, are chosen to proxy the environment in which insurers operate, i.e. the takeover market and the shareholder protection offered by the legal system in which the business operates.

The importance of the factors associated with corporate risk taking in general and insurance companies in particular has attracted considerable attention in both the economic and financial literature and is widely believed to play an important role in corporate governance, particularly in monitoring top management. This influence of risk management and board of directors on corporate risk taking and firm performance has been discussed for a number of years, but mainly in the United States and European business context.

There are different ways to measure the insurance company risk taking, such as determination of risk-based capital via cash flow simulations (Cummins et al., 1999) or an analysis of factors explaining insurance company financial health (Chen and Wong, 2004). A number of methodologies have been adopted in this context, including multiple discriminant analysis (Carson

and Hoyt, 1995), neural networks (Brockett et al., 1994), and cascaded logistic regressions (Baranoff et al., 1999). Regulatory authorities assess insurer risk taking by performing stress tests or deriving solvency ratios. It is worth noting that a significant body of research involves identifying the parameters relevant for company failure (see, BarNiv and McDonald, 1992; Ohlson, 1980; Trieschmann and Pinches, 1973).

As most of the empirical evidence concerns developed markets such as the UK and US stock markets, it is necessary to investigate this issue for other markets to check the robustness of the US and UK results. Also, academics and policy makers in both developed and emerging markets are increasingly grappling with this issue as they seek to avoid or reduce the relevant level of risk which in turn will reform their governance mechanisms.

Despite the importance of corporate risk taking in emerging countries, a very few studies (see Adenikinju and Ayorinde (2001) and Sanda et al. (2005)) have been made on the emerging insurance business environment. This is because, firstly, developing countries have mainly chosen a state-sponsored route of development with a relatively insignificant role of the private corporate sector which made corporate finance not an interesting area of research for many decades. Secondly, developing countries suffer from the lack of data, since data on relevant variables are often not available. Thirdly, the analysis of the Egyptian market is of particular interest for three main reasons:(i) this market has been the focus of little research despite its importance (one of the largest markets in Africa); (ii) the Egyptian economy is a small open economy and it is likely that international factors play an important role in explaining risk taking decisions and variations in stock prices; and (iii) given the great Egyptian revolution, it is now the appropriate time for Egyptian companies seeking to reduce the level of risk and reform their governance mechanisms. The Egyptian insurance industry undoubtedly faced the most difficult period during the Egyptian revolution of 2011, as reflected in the number of individual policies seen in Table 1. These developments raise many questions concerning the nature of risk taking and the way of quantifying this type of risk in Egyptian insurance companies.

Table 1. Number of policies and sums assured (in thousands) in Egyptian Insurance Companies

	2006	*2007*	*2008*	*2009*	*2010*	*2011*
Number of policies:						
Individual	147032	176165	157464	158146	180363	158883
Group	515	536	528	431	482	485
Sums Assured:						
Individual	5883542	10139158	9744821	11106490	13598856	11131402
Group	23619430	27740740	44594760	49741142	45969718	62443244

Source: (Egyptian Financial Supervisory Authority EFSA, 2011)

This controversy, besides the lack of research in developing countries in general and Egypt in particular, motivates this study on the financing practices of the Egyptian insurance companies, where answers for many questions are still not clearly developed. Hence, the study intends to reduce the knowledge gap by investigating the corporate risk taking in large Egyptian insurance firms and analyse whether firm-specific and external factors have an impact on the level of risk, as measured by total and systematic risks.

Equipped with the previous analysis, this paper aims to examine the Egyptian evidence on the relationship between the firm-specific and external factors and corporate risk taking using data of Egyptian insurance companies between 2006 and 2011. Company-specific characteristics are credit risk, market risk, liquidity risk, premium risk, reserve risk, leverage and firm size, while external factors are growth rate of the gross domestic product (GDP growth) and an average short-term (three month) interest rate. Further, we extend our analysis to examine the relationship between the board characteristics and firm risk taking of Egyptian insurance companies. In essence, we are asking whether board characteristics, namely board independence and board meetings, are better able to explain the data of corporate risk taking. The idea is to identify the amount of risk taking through variations in stock prices.

The analysis in this paper is innovative in several ways. It is, to our knowledge, the first attempt to analyze a set of different internal and external risk drivers and their relationship to corporate risk taking in emerging markets. Furthermore, this is one of the first papers that use a dataset of Egyptian insurers to evaluate firm and environmental factors at an international level.

The remainder of the paper is set out as follows. Section 2 is a brief literature review on corporate risk drivers. Section 3 provides details of the methodology and models. Section 4 presents the data and empirical results and section 5 concludes.

Literature Review

The extent of risk taking is quantified through variations in stock prices and these are explained by firm-specific and external factors that proxy the environment in which the insurers are active. Indeed, there is a great deal of research that documents the correlation between risk drivers and corporate risk taking.

One strand of research on risk taking and variations in asset pricing (see, *inter alia* Hermalin and Weisbach (1991); Goodstein et al. (1994); Weir and Laing (1999); Adenikinju and Ayorinde (2001); Ferris et al. (2003); Sanda et al. (2005)) has investigated the internal factors discussed in academia and practice as potential drivers of risk associated with insurance companies. Internal factors include the company's management, organization, and business policy. Here, Ashby et al. (2003) emphasize that insurance company failures result from a combination of different causes and effects. Yet, the root of most failures is poor management. It is not clear whether skillful managers engage in more or less risk taking and do have a sense of responsibility with a long-term orientation toward business success (in contrast to a short-term bonus orientation). Skills would then be a combination of entrepreneurial competence and managerial responsibility, which is difficult to quantify. In this line Baranoff and Sager (2002) investigate the relation between capital and risk in the Life insurance industry in the period after the adoption of life risk-based capital (RBC) regulation over the period from 1993 to 1997 using Autoregressive two-stage least squares. They find that for life insurers the relation between capital and asset risk is positive and significant, while the relation between capital and product risk is negative. The contrast between the positive relation of capital to asset risk and the negative relation of capital to product risk underscore the importance of distinguishing these two components of risk.

Using the longitudinal factor analysis, Baranoff et al. (2007) examine the capital structure in the life insurance industry over the period from 1994 through 2000 and compare the effects of two different perspectives of asset risk represented by two different proxies and two size segments of the industry in two separate periods. They find that regulatory asset risk (RAR) and opportunity asset risk (OAR) are not equivalent proxies for asset risks and the large life insurers and small life insurers differ substantially in the importance of the two asset risks exert strongly positive and approximately equal effects on the capital ratio. But for the smaller life insurers, the RAR faddist is insignificant, whereas the OAR remains strong and positive as important in the prebull market period as for large insurers.

Low (2009) investigates the impact of equity-based compensation on managerial risk-taking behavior using both the abnormal returns and univariate analyses over the period from 1990 to 2000. He finds strong empirical evidence on the impact of equity-based compensation on managerial risk-taking, which are listed as (i) equity-based compensation affects managers' risk-taking behavior, this risk reduction is concentrated among firms with low managerial equity-based incentives, in particular firms with low chief executive officer portfolio sensitivity to stock return volatility. Further, the risk reduction is value-destroying; (ii) firms respond to the increased protection accorded by the regime shift by providing managers with greater incentives for risk-taking. In the same vein, Lee et al. (1997) examine the change in property-liability insurers' risk taking around enactments of state guaranty fund laws using t-test and Wilcoxon signed-ranks test in addition to the two-sample t-test and the mann-whitney test. They find an evidence supportive that the risk of insurer' asset portfolios increases following enactment, but this increase in risk is significant only for stock insurers. Their evidence of increased risk-taking following guaranty-fund adoptions suggests that the way these funds are organized creates counter productive investment incentives, while the evidence on changes in risk-taking helps resolve statistical problems that have been troublesome for studies of bank deposit insurance.

In the same line, Cummins and Sommer (1996) investigate the capital and portfolio risk decisions of property-liability insurance firms using OLS over the period from 1979 to 1990. They find supportive evidence that managerial incentives play a role in determining capital and risk in insurance markets, implying significant implications for insurance solvency regulation.

Another factor thought to have an influence on risk taking in insurance companies is financial distress and insolvency. Here, Sharpe and Stadnik (2007) test a statistical model to identify Australian general insurers experiencing financial distress using multiple discriminant analysis and logit and probit analysis over the period from 1998 to 2001. They find that insurers are more likely to be distressed. They are generally small and have low return on assets and cession ratios. Relative to holdings of liquid assets, they have high levels of property and reinsurance assets, they also write more overseas business, and less motor insurance and long-tailed insurance lines, relative to fire and household insurance.

Following Bar and McDonald (1992) and Trieschmann and Pinches (1973), Carson and Hoyt (1995) investigate the Life insurer financial distress. For insurance companies adopting three empirical models; namely recursive partitioning,

logistic regression, and multiple discriminant analysis, they find that surplus and leverage measures are strong indicators of insurer financial strength. However, no evidence is found for a strong relationship between state minimum capital requirements and insolvency.

Baranoff et al. (1999) investigate whether segmentation of the life/health insurance industry by product specially or size can improve solvency models. They find that segmentation improves upon whole industry models specialized by product line and by size are better than unitary models. Similarly, Eling et al. (2007) outline the specifics of solvency, to provide a basic understanding of solvency and also encourage additional research on best practices for successful risk-based capital standards. They indicate that insurance supervision in the EU is undergoing significant change as the European commission works toward harmonization across member countries as well as implementation of standards that are appropriate for a rapidly changing market place. Eling and Schumacher (2007) analyze the situation in which the fund under consideration represents the entire risky investment using the Hotelling-Pabst statistic. They compare the Sharpe ratio with twelve other performance measures. They find that despite significant deviations of hedge fund returns from a normal distribution, the comparison of the Sharpe ratio to the other performance measures results in virtually identical rank ordering across hedge funds.

Post et al. (2007) provide an overview and evaluation of the various international financial reporting standards (IFRS) arguments that concern the changes IFRS is likely to cause in the European insurance industry and indicate that the effects of IFRS are exaggerated and the main area of IFRS impact on the European insurance industry is likely to be on insurance product design. Also, Kim et al. (1995) employ dynamic statistical methodology, particularly event history analysis, to examine insurer insolvencies and factors associated with these insolvencies using multivariate discriminant analysis and binary response regression models. They indicate that examination of various factors associated with property-liability and life insurer insolvencies reveals several statistically significant relationships. For property-liability insurers, they find statistically significant factors with consistent signs in various versions of the exponential model including organizational age, premium growth, investment yields, underwriting results, expense ratios, loss reserve expousure, and realized and unrealized capital gains. For life insurers, statistically significant factors with consistent signs in various versions of the exponential model included organizational age, investment yields, expense ratios real estate holdings, income performance, and realized and unrealized capital gains. Klumpes (2004) investigates the performance benchmarking in the U.K life insurance industry using regressions analysis. He finds that performance benchmarking is applied to measure the profit and cost efficiency of UK life insurance products that are required by 'polarization' regulations to be distributed through either independent financial advisers.

Klumpes (2005) examines the economic and organizational factors affecting the level of risk taking and managerial propensity using three alternative measures: traditional accounting-based measures, economic value added(EVA) and multi period, actuarial cash flow based measures such as embedded value(EV) using univariate and multivariate tests and logistic regression. He indicates that life insurance CEOs are more likely to use EV for strategic management planning and control purposes, and that this preference is strongly conditioned by the firm's ownership structure. These results support the managerial incentive hypothesis, after controlling for the effects of other organizational structural and behavioral variables that potentially influence the level of risk and choice of financial performance measure.

Harrington et al. (2008) analyze whether the 1994-1999 'soft' market in medical malpractice insurance led some firms to underprice, grow rapidly, and subsequently experience upward revisions in loss forecasts 'loss development' which could have aggravated subsequent market 'crises'. The results indicate a positive relation between loss development and premium growth among growing firms. Underpricing was likely more prevalent among non-specialist malpractice insurers. Elston and Goldberg (2003) examine the factors affecting the level of executive compensation in Germany, with particular emphasis on the agency problem created by the separation of management and ownership using OLS. They find that, similar to US firms, German firms also have agency problems caused by the separation of ownership from control, with ownership dispersion leading to higher compensation.

Eling and Schmeiser (2010) investigate the impact of crisis on insurance companies and to derive consequences for risk management and insurance regulation. They indicate that the importance of outlining potential consequences seen from the crisis and the consequences derived believed to have sufficient evidence on the level of risk taking. Chen and Wong (2004) test the solvency status of individual insurers in the four Asian economies and to assess the effect of Asian financial crisis on the financial health of the insurance companies. They find that the factors that significantly affect general insurers, financial health in Asian economic are firm size, investment performance, liquidity ratio, surplus growth, combine ratio, and operating margin. While the

factors that significantly affect life insurers, financial health are firm size, change in product mix, but the last three factors are more applicable to Japan. Moreover, the financial health of insurance companies in Singapore seems to be significantly weakened by the Asian financial crisis.

Chen et al. (2006) examine the impact of option-based compensation on several market-based measures of bank risk: total, systematic, idiosyncratic and interest rate risks. They find a robust across alternative risk measures, statistical methodologies, and model specifications. Overall, the results support a management risk-taking hypothesis over a managerial risk aversion hypothesis . The results also have important implications for regulators in monitoring the risk levels of banks. In the same vein, Grace (2004) examines several hypotheses about the structure and level of compensation for property-liability chief executive officers (CEOs) using OLS. He finds that corporate governance structures, managers' stock ownership, and regulatory attention are not adequate to prevent CEOs from receiving compensation levels in excess of what economic factors predict. Contrary to findings in prior studies, there is little evidence that use of incentive compensation paid increases with insurer investment opportunities, as traditional measured.

Another strand has investigated external factors of risk taking, which are those cannot be influenced by the company. These are divided into general economic conditions, institutional intervention, and other risk factors. Factors for economic conditions and institutional intervention can be taken from the underwriting cycle literature (see, Cummins and Outreville, 1987; Lamm-Tennant and Weiss, 1997). In this regards, variations in interest rates should play an important role in determining insurer business risk, as premiums are calculated as discounted future claims or benefits. This argument is especially relevant for life insurers and long-tail casualty business. Here, Grace and Hotchkiss (1995) and Chen et al. (1999) analyse underwriting cycles and find that prices and underwriting profits are related to changes in the economic environment as measured by changes in real prices (inflation) or real GDP. Catastrophes are accompanied by an unusual and massive impact on claims and these might affect the business risk of insurance companies. With regard to corporate governance, the degree of regulation and disclosure requirements are two important external risk drivers. The higher the degree of regulation (such as price, product, or capital regulation), the lower is the competition in an industry. A low degree of competition without differentiation in products and prices might lower risk, but it also has a dampening effect on innovation. It is worth noting that higher disclosure requirements reduce information asymmetries between stockholders and managers, leading to more accurate estimates of future earnings and firm value. The switch from local generally accepted accounting principles (GAAP) to international financial reporting standards (IFRS) is an aspect in this context. The IFRS introduce more and standardized disclosure requirements, which should enhance the transparency and comparability of international insurers.

Following on from the seminal work of Fama and Jensen (1983), it has been argued that boards can be effective mechanisms to monitor top management on behalf of dispersed shareholders. Boards effectuate management appointment, dismissal, suspension and reward. Board characteristics, therefore, are relevant to corporate performance. A natural variable of interest in this case is board composition. The empirical evidence on this count is, however, mixed. Weisbach (1988) was one of the earliest to report an association of board turnover, risk taking, firm performance and the presence of outside directors. Fama (1980) argued that the viability of the board as a market-induced mechanism for low-cost internal transfer of control might be enhanced by the inclusion of outside directors. Echoing this view, Cadbury (1992) argued for more non-executive director representation on the boards of firms and the separation of the chairman and chief executive and their reflections on the level of risk taking.

In the same vein, Weisbach (1988) found that risk taking and performance measures are more highly correlated with CEO turnover for firms in which outsiders dominate the boards of directors than for those in which insiders dominate. Bhagat and Black (1999) provide evidence for a positive impact of the number of outsiders, while Hermalin and Weisbach (1991) did not uncover any robust relationship. A second variable of focus is CEO remuneration. Two important considerations assume relevance in this context. The first is the participation constraint which suggests that compensation of the CEO must be higher than the income available from alternative sources. The second is the incentive constraint, which indicates that aligning the incentives of the CEO with those of the shareholders is the easiest way to circumvent moral hazard on the part of the CEO (Jensen and Meckling, 1976; Fama , 1980).

In this line, Chen et al. (2001) examine the relation between risk and managerial ownership for a sample of life insurance companies in the United States. They find that the level of life insurance company risk is dependent on the level of managerial ownership, specifically, as the level of managerial ownership increases, the level of risk increases supporting a wealth transfer hypothesis over a risk aversion hypothesis. The findings suggest that when compensation packages encourage higher levels of managerial ownership,

manager and stockholder interest converge with regulators can control the risk-taking activities of life insurers by requiring a separation between ownership and management. Also, Cheng et al. (2011) investigate the relationship between risk taking of life-health insurers and stability of their institutional ownership. The main three findings are: (i) stable institutional ownership is associated with lower total risk of life-health insurers, supporting the prudent-man law hypothesis; (ii) when investors are sorted in terms of stringency of the prudent-man restrictions, their negative effect on risk holds for all, except insurance companies, as owners of life health insurers; and (iii) large institutional owners do not raise the riskiness of the investee-firms as proposed by the large shareholder hypothesis.

Cole et al. (2011) test the alternative theories regarding the relation between separation of ownership and management and risk taking by examining the implications of ownership structure for firm's risk taking behavior in the U.S. property-liability insurance industry, to impact firm risk. They find that each ownership structure is significantly different from every other ownership structure in terms of risk. Also, Core et al. (1999) examine the association between executive pay and a comprehensive set of board and ownership structure variables and find that measures of board and ownership structure explain a significant amount of cross-sectional variation in CEO (chief executive officers) compensation, after controlling for standard economic determinants of pay. Moreover, the signs of the coefficients on the board and ownership structure variables suggest that CEOs earn greater compensation when governance structures are less effective. They also find that the predicted component of compensation arising from these characteristics of board and ownership structure has significant impact on firm performance.

Mayer et al. (1997) investigate the role of outside directors in the corporate-control process by exploiting variation in ownership structure within the insurance industry. They find that firms that switch between stock and mutual charters make corresponding changes in board composition and mutuals' by laws more frequently stipulate participation by outside directors.

For growth rate as an external factor, John et al.(2008) examine the relationship between investor protection and the risk choices in corporate investment and find that corporate risk-taking and firm growth rates are positively related to the quality of investor protection.

He and Sommer (2010) investigate the implications of separation of ownership and control for board composition over a spectrum of ownership structures present in the U.S. property-liability insurance industry. They find that agency costs associated with manager-owner conflicts increase with the degree of separation of ownership and control, as greater agency costs imply a greater need for monitoring by outside directors on the board. Therefore, use of outside directors is expected to increase as the separation of ownership and control gets larger. Further, they found evidence supportive of: (i)corporate board roles, which fulfil two roles: boards play an institutional role and providing a link between the organization and its environment; (ii) boards discharge a governance role, monitoring and disciplining of inefficient management; and (iii) the strategic role, chartering the future growth path of the firm in a competitive setup.

In this line, Monks and Minow (1995) argue that board monitoring can lead to an improvement in the quality of managerial decision-making. Yet, the root of most failures is poor management. It is not clear whether skillful managers engage in more or less risk taking and do have a sense of responsibility with a long-term orientation toward business success (in contrast to a short-term bonus orientation). Skill would then be a combination of entrepreneurial competence and managerial responsibility, which are difficult to quantify.

Methodology and Models

In the following section, the research methodology is set up to estimate different specifications associated with risk drivers and firm risk taking. Based on the above analysis, the following model is employed:

$$BETA/VOL = \int[MR, CR, LR, PR, RR, LEV, SIZ, SB, BM, GDP, IR] \quad (1)$$

where the *BETA* is measured by the covariance of stock return and market return (EGX30) divided by the variance of the market return; *VOL* is the logarithmic changes of the insurer's stock price; *MR* is market risk measured by ratio of equity and real estate investments to total assets; *CR* is credit risk measured by ratio of loans and fixed-income securities to total assets; *LR* is the liquidity risk measured by ratio of cash and near-cash items and marketable securities to total assets; *PR* is the premium risk measured by the yearly net insurance premium growth *RR* is reserve risk measured by ratio of total insurance reserves to total net premiums earned;*LEV* is Leverage measured by ratio of total liabilities to shareholders equity;*SIZ* is the firm size, measured by LN(total assets); *SB* is the supervisory board compensation and measured by percentage of independent

members of the supervisory board;*BM* is board meetings measured by number of meetings held by the supervisory board; *GDP* is GDP Growth measured by the yearly growth rate of gross domestic;*IR* is the interest rate, measured by the Short term interest rate based on 3-month offered interbank rate.

To examine the relationship between risk drivers (internal and external) and corporate risk taking (systematic (Beta) and total (VOL) risks), let the risk measure be the dependent variable and the risk drivers be explanatory variables. The systematic (Beta) and total (VOL) risks and relationship model for life insurance companies is then presented as follows:

$$LBeta = \alpha + \sum_{k=1}^{9} \beta_j LINT_i + \sum_{k=10}^{11} \beta_j LEXT_i + \varepsilon_i \quad (2)$$

$$LVOL = \alpha + \sum_{k=1}^{9} \beta_j LINT_i + \sum_{k=10}^{11} \beta_j LEXT_i + \varepsilon_i \quad (3)$$

where L is the life insurance companies; α is the intercept; INT_i and EXT_i are the internal and external drivers respectively.

To investigate the relation between risk measures of nonlife insurance companies and the same independent variables, the following models are adopted:

$$NLBeta = \alpha + \sum_{k=1}^{9} \beta_j NLINT_i + \sum_{k=10}^{11} \beta_j NLEXT_i + \varepsilon_i \quad (4)$$

$$NLVOL = \alpha + \sum_{k=1}^{9} \beta_j NLINT_i + \sum_{k=10}^{11} \beta_j NLEXT_i + \varepsilon_i \quad (5)$$

where NL is the non-life insurance companies; α is the intercept; INT_i and EXT_i are the internal and external drivers respectively.

To accomplish the above objectives, the study employs pooled and panel data analysis techniques where panel data analysis are usually estimated by fixed effects and random effects techniques. In pooled model, all observations are put together and the regression coefficients describe the overall influence with no specific time or individual aspects. It assumes that the error term captures the differences between the firms (across-sectional units) over the time.

The pooled model is simply be estimated by Ordinary Least Square (OLS). However, OLS will be appropriate if no individual firm or time-specific effects exist. If they are, the unobserved effects of unobserved individual and time specific factors on dependent variable can be accommodated by using one of the panel data techniques (Gujarati, 2003). A panel data technique helps researchers to substantially minimize the problems that arise when there is an omitted variables problems such as time and individual-specific variables and provide robust parameter estimates than time series and/or cross-sectional data. It is usually estimated by fixed effects model and random effects models. The fixed effect model allows control for unobserved heterogeneity which describes individual specific effects not capturing by observed variables. The term ``fixed effects'' is attributed to the idea that although the intercept may differ across individuals (firms), each individual's intercept does not vary over time; that is, it is time invariant.

Unlike fixed effects model, the unobserved effects in random effects model is captured by the error term (ε_{it}) consisting of an individual specific one (u_i) and an overall component (v_{it}) which is the combined time series and cross-section error. The random effects model will be estimated by the Generalized Least Squares (GLS) technique. This is because the GLS technique takes into account the different correlation structure of the error term in the random effects model (Gujarati, 2003).

Assume that Y_t and X_t are random variables so that every equation in the linear model can be written in the form:

$$Y_t = X_t\theta + u \quad (6)$$

According to equation (6), we can imply two sets of the relationships between the residual and the explanatory variables. Firstly, where there is no correlation between the explanatory variables and the residuals. In this case we say that the expectation of Y_t, given a set of information I, can be given by $E\ (Y_t\ |I_t = X_t\theta)$ and the orthogonality condition appears as $E\ (X_t\ \theta|I_t) = 0$. Calling at the second case, which is common in the practical world, there is a correlation between the residual and the explanatory variables. Therefore it is

important to find other variables that did not correlate with residuals but correlate with the original variables; these variables are called instrumental variables.

Suppose that we have *n* observations on *K* variables, denoted as $Z_t = 1, \dots\dots, n$ which are correlated with X_t where $E\,(X_t, Z_t)$ is nonsingular but remains negatively correlated with the residual u_t, that is, $E\,(Z_t, u_t)$, so that $\rho \lim Z'\,u/n = 0$. Hence we include Z_t, as instrumental variables instead of the problematic regressors. Again, these instrumental variables are correlated with X_t (explanatory variable) but uncorrelated with the residual. Consider the following estimator:

$$\begin{aligned} \tilde{\tau} &= (Z'X)^{-1}Z'Y \\ &= \theta + (Z'X)^{-1}Z'u \\ &= \theta + (Z'x/n)^{-1}Z'u/n \end{aligned} \tag{7}$$

Then postulate that $\rho \lim Z'\,X/n$ is nonsingular, $\rho \lim Z'\,u/n = 0$, and $\rho \lim \tilde{\tau} = \theta$, where $\tilde{\tau}$ is called the simple instrumental variable estimator (IV). If the model contains a group of observations, then $U = Y_t - X_t\theta$ and $E(Z'u) = E(Z_t(Y_t - X_t\theta))$ which implies that the sample counterparts of the moment conditions can be given by:

$$\frac{1}{T}\sum_{t=1}^{T} Z(Y_t - L_t\theta) \tag{8}$$

Assume that the model is just-identified, then the sample version is set to be zero (orthogonality condition) and the GMM estimator (the standard instrumental variables estimator) can be evaluated as:

$$\hat{\theta}_T = \{\sum_{t=1}^{T} z_t' x_t\}\sum_{t=1}^{T} z_t y_t \tag{9}$$

However, if the matrix $Z'_t X_t$ is non singular and the model is over identified, we estimate the model as presented in equation (9). To estimate the variance of the standard instrumental variables estimator $\hat{\theta_T}$ for the sample version, we use:

$$[\frac{1}{T}]\hat{v}_T = [\frac{1}{T}]\{[[\frac{1}{T}]\sum_{t=1}^{T} x_t z_t']\hat{A}_T^{-1}[[\frac{1}{T}]\sum_{t=1}^{T} z_t x_t']\}^{-1} \tag{10}$$

where $\hat{A_T}$ is an estimate of

$$A = \lim_{T\to\infty}[\frac{1}{T}]\sum_{t=1}^{T}\sum_{\nu=-\infty}^{\infty} E\{u_t u_{t-\nu} z_t z_{t-\nu}'\} \tag{11}$$

When the residuals u_t are serially uncorrelated and homoscedastic with a variance of σ^2, (A) can be obtained by:

$$\hat{A}_T = \hat{\sigma}_T^2[\frac{1}{T}]\sum_{t=1}^{T} z_t z_t' \tag{12}$$

$$\hat{\sigma}_T^2 = [\frac{1}{T}]\sum_{t=1}^{T}(y_t - X_t'\hat{\theta}_T)^2$$

where

Substituting into equation (9), the Variance of GMM (the standard instrumental variables estimator) is given by:

$$\hat{v_t} = \hat{\sigma}_T^2\{\sum_{t=1}^{T} z_t X_t^{'}\}^{-1}\{\sum_{t-1}^{T} z_t z_t^{'}\}\{\sum_{t=1}^{T} X_t z_t\}^{-1} \tag{13}$$

Data and Empirical Results

Data

The data adopted in this study are annual data on Egyptian insurance companies and span the period from 2006 to 2011. Panel data are used as it observes multiple companies over multiple time periods. Hence, in this study we adopt panel data to examine a number of explanatory variables using the regression models discussed above. Hsiao (1986) in his book `analysis of panel data' highlighted the significant advantages from using panel data over cross-sectional and time-series data sets. Firstly, panel data provide a large number of data points, increasing the degrees of freedom and reducing the collinearity among explanatory variables. Secondly, longitudinal data allows certain questions to be addressed that cannot be done through using cross-sectional or time-series data sets. Finally, panel data while capable of testing more complicated behavioral models, can also resolve or reduce the problem of the certain effects that occur due to omitted or mismeasured variables, which are correlated with the explanatory variables. Thus panel data are able to control better these effects (Hsiao,1986). The data has been collected from various sources. Data on stock prices are obtained from DataStream and Egyptian disclosure book.

To examine the effect of firm size on corporate risk taking, the variables of total assets and sales are gathered from the annual report of insurance companies issued by the Egyptian Financial Supervisory Authority, stock market index in the same periods, and price of shares of the insurance companies.

Empirical Findings

We begin our analysis with the descriptive analysis as in Table 2. The table presents the mean, standard deviation and correlations of two risk measures and Eleven risk drivers.

As we can see from Panel *A* and *B*, there is a wide spread in average and standard deviation across the risk measures and risk drivers. Data are separated by life and non-life, which includes reinsurance companies. The discussion is focused on differences between life and non-life insurers.

Comparing the different industries, the average beta is higher for non-life insurance (0.024) than for life insurers (0.008), a finding in agreement to that of Borde et al. (1994) who find that U.S. life insurers have a lower beta than non-life insurers. We believe that our finding is meaningful since non-life insurers in Egypt typically have significant savings processes, which result in large investment portfolios, and experience only a limited degree of uncertainty from the underwriting business. life insurers in Egypt have a smaller investment portfolio and are more prone to underwriting risk, especially in lines with catastrophes exposure. This situation should result in the returns of life insurers being more dominated by the investment result, whereas the returns of non-life insurers may be more dominated by underwriting results. One consequence of this difference between the two lines of business could be that non-life insurers are more correlated to stock market returns, as documented by a beta close to 1, while life insurers should have a lower beta.

The risk drivers in Panel *B* of Table 2 reveal some interesting cross-industry differences. On average credit risk and liquidity risk are higher in life insurers than nonlife. In contrast, premium risk and reserve risk are higher in nonlife insurers than life insurance. We believe that our finding is meaningful since non-life insurers in Egypt typically characterized by short-term contracts which reflect on the value of claims by insurers. On average we find differences for the control-related variables supervisory board independence and board meetings, which are both higher for the life insurers than non-life. This might reflect the fact that in life insurers industry the independence and control of executives can come under more public scrutiny (the publication of independent supervisory board members is mandatory in Egypt). In general, this highlights the distinct characteristics of the corporate governance environment in Egypt. Given the asset accumulation function of life insurers that leads to high reserves, it is reasonable to find a higher leverage and size compared to non-life insurance companies. Also, the higher market risk of non-life insurance companies seems plausible given the nonlife insurer business model. Further, we find no significant differences between GDP and interest rate in both life and non-life insurers.

Table 2 also presents Pearson's correlation coefficients between considered variables. As expected, the correlation between both risk measures for nonlife insurers is positive. Most of the correlations between internal risk and beta are positive and significant. The correlation between leverage and systematic risk is positive and significant with life insurers.

The correlation between size and the risk measures (systematic risk and total risk) is significant and positive in life and nonlife insurers for systematic risk indicating that with increasing size, the insurers become more aligned with the market and thus more prone to systematic risk. Interestingly, the correlation between corporate governance related variables (supervisory board independence and board meetings) and the insurers' beta is significant and positive for life insurers, while for volatility, this is only the case for board meetings but with a negative correlation.

With regard to external risk drivers, we find that GDP growth is positively correlated with total risk but uncorrelated with systematic risk. Also, GPD growth is negatively aligned with the short-term interest rate. To detect multi-collinearity, an ordinary least-squares regression of both risk measures against all other variables is conducted.

The results of the random and fixed effects regressions with beta and volatility as dependent variables are presented in Table 3 and Table 4. As specification tests we report the p-value of the Hausman statistic with the random effect models and the p-value of the f-test with the fixed effect models.

Table 2. Descriptive statistics and correlation between risk measures and risk drivers

	Beta	*Vol*	*MR*	*CR*	*LR*	*PR*	*RR*	*LEV*	*SIZ*	*SB*	*BM*	*GDP*	*IR*
Panel A:Life Insurance													
Mean	0.0075	0.6820	0.3222	0.1480	0.2971	1.937	3.475	10.60	12.69	0.8726	6.354	0.0247	0.0944
Std.Dev.	0.0261	0.1070	0.3375	0.1334	0.2374	6.688	3.119	11.73	1.871	0.0308	3.609	0.0331	0.0110
Panel A:Non-Life Insurance													
Mean	0.0239	0.4744	0.4027	0.1354	0.2397	39.18	4.585	1.945	12.59	0.8522	6.167	0.0245	0.0946
Std.Dev.	0.0125	0.2240	0.2712	0.0975	0.1648	6.1326	16.02	1.536	1.698	0.0396	3.515	0.0329	0.0113
Panel B: Pearson Correlation Matrix-Life Insurance													
Beta	1.0000												
Vol	-0.08	1.0000											
MR	-0.31	-0.14	1.0000										
CR	0.32	0.23	-0.09	1.0000									
LR	0.23	-0.08	-0.38	-0.13	1.0000								
PR	-0.17	0.13	0.48	-0.23	-0.26	1.0000							
RR	0.21	0.14	-0.60	0.19	0.39	-0.22	1.0000						
LEV	0.21	0.18	-0.66	0.04	0.10	-0.27	0.46	1.0000					
SIZ	0.28	0.11	-0.76	0.24	0.28	-0.37	0.74	0.46	1.0000				
SB	0.15	0.11	-0.30	0.21	0.15	-0.12	0.35	0.19	0.53	1.0000			
BM	0.15	-0.02	-0.43	-0.13	0.15	-0.24	0.09	0.34	0.18	0.35	1.0000		
GDP	0.17	0.42	-0.03	0.28	-0.02	-0.17	-0.04	0.09	-0.14	-0.04	-0.07	1.0000	
IR	0.09	0.42	0.04	-0.25	0.17	-0.01	0.07	-0.14	0.16	-0.01	0.05	-0.63	1.0000
Panel B: Pearson Correlation Matrix-Non-Life Insurance													
Beta	1.0000												
Vol	0.46	1.0000											
MR	0.13	0.17	1.0000										
CR	-0.02	-0.13	-0.05	1.0000									
LR	-0.10	-0.08	-0.37	-0.16	1.0000								
PR	0.30	0.26	0.30	-0.19	-0.32	1.0000							
RR	0.08	0.09	-0.01	-0.08	-0.19	-0.05	1.0000						
LEV	-0.01	-0.03	-0.40	0.12	0.37	-0.27	-0.01	1.0000					
SIZ	0.01	-0.12	-0.42	0.01	0.42	-0.38	0.01	0.43	1.0000				
SB	0.08	-0.08	-0.27	-0.07	0.28	-0.36	-0.06	0.27	0.58	1.0000			
BM	-0.01	-0.12	-0.27	0.17	0.11	-0.49	0.05	0.20	0.02	0.36	1.0000		
GDP	0.23	0.71	0.10	-0.03	-0.16	0.34	0.09	0.03	-0.20	-0.10	-0.12	1.0000	
IR	-0.04	-0.69	-0.04	0.07	0.02	-0.15	-0.04	-0.05	0.17	0.12	0.10	-0.64	1.0000

Starting from the random effects regressions, Table 3 shows results for two types of insurers (life and non-life). With beta, we focus on the co-movement of the individual insurer's stock price with the overall market movement, i.e., systematic risk. With volatility, we analyze total risk, i.e., we consider both systematic and unsystematic (firm-specific) effects. The variables are grouped into three categories as seen in Table 2: (i) internal risk drivers; (ii) internal risk drivers related to corporate governance; and (iii) external risk drivers. For each explanatory variable we present coefficient and significance estimates. In terms of sign estimates, the results are generally robust as most variables have either an entirely positive or negative impact on beta or volatility.

Table 3. Regression results for random effects models

Random Effects Regression				
	Beta		***Volatility***	
	Life	*Nonlife*	*Life*	*Nonlife*
MR	-0.0081 (0.0142)	0.0073 (0.0045)	-0.1282 (0.0684)*	0.1233 (0.0546)**
CR	0.0250 (0.0194)	0.0066 (0.0115)	0.0690 (0.0937)**	-0.1523 (0.1391)
LR	0.0025 (0.0117)	0.0011 (0.0078)	-0.0304 (0.0562)	0.0425 (0.0938)
PR	-0.0018 (0.0005)***	0.0000 (0.0000)***	0.0096 (0.0026)***	0.0001 (0.0001)
RR	0.0011 (0.0013)	0.0001 (0.0001)	-0.0049 (0.0064)	0.0006 (0.0008)
LEV	-0.0001 (0.0002)	0.0001 (0.0008)	-0.0003 (0.0012)	-0.0088 (0.0097)
SIZ	0.0004 (0.0025)	0.0014 (0.0009)	0.0147 (0.0121)	0.0198 (0.0114)*
SB	0.0036 (0.0018)***	0.0366 (0.0360)	-0.0044 (0.0085)	-0.1271 (0.4344)
BM	-0.0028 (0.0027)	0.0007 (0.0004)*	0.0059 (0.0130)	0.0047 (0.0047)
GDP	-0.0125 (3.918)	0.0723 (0.0438)*	1.3162 (0.3766)*	2.963 (0.5289)***
IR	-0.1688 (0.1321)	0.0989 (0.1206)	1.2118 (0.6343)*	-8.446 (1.4556)***
R^2	0.3347	0.2057	0.4786	0.6398
Hausman	37.58 (0.0001)	1.86 (0.9973)	-12.59 (0.0001)	1.04 (0.9998)

Note: (*:10%,**:5%,***:1% significance)

Next is the internal risk drivers. The most relevant internal risk drivers for beta life-supervisory board independence and premium risk are discussed, while for the most relevant internal risk drivers for beta non-life insurers are premium risk, and board meetings. For volatility, life-market risk, premium risk and interest rate are the most relevant internal risk drivers, while volatility non-life-market risk and firm size are the most relevant drivers. We find strong evidence that larger firms are associated with a higher premium risk.

That size affecting risk taking is also in line with the literature (Cheng et al., 2011). The positive sign for beta implies that with increasing size the analyzed insurers tend to become more aligned with the market. Smaller insurers, which tend to be less diversified, might be able to decouple from overall market movements. But also the estimates for the volatility are positive, which is contrary to our expectation that larger firms exhibit lower total risk, e.g., due to diversification of risks. However, the implications may be different when risk is not considered as an aggregate measure, such as our total risk proxy.

Table 4. Regression results for fixed effects models

Fixed Effects Regression				
	Beta		***Volatility***	
	Life	*Nonlife*	*Life*	*Nonlife*
MR	-0.0127 (0.0151)	0.0088 (0.0053)*	-0.1503 (0.0778)*	0.1496 (0.0651)**
CR	0.0405 (0.0208)*	0.0055 (0.0137)	0.0002 (0.1068)	-0.1990 (0.1670)
LR	-0.0025 (0.0125)	-0.0032 (0.0098)	-0.0079 (0.0644)	0.0757 (0.1193)
PR	-0.0016 (0.0006)***	0.0000 (0.0000)***	0.0113 (0.0032)***	0.0001 (0.0001)
RR	0.0016 (0.0013)	0.0001 (0.0001)	-0.0103 (0.0069)	0.0007 (0.0009)
LEV	0.0000 (0.0003)	0.0000 (0.0009)	-0.0014 (0.0014)	-0.0095 (0.0114)
SIZ	-0.0005 (0.0026)	0.0017 (0.0011)	0.02344 (0.0135)*	0.0231 (0.0130)*
SB	0.0045 (0.0019)**	0.0456 (0.0426)	-0.0051 (0.0096)	-0.2882 (0.5185)
BM	-0.0054 (0.0030)*	0.0008 (0.0004)*	0.0099 (0.0153)	0.0058 (0.0054)
GDP	-0.1017 (0.0785)	0.0697 (0.0475)	1.7227 (0.4039)***	2.992 (0.5790)***
IR	-0.1508 (0.1389)	0.0999 (0.1299)	1.2584 (0.7142)*	-8.477 (1.583)***
R^2	0.2791	0.1998	0.4474	0.6381
F-test	3.90 [00007]	2.61 [0.0057]	5.01 [0.0001]	16.61 [0.0000]

We find Leverage is insignificant for both systematic risk and total risk, which is in contrast to the case in the U.S. sample of Borde et al. (1994), who find a positive and significantly influence of leverage on total risk and a mixed (positive for life insurance companies and negative for non-life insurance companies) influence on systematic risk. However, Cummins and Sommer (1996) find a positive relation between capital and (total) risk for the property/casualty industry and Baranoff and Sager (2002) find a positive relation for the life insurance industry with asset risk. Our findings generally confirm this relationship as, in our case, a higher leverage ratio can be considered as a proxy for lower capital. As insurers usually have little equity compared to their liabilities, the estimates for the regression coefficients are rather small.

Also, Liquidity risk is especially insignificant with volatility and exhibits a negative sign for life insurers. Holding more cash generally should reduce liquidity risk, but it also reduces asset returns, as cash does not earn interest, and therefore increases the risk for life insurers of not being able to fulfill guarantees. For the non-life insurers, the coefficient is positive for systematic risk. Borde et al. (1994) find for their U.S. sample a negative relation of liquidity with systematic risk and a positive relation with total risk. This difference might be explained by the different reactions U.S. and Egyptian insurers have to a changing risk situation.

For the corporate governance-related risk drivers, the significant estimate of supervisory board independence is positive. in this line, John and Senbet (1998) discuss the role of the supervisory board in solving problems related to agency theory (and thus corporate governance), Core et al. (1999) relate weak board structures to agency problems and lower firm performance (as well as higher executive compensation). Boone et al. (2007) find indication that board independence is negatively related to executive influence. These results from previous work imply that increased control, e.g., through board outsiders, should be accompanied by less managerial discretion, resulting in better shareholder protection. This manifests in our case as higher risk taking, as shareholders may consider their investment as an option. There is a positive effect of the number of board meetings on total risk for life and non-life

insurers. The positive relation of board meetings and risk might be explained by firms with a higher (systematic and total) risk responding to this situation by increasing control efforts. The relation of the number of board meetings to risk is equal to the relation of board independence to risk, namely, positive, providing support for the idea that the board is indeed reacting to some high-risk situation.

Moving onto external risk drivers, GDP is the most relevant of the two external risk drivers and exhibits a negative relation with systematic risk and positive with total risk. The interest rate level is positively connected to total risk. This is in line with Chen and Wong (2004) who find for Asian property-liability insurers a positive relationship between the absolute level of interest rates and an "unhealthy rate". The authors interpret the interest rate not as a crediting, but as a financing cost rate. The short-term interest rate in our analysis may be interpreted similarly. Therefore, in our model, increasing the cost of short-term financing and liquidity is related to a higher probability of becoming insolvent and thus higher total risk. The fact that liquidity risk, i.e., the ratio of cash and near-cash items and other marketable securities to total assets, is negatively associated with total risk supports this hypothesis.

When we turn our attention to Dynamic Panel Data Analyses (considering endogeneity issues) we employ the GMM methodology to estimate the models. The results are presented in Table 5. GMM estimations of models

Table 5. Generalized Method of Moment-GMM

Generalized Method of Moment-GMM				
	Beta		***Volatility***	
	Life	*Nonlife*	*Life*	*Nonlife*
MR	-0.0173 (0.0230)	-0.0022 (0.0206)	0.0023 (0.1117)	0.0700 (2.82565)
CR	0.0377 (0.0388)	0.0365 (0.0383)	0.0137 (1496)	-0.0071 (0.2.4526)
LR	-0.0079 (0.0137)	-0.0066 (0.0151)	-0.0180 (0.0776)	-0.16329 (1.8722)
PR	-0.0036 (0.0014)	0.0000 (0.0000)***	-0.0006 (0.0055)	-0.0022 (0.0026)
RR	0.0010 (0.0011)*	-0.0005 (0.0005)	-0.0020 (0.0075)	0.0000 (0.0095)
LEV	-0.0004 (0.0006)	-0.0023 (0.0032)	0.0006 (0.0036)	-0.0089 (0.2834)
SIZ	-0.0023 (00025)	0.0036 (0.0026)	0.0181 (0.0102)*	0.1551 (0.1723)
SB	0.0109 (0.0636)	-0.0312 (0.0509)	0.4471 (0.2302)*	0.9949 (4.3167)
BM	0.0013 (0.0014)	0.0009 (0.0012)	0.0009 (0.0055)***	-0.4056 (0.1065)***
GDP	-0.0397 (0.1872)	0.1365 (0.0800)*	1.0506 (0.6147)*	24.197 (10.236)**
IR	0.0030 (0.0033)	-0.0087 (0.2687)	0.0060 (0.30136)	-7.5187 (24.518)
R^2	0.2791	0.1998	0.4474	0.6381
j-statistic	11.5730 (0.1155)	6.6734 (0.4637)	5.15320 (0.6413)	6.8857 (0.3315)

It is worth noting that significant differences in estimation results may indicate potential effects of the Endogeneity on risk taking. We do find slightly changes in sign estimates for the significant variables, but do find some interesting variations in significance for the internal risk drivers, external risk drives and corporate governance variables with the total risk measure across the insurers industry. The direction of the impact of risk drivers on the risk measures remains-on average- unchanged. We found strong positive significant influence to firm size, supervisory board independence and GDP growth on the total risk of the Egyptian insurance companies with life insurers, while the premium risk has a negative impact on the systematic risk. For the Egyptian non-life insurers, we find that the premium risk and GDP have positive impact on the

systematic risk, while board meeting and GDP have positive influence on the total risk.

In light of this additional test, we conclude that our results are robust with regard to model modifications. We observe changes of significance for some of the variables when we use instrumental variables. This is especially true for corporate governance related variables as well as for size and premium risk.

Conclusion

This article examines the effect of internal and external factors on firm risk taking. we adopt stock prices to clarify variations in risk across life and non-life insurance companies. Our analysis is based on a comprehensive sample of Egyptian life and non-life insurance firms over the period from 2006 to 2011. Our study reveals the need to be cautious when comparing the results of previous empirical work. As the review of the literature shows that many factors can alter the outcome of corporate risk taking analysis: alternative definitions of risk measures, different institutional environments, and methodologies. We confirmed some of these findings. First, we determined that alternative insurers may lead to varying results. In fact, our study shows that there is a difference between the level of risk associated with life and non-life insurers. Although, in general, we did not find a significant relationship between the most of internal factors associated with non-life insurers when we use the systematic risk as a measure of risk, we did find that the presence of the impact of the internal and external factors to hamper the results when we use the total level of risk as a measure of risk. Therefore, our article does not confer much importance on corporate risk taking per se but on the significance and effect of different measures of risk taking. It points to the necessity of further investigation into how life and non-life insurance firms should be controlled and managed to be successful by reducing the relative level of risk. Second, our study shows that different methodologies drive different results and that we should take into account a firm's unobservable heterogeneity and endogeneity issues when analyzing corporate risk taking. Third, interestingly, our research produced some contradictory results when compared with other insurance company multicountry studies. This suggests that the conclusions of multicountry studies that use mainly samples composed of large insurance firms may not apply to the whole universe of listed insurance firms.

Overall, our study suggests that although a priori it could seem that corporate risk taking might be an overstudied topic, we should explore it further. Recent studies have started to disentangle the separate effects of risk- based ownership and risk based control, as well as the influence of other measures of risk taking, but some questions have not been answered yet. For instance, why is it that the empirical results about the influence of types of risk measures on company performance may vary for different institutional settings and countries?

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