

# CORPORATE GOVERNANCE PRACTICES IN EMERGING MARKETS: EVIDENCE FROM KAZAKHSTAN FINANCIAL SYSTEM

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## Abstract

This research examines the influence of corporate governance practices on leverage and financial performance of firms in financial system of Kazakhstan. The research employs level data for financial institutions, listed on Kazakh Stock Exchange by using multivariate regression analysis under fixed effect model approach. Results of panel study showed that board size is significantly positively correlated with debt to equity ratio, and with the number of independent directors. Private investors' shareholding is significantly negatively correlated with debt to equity ratio. CEO/Chair duality is significantly positively correlated with the debt to equity ratio. The size of firm has also significant effect on the leverage level. Analysis of the banking sector showed a negative relationship between managerial ownership (MO) and both market value (Tobin's Q) and performance (ROA and ROE). Moreover, there are statistically significant relationship between bank performance and stock market capitalization, scaled to GDP of country, and there is statistically significant negative relationship between Tobin's Q and net interest income to total operating income as a proxy for income diversity. The findings also show higher risk-taking behavior (capital market indicators as risk measure, Z-score and the percentage of non-performing loans in total loans as NPL/L). There is a positive relation between MO and Z - scores, and negative relationship between MO and NPL. Moreover, there are significant relationship between banking risk and development of the financial markets which is proxy by private credit and stock market capitalization, both scaled by GDP of country, and, there is statistically significant negative relationship between debt intensity and risk.

**Keyword:** Corporate Governance, Board Composition, CEO/Chair Duality, Ownership, Leverage, Financial Performance, Banking Risk, Non-Performed Loans, Z-Scores

**JEL:** G32, G34

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## 1 Introduction

Current financial crisis continues fall deeper in financial system of Kazakhstan. Managers of financial intermediaries have been more and more criticized by rating authorities and by public. The main criticisms relate to governance failures. The negative outlook for Kazakhstan's financial system is driven by expectations of a large overhang of problem loans requiring higher loan-loss reserves; poor profitability and capital adequacy; and modest credit growth. In these circumstances corporate governance issues become more and more challengeable. Good corporate governance practices may have significant influence on the strategic decisions of a firm, e.g. external financing, that are taken at board level. Therefore corporate governance variables like size of board, composition of board, and CEO/Chair duality, ownership structure may have direct impact on financial behavior and decisions in financial system of Kazakhstan. Corporate ownership concentration in Kazakhstan could be considered as a highest in the

world, like in Russia, and in other post-soviet countries, and the transparency of ultimate control structures is typically low. Most of listed on Kazakh Stock Exchange financial institutions have high concentration of ownership. Argued from the agency perspective, the choice of the firm's optimal capital structure is closely related to the choice of corporate governance. Leverage can act as a substitute self-disciplining internal governance practice that mitigates agency costs by imposing fixed obligations on the use of corporate cash flow. The development of financial System of Kazakhstan depends on how its place and role in economy is determined based on the needs of the society and the country. The government expects the financial system to be able to provide sufficient volume of resources at a reasonable price to finance top-priority sectors of the economy as part of the economic development programs. Trends in the financial system development should also take into account the changes occurring worldwide. At the time, when integration processes are strengthening, coordinated common approaches to regulation of

national financial markets (Basel III standards, Solvency II) have been established in Kazakhstan. Also, financial market of Kazakhstan does not stand aside from the global trends. Integration into the World Trade Organization and Common Economic Space creates pre-requisites for further liberalization of the financial services market. Strong competition in the financial market, on the one hand, should result in improved quality and expanded range of services. On the other hand, the financial system of Kazakhstan would be more vulnerable to external shocks. In these circumstances the financial system should not create new risks or increase the extent of existing risks in the economy. Over the recent years financial system has several next problems:

- bank lending priorities reflect disproportions in the structure of economic growth, which is based on consumer demand, not on investments;
- a limited range of services rendered to large businesses and inability of banks to independently accumulate a significant volume of resources required to finance large-scale investment projects determine that funding of top-priority areas in the development of the economy, including small and medium businesses, is to a large extent dependent on resources allocated by the government;
- a large volume of non-performing loans reduces possibilities of the banking sector to respond to changes in the macroeconomic environment or a situation in certain markets in a flexible manner; and
- mismatch in the structure of assets and liabilities of the banking system by types of currencies since bank lenders increase their preferences of foreign currency and borrowers prefer the domestic currency;

These problems require the development of an optimal regulation framework where possible consequences of risk realization could be minimized.

Generally corporate governance is associated with the existence of agency problem and its roots can be traced back to separation of ownership and control of the firm. Agency problems arise as a result of the relationships between shareholders and managers and are based on conflicts of interest within the firm. Similarly conflict of interests between controlling shareholders and minority shareholders is also main large area of the corporate governance literature. Argued from the agency perspective, the choice of the firm's optimal capital structure is closely related to the choice of corporate governance. Leverage can act as a substitute self-disciplining internal governance practice that mitigates agency costs by imposing fixed obligations on the use of corporate cash flow (Jensen and Meckling, 1976). This argument is further extended by Jensen (1986) in the context of leveraged buyouts, which force managers to disgorge the firm's free cash flow by replacing equity with debt. The reduction in equity increases the alignment of the interests of managers and shareholders by increasing

managerial ownership (Jensen and Meckling, 1976). The outcome perspective of agency theory suggests the reverse. If strong corporate governance protects bondholders and leads to higher credit ratings and a lower cost of debt, we should observe higher leverage among better-governed firms. Therefore, the primary objective of this research was to investigate the financial system of Kazakhstan and find the relationship between Corporate Governance and debt to equity ratio of listed on Kazakh Stock Exchange (KASE) financial institutions over the period 2008-2013. The reduction of foreign funding and government subsidies after the deep financial crisis of 2006-2008 resulted in the accumulation of vast amounts of non-performing loans in domestic banks. At the same time, liberal licensing policies governing the entry of new banks, weak regulatory and supervisory laws and a lack of experienced specialists in the banking sector contributed much to a banking crisis recently in Kazakhstan. To avoid a complete collapse of the banking sector, government of Kazakhstan was required by world rating companies to oversee legislation and create new prudential regulations to facilitate the development of the financial system of Kazakhstan. Thus, following the agency theory, second objective of this research is to assess the impact of managerial ownership on the market value, performance, and risk of listed main Kazakh banks for the periods from 2008 to 2013 years.

The structure of the paper is followed: section 2 describes the brief overlook of financial system in Kazakhstan; section 3 reviews the literature on modeling of corporate governance and performance of the firms in financial system. Section 4 presents the model and methodology, in followed section 5 the empirical results are presented, and last section presents the conclusions.

## **2 Overlook of the Financial System of Kazakhstan.**

### **2.1 Banking sector**

In transition to a market economy the financial system of Kazakhstan implemented two major reforms. The first was the introduction of a two-tier banking sector to separate the central bank (now as National Bank) from the commercial banking sector. This also included the division of large industrial banks into smaller firms to create competition in the banking sector. This system was inefficient in terms of resource allocation and the quality of banking supervision and risk assessment was poor. The second was the establishment of a system of financial intermediation to increase saving and investment. The importance of these reforms was recognized by the governments of all the transition economies of former Soviet Union countries (Djalilov and Piesse (2014). As of January 1, 2014, there were 38 banks operating in Kazakhstan, of which – 17 banks with foreign

equity, 1 bank –100% -state owned and 3 banks with quasi-government equity participation. After several years of stagnation caused by the financial crisis, since 2011 certain growth pattern had been observed in the banking sector. However, financial intermediation indicators show insufficient effectiveness of banks in redistribution of resources in the economy and satisfaction of demand for loans on the part of economic agents; they also reflect strengthened regulation in the context of international initiatives to address the problems that led to the global financial crisis. One of the issues related to further development of the banking sector is to address existing problems related to a high level of nonperforming loans and a shortage of long-term funding sources, which discourage lending activity of banks. As of January 1, 2014, the share of non-performing loans accounted for 31.2% of the banks' total loan portfolio, the major portion of which falls on banks that restructured their liabilities. The National Bank of the Republic of Kazakhstan, as part of the early response measures, introduced limits for the share of non-performing loans in the loan portfolio of banks (from 2013 – 20%, from 2014 – 15% of the loan portfolio). In order to make the banks' effort on improving the quality of their loan portfolios more active, a mandatory maximum limit of 10% will be set for non-performing loans as a prudential ratio from January 1, 2016.

## **2.2 Insurance sector**

As of January 1, 2014, 34 insurance organizations engage in insurance and reinsurance business, of which 7 organizations provide life insurance. At the same time, there is a clear trend that the number of general insurance companies is decreasing. During the last three years 6 general insurance companies ceased their operations and, if circumstances associated with possible mergers and acquisitions in 2014 are taken into account, the number of general insurance companies may decrease even more. Despite the dynamic growth of assets of insurance organizations, their share in GDP remains at quite a low level (less than 2%).

## **2.3 Securities Market**

Before 2007, accumulation pension funds played the most active role in the establishment of the domestic securities market, in parallel with other institutional investors such as banks and investment funds. The global financial crisis of 2008 had negatively affected a further development of the securities market. As a result of the crisis, issuers defaulted on corporate bond issues, confidence in investment funds on the part of investors declined, such that a significant number of investment funds were closed and the overall number of issuers in the securities market decreased. Reduced investment activity (including as

a result of legislative changes) of the major class of institutional investors represented by accumulation pension funds and pension asset managers, which created and maintained the demand for corporate securities of Kazakhstan' issuers, had a negative impact on liquidity position of the domestic stock market. Apart from that, opportunities for raising shareholder's equity and/or debt capital by issuers through the securities market as well as investment horizons for other investors narrowed; as a consequence, the capacity of the domestic organized market represented by the joint-stock company KASE decreased. The securities market of Kazakhstan is mainly oriented at institutional investors, since transactions with government securities and repo transactions prevail in the overall trading volume. Out of 102 issues of shares included in the official listing of the stock exchange, active trading is carried out only with 8 issues of shares included in the KASE Representative List of the Kazakhstan Stock Exchange. Out of those 8 issues of shares, 5 issues of shares are negotiable both in the domestic securities market and in foreign securities markets. Therefore, liquidity and pricing of this category of shares is ensured not only in the Kazakhstani securities market but also abroad. Thus, measures to increase liquidity of securities should be supported by attracting foreign investors to participate in securities trading in the domestic securities market.

## **2.4 Mutual funds**

There is a downward trend in the number of existing issues of mutual investment funds; at January 1, 2014 there were 99 issues (at the end of 2010 – 162).

## **2.5 Global Competitiveness**

According to the Global Competitiveness Report of the World Economic Forum for 2013 –2014, Kazakhstan takes the 103rd position out of 148 countries based on the factor of “Financial market development”. The worst performance is demonstrated by such indicators as “soundness of banks” (100th position), “financing through local equity market”(100th position), and “legal rights index” (101st position). As compared to other CES member countries, Kazakhstan demonstrates virtually commensurable results. The Russian Federation occupied the 121st position in the rating for 2012 – 2013 (the Republic of Belarus is not rated by the World Economic Forum).

According to concepts for financial system of Kazakhstan, National Bank of Kazakhstan settled the next main goals for increasing soundness of the banking sector by:

1) Designing a System of Effective Shock Absorption through Implementation of Basel II and III International Standards. This objective will be accomplished by a stage-by-stage implementation of

recommendations of the Basel Committee on Banking Supervision (BCBS) in relation to capital adequacy, liquidity and financial leverage ratios as well as risk management.

2) Improve the structure of banks' assets and decrease the percentage of non-performing loans to an acceptable level which does not limit abilities of banks to provide credits to the economy. A high level of non-performing loans is the main obstacle for increasing soundness of the banking sector and implementing the BCBS's recommendations, since it decreases profitability of banks and their ability to build up capital from retained earnings; it also limits lending activity of banks. As National bank of Kazakhstan suggest, it is also necessary to establish the market of non-performing loans in order to determine fair value of such assets, thus providing opportunities to manage them. Any valuation methodology recognized by the market suggests a large degree of information disclosure about a loan portfolio. It should be mentioned that adequate valuation of assets under management of asset management companies and a high degree of transparency in corporate governance will allow attracting the funds of foreign investors including from international financial organizations in the international markets of stressed assets, in order to deal with non-performing assets.

### 3 Literature review

The literature review was structured into several areas related to differences in governance of financial institutions and management strategies: Corporate governance and leverage; board of directors; ownership and control; managerial ownership, bank performance and risk behavior according to research objectives of this paper.

#### 3.1 Corporate governance and leverage

Argued from the agency perspective, the choice of the firm's optimal capital structure is closely related to the choice of CG. Leverage can act as a substitute self-disciplining internal governance practice that mitigates agency costs by imposing fixed obligations on the use of corporate cash flow (Jensen and Meckling, 1976). This argument is further extended by Jensen (1986) in the context of leveraged buyouts, which force managers to disgorge the firm's free cash flow by replacing equity with debt. The reduction in equity increases the alignment of the interests of managers and shareholders by increasing managerial ownership (Jensen and Meckling, 1976). The outcome perspective of agency theory suggests the reverse. If strong CG protects bondholders and leads to higher credit ratings and a lower cost of debt, we should observe higher leverage among better-governed firms. For a sample of Canadian firms, Aivazian et al. (2005) provide support for the theory that leverage plays a

disciplining role. They find leverage is negatively related to investment and that the relationship is stronger for firms with few growth opportunities. Ortiz-Molina (2007) tests the hypothesis that leverage reduces manager-shareholder conflicts by examining pay-performance sensitivity as a function of leverage. He finds pay-performance sensitivity decreases in straight-debt, but is higher in firms with convertible debt. Stock options are the component of CEO pay that is most sensitive to differences in capital structure. John et al. (2010) propose CEO compensation is optimally designed to trade off two types of agency problem: the standard shareholder-manager agency problem and the problem of shifting risk between shareholders and debt holders. This gives rise to two predictions: (a) the pay-for-performance sensitivity of CEO compensation decreases with the leverage ratio; and (b) the pay-for-performance sensitivity of CEO compensation increases with the intensity of outside monitoring of the firm's risk choices. They test and find support for both hypotheses in the banking industry, where regulators and non-depository (subordinated) debt holders provide outside monitoring of risk. Entrenched managers avoid the disciplining role of leverage. Jiraporn and Liu (2008) find firms with staggered boards have lower leverage. Similarly, Berger et al. (1997) find entrenched CEOs seek to avoid leverage, with leverage increasing in the aftermath of entrenchment-reducing shocks to managerial security, including unsuccessful tender offers, involuntary CEO replacements, and the addition to the board of major shareholders. Using panel data for 611 firms listed on the Taiwan Stock Exchange from 2002 to 2006, Shyu and Lee (2009) find a robust negative link between excess control rights and short-term leverage in family-controlled firms. Wiwattanakantang (1999) finds, in Thailand, single-family-controlled firms with greater family ownership have higher leverage. Florackis and Ozkan (2009) report a significant non-monotonic relationship between insider ownership and leverage for their sample of UK firms, consistent with the alignment and entrenchment hypotheses. The nature of the relationship depends on the firm's Corporate Governance structure, with a significant relationship between leverage and insider ownership holding mainly for weak governance firms. To address potential endogeneity between Corporate Governance and leverage, Agrawal and Knoeber (1996) use a complex simultaneous equation framework. For a sample of 383 large US firms for 1987, they find leverage is positively related to insider ownership and the proportion of outsiders on the board. However, the relationship runs from leverage to ownership and board structure, rather than the reverse. Jiraporn and Gleason (2007) find firms adopt higher leverage ratios where shareholder rights are more restricted. This is consistent with other results in that adoption of anti-takeover provisions, although detrimental to

shareholders, is viewed favorably by bondholders, resulting in a higher credit rating and a lower cost of debt (Ashbaugh-Skaife et al., 2006;). Hence, the direction of this relationship may run from corporate governance to leverage. Leverage can be used by controlling shareholders to fund resources to expropriate. Faccio et al. (2010) examine the expropriation of outside shareholders' interests by controlling shareholders in East Asian and European economies. They propose that the role of leverage in CG may depend on the structure of firm ownership and control. Whereas leverage could constrain managers' expropriation of the resources belonging to dispersed shareholders in say the United States, it could facilitate the expropriation of minority shareholders' rights by the controlling shareholders of the business groups that are prevalent in Europe and Asia. Their findings suggest European capital market institutions are sufficiently effective so that competition for external capital from informed suppliers restricts the leverage of firms that appear more vulnerable to expropriation through being lower down a corporate pyramid. Asian institutions appear ineffective, allowing controlling shareholders of firms lower down a pyramid to increase leverage to acquire more resources to expropriate. They suggest that these contrasting outcomes are reflected in regional differences in access to related-party loans. In another study, Faccio et al. (2003) has regress leverage on an index of firm exposure to expropriation by the controlling shareholder: the ratio of his ownership rights (O) to his control rights (C) and on an index of creditor rights. Among firms that can access related party loans, a lower O/C ratio leads to increased leverage when creditor protection is weak, but reduces leverage when it is strong. In the first case, higher leverage gives the controlling shareholder access to more resources to expropriate. In the second case, minority shareholders and external lenders constrain the leverage of group affiliates that seem more vulnerable to expropriation. They account for endogeneity between O/C and leverage using a dummy equal to 1 if the firm's name includes the name of any of its top officers (CEO, chairperson of the board, president, a vice-president, or secretary of the board) and zero otherwise. This variable is independent of leverage. Greater bank concentration may substitute for creditor protection and asset tangibility to reduce the agency cost of leverage between shareholders and debt holders. Evidence that supports this contention is provided by Gonzalez and Gonzalez (2008), who find leverage increases with greater bank concentration and stronger protection of creditor rights, but decreases with stronger protection of property rights. Sarkar and Sarkar (2008) highlight the role of ownership structures and institutions in debt governance. They estimate simultaneously the relation between Tobin's Q and leverage using a large cross-section of listed manufacturing firms in India for 3 years: 1996, 2000 and 2003. While in the early

years of institutional change debt did not have any disciplinary effect on either standalone or group affiliated firms, there was an effect in the later years as institutions became more market oriented. They find limited evidence of debt being used as an expropriation mechanism in group firms that are more vulnerable to such expropriation. However, the disciplining effect of debt is found to persist even after controlling for such expropriation possibilities. For a sample of Australian firms, Brailsford et al. (2002) report a positive relation between outside block holders as monitors and leverage. Likewise, Mehran (1992) finds a positive relationship between the percentage ownership by large individual investors and a firm's leverage ratio. Du and Dai (2005) provide evidence among East Asian firms that controlling shareholders with relatively small ownership tend to increase leverage out of the motive of raising external finance without diluting their shareholding dominance. They propose that such risky capital structure choices serve as one potential channel through which weak corporate governance contributed to the severity of losses during the Asian financial crisis. Piot (2001) tests two agency cost hypotheses: (1) ownership diffusion is a proxy for shareholder-manager conflicts; and (2) ownership diffusion is a proxy for shareholder-manager conflicts and leverage in high-investment-opportunity-set (IOS) firms, supposing an increased expropriation risk for debt holders. Results do not support the ownership hypothesis and corroborate the leverage-IOS one, suggesting that the Anglo-American principal-agent model has little explanatory power in the concentrated ownership framework of the French corporate governance system. To sum up, the evidence indicates leverage has an important role to play in disciplining management, with the governance role of leverage being sensitive to ownership and control structures.

### **3.2 Board of Directors**

Evidence from recent studies of international bank boards confirmed that the average US bank holding company(BHC) board became smaller, and had more independent, less busy, and somewhat less competent directors(Ferreira et al., 2010). Also, US banks always exceeded the NYSE independence requirement: The percentage of independent directors was already 51 percent in 2000 year but increased further to 67 percent in 2007 year. The average board size decreased from 15 to 11.6 members. The average bank board outside the United States did not adopt the US reforms. The number of independent directors was consistently smaller than 50 percent; boards were larger than in the US and populated by directors with more outside appointments. However, a larger percentage of directors had previous banking experience (36 per cent compared to 18 per cent in the United States in 2006). Independence has, however, correlated with losses at the bank level. Independence

was associated with greater shareholder losses, even when controlling for other factors, such as institutional ownership (Erkens et al., 2010), and studies of only deposit taking banks found that banks with more shareholder-friendly boards fared worse distinctly during the crisis (Beltratti and Stulz, 2010).

### **3.3 Ownership and control**

Did concentrated shareholders encourage managers to take on more risk and/or more leverage? Evidence from US banks showed that institutional shareholders did not oppose risk-taking, but no direct evidence that they encouraged it. Two studies (Beltratti and Stulz, 2010; Erkens et al., 2010) found a positive relationship. The question arises here is: What would have happened if bank boards had proposed pay packages linked to debt rather than to equity remains an open question. Studies of outside the US banks showed that banks are frequently controlled by block holders. The block holder is typically a family or the state and often appoints representatives to the board, and the attitude to risk-taking by block holders is ambiguous. A widely cited pre-crisis study found that the presence of a 10 percent block holder correlates with more risk-taking, as measured by Z-scores (Laeven and Levine, 2009). In contrast, many countries dominated by block holder banks which had low Z-scores, such as Brazil, India, and Korea, withstood the crisis very well. A more recent cross-country study found a small positive effect of ownership concentration that is dominated by an 'anti-director-rights index' country dummy that correlates very strongly with ownership dispersion; the net effect suggested that losses were greater for widely held banks. The largest losses were incurred at (widely held) bank holding companies, but the losses at investment banks were reported as not significant (Gropp and Kohler, 2010). Theory predicts that 'ownerless banks', such as mutual or cooperative banks that are 'owned' by depositors, take fewer risks than corporate banks. This proposition found some support in the US S&L crisis. Casual inspection of the list of failed institutions in 2008 indicated that with the exception of the one in Spain, one UK case, and two Irish cases, most failures occurred at corporate banks, cooperative and mutual banks suffered small, and savings banks much larger, losses (Gropp and Koehler, 2010). Investigation in China showed that compared to privately controlled firms, state-owned enterprises had greater access to long-term debt and used less short-term debt sample period. Evidences also indicate that the on-going financial reform has increased the motivation of banks to consider company profitability in their lending decisions. However, state-owned banks still discriminate private firms in allocation of financial resources, particular in less-developed regions (Ruan et al. (2014)). Another study shows, that with a measure of financial

performance (ROA), and 4 types of ownership (ownership concentration, public ownership, private ownership, foreign ownership), there was no impact of ownership structure to the financial performance of banks in the Tunisian context (Ben (2014)). Testing on five categories of ownership structure such as insider, family, government, institutional and foreign ownership influence on bank performance of Malaysian commercial banks during the period of 2000 to 2011, showed that bank performance varies with different types of ownership structure. (Rahman and Reja (2015)).

### **3.4 Managerial ownership, banks performance and risk behavior**

The theoretical foundation of this part is agency theory based on the work of Jensen & Meckling (1976), which opened the important research area concerning the separation of ownership and control in the modern corporation. According to agency theory, strong corporate governance mechanisms better align the interests of managers and shareholders and subsequently enhance firm performance. Results extended Larcker et al. (2007), especially regarding the concave relationship between board size and performance, and the role of leverage. It would be interesting to answer for the question: Does corporate governance explain Kazakh bank performance during the period from the start of the financial crisis? In recent research in this area agency theory was applied to the banking industry and it was expected that the governance performance linkage might differ due to the unique regulatory and business environment. Given the lack of support for agency theory predictions, it was suggested that alternative theories are needed to understand the performance implications of corporate governance at banks. It was found that:

1. Corporate governance factors explain financial performance better than loan quality. Strong support for a negative association between leverage and both financial performance and loan quality.
2. CEO duality is negatively associated with financial performance.
3. The extent of executive incentive pay is positively associated with financial performance but exhibits a negative association with loan quality in the long-run.
4. There is a concave relationship between financial performance and both board size and average director age.
5. Was provided a weak evidence of an association of anti-takeover devices, board meeting frequency, and affiliated nature of committees with financial performance.

To follow our first objective in this paper we investigate the corporate governance influence on the Financial Institutions performance in Kazakhstan

during the period of 2009- 2011. We state several hypotheses to test:

**Hypothesis 1** Board size is significantly associated with debt to equity ratio in financial institution industry.

**Hypothesis 2** Ownership concentration is significantly negatively correlated with debt to equity ratio.

**Hypothesis 3** The ownership structure and CEO/Chair duality play important role in determination of Debt to Equity ratio.

**Hypothesis 4.** The level of ownership structure is negatively associated with bank performance.

**Hypothesis 5** CEO duality is positively associated with firm size and debt to equity ration in banking industry.

To follow our second objective we analyze the influence of managerial ownership of main Kazakh banks on performance and risk taking. Corporate governance theory predicts that effective governance mechanisms enhance firm value and ensure accountability by insiders, the managers; this in turn motivates managers to act in the interest of shareholders, an issue that is at the crux of agency theory (Kroszner, 2004). Corporate governance theory also predicts that firm ownership influences risk-taking (Bhimani (2009) and Kroszner (2004)). A review of the literature shows that, unlike manufacturing firms, it is only recently that academics have turned their attention to the agency relation (and corporate governance in general) in banking. Most studies pertain to ownership (block-holdings, family and managerial ownership (MO)), board structure (external and internal directors, diversity, size, and turnover), and executive compensation (fixed and variable pay modes) and their relation to market value and performance. The specific interest in the influence of MO on market value and performance in banking firms is also relatively recent (Mohamed et al.(2012), Iannotta et al. (2013)), but, like nonbanking firms, the results do not always coincide. In manufacturing firms, for example, Agrawal and Knoeber (1996, United States), Yermack (1996, United States), and Short and Keasey (1999, United Kingdom) find a positive relation between MO (percentage of equity held by managers) and market value (Tobin's Q) and accounting performance (ROA), but Himmelberg et al. (1999, various countries) and Demsetz and Villalonga (2001, United States) find a positive but non-significant relation. According to the literature review there is a statistically significant (negative) relation between MO (percentage of equity owned by the company directors and top executive officers, including the CEO) and market value (Tobin's Q) (Belkhir (2004) for US banks. There is also statistically significant (positive) relation between MO and accounting performance (ROA and ROE) (Westman (2011)) for European financial companies. Concerning the risk-taking behavior of banks Saunders et al. (1990) showed significantly higher

risk-taking (capital market indicators as backward-looking risk measure, Z-SCORE) behavior. There is a positive relation between their proxy for MO and risk-taking, but the relationship is not significant in statistical terms for US banks. Barry et al. (2010) found a negative and statistically significant relationship (although at 10 per cent level of confidence) between MO and risk-taking for European banks.

Several reasons may be reflect these mixed findings on the influence of MO on market value, performance, and risk-taking:

1. The U.S. context is quite different from that of Europe and, more significantly, the rest of the world.

2. The data and variables differ from one study to another inhibiting direct comparisons and the generalization of findings.

3. Finally, heterogeneity in the activity of banks, country, and coverage may be producing inefficient estimators.

In the presented research we assess the theoretical predictions and qualify the influence of MO on bank market value (Tobin's Q), accounting performance (ROA, ROE), and risk-taking (NPL/L and Z-scores) across the main Kazakh banks controlling for bank-specific characteristics and macroeconomic factors through multivariate regression of a forward-looking measure of performance. This study is relevant in the context of the on-going financial crisis in the emerging market as Kazakh banking system: agency issues are most often studied in a non-crisis context. This research contributes to the literature by extending agency theory (and the broader corporate governance literature, Tirole (2006)) to a globally integrated financial crisis context. Second, most studies focus on the regulatory and macroeconomic conditions that deep the recent financial crisis. We study why some banks were more affected than others to identify a key agency factor that covered the way for some banks to perform better and take fewer risks than others before and during the crisis. Some of the public experts say that agency relations are at the root of the on-going financial crisis. This study is shown, which managers can be held responsible for the on-going crisis. And finally, this study could be effective in immunizing financial systems and the economy as a whole in a future crisis.

Among the huge empirical studies of corporate governance impact on firm performance still no study has been conducted to investigate the relationship between corporate governance and capital structure of the banks and other financial institutions in emerging markets as Kazakhstan.

Kazakh Stock Exchange is a largest emerging market in Central Asia and in recent years has shown remarkable performance, attracting considerable direct foreign investment. This paper explores the influence of corporate governance on capital structure and performance of Kazakh financial institutions. The

study examines the influence of three groups of variables on debt to equity ratio in capital structure. The first group includes the corporate governance measures presented by Board Size, structure of the Board and CEO/Chair Duality. The second group is represented by two variables of Institutional Shareholding and Managerial Shareholding according by percentage of shares belongs to the Board of directors or other Institutions. The third group is consisting from two control variables of Size of the FI and Return on Assets. The capital structure as a dependent variable is represented by Debt to Equity ratio. The empirical studies in this research suggested above five hypotheses. This research has important implication for the effective corporate governance of Kazakh financial institutions listed on KASE.

The results, obtained in this research, highly support the Hypothesis 1. In all three cases with different composition of financial institutions the board size is significantly positively related to the debt to equity ratio. Another result is, that debt to equity ratio is positively relates to institutional shareholding, but negatively relates to the managerial shareholding and private investor shareholding, which consistent with the findings in literature and supports the Hypothesis 2. We found also that the firm size for all cases has positive and significant relationship with the debt to equity ratio. That result is also consistent with theory of corporate governance and support the Hypothesis 5. And finally, CEO/Chair duality has important role in decision of the institutions on leverage. In all cases the relationship between CEO/Chair duality is positive significantly to the debt to equity ratio, and supports the Hypothesis 3. Concerning financial institutions' performance we found one significant result that ROA significantly negatively relates to the institution' size. All these results are shown in section 5. Analyzing the MO influence on main Kazakh bank's market value, performance and risk behavior, it was found the next results. First, the data showed very low levels of MO in Kazakh banking industry; Secondly, analysis of bank characteristics and macroeconomic conditions showed a negative relation between managerial ownership and both market value (Tobin's Q) and performance (ROA and ROE). This finding is consistent with the finding of Belkhir (2004) in the context of U.S. bank and savings- and-loan holding companies (1995–2002). Third, moreover, the findings showed a negative relation between managerial ownership and risk (NPL/L) in 2013 and positive relationship between MO and Z-scores in 2008 and 2013. This finding is consistent with the finding of Saunders et al. (1990).

The rest of the paper is organized as follows. In section 4, we describe the data, variables, model and the methodology used to test our hypotheses. In section 5 we present and interpret the empirical results. Section 6 contains a summary and conclusions of the research.

## **4 Data, variables, methodology and models**

### **4.1 All financial institutions listed on KASE**

In the first part of this research it was applied an explanatory quantitative research type of data in order to test the causal relationships between the Corporate Governance and Capital structure of the firm. As the scope of research work already exists on this topic mostly for developed countries, I would like to determine if the same causal relationships between corporate governance and capital structure are held in emerging economies, particularly in Kazakhstan. I will rely on the deductive approach by, first, stating hypotheses from existing theories, then, collecting and analyzing data and, finally, accepting or rejecting hypotheses. In the first part examined the totally forty six financial institutions listed on KASE, and in the second part I have examined only twelve main Kazakh banks to assist the managerial ownership influence on bank performance and risk taking. This study in the first part examines the impact of three groups of variables on capital structure. The first group of variables includes corporate governance variables represented by Board Size, Composition of Board and CEO/Chair Duality. The second group comprises ownership variables represented by Managerial Shareholding, Institutional Shareholding and Private Investors' shareholding. The third group consists of control variables which include Size of Financial Institutions and Profitability as ROA. All these three groups of variables are considered as independent variables. The capital structure is represented by Debt to Equity Ratio, and is considered as dependent variable. Total data consists of 46 Financial institutions, listed on KASE in October of 2012. Monthly data observations across companies traded on KASE are limited to the period of October, 2009 to October, 2012 and available from the KASE' reports. For the first part I data include 1656 observations, including 25 commercial banks, 6 insurance companies, 6 investment funds and 2 mortgage companies, 4 accumulated pension funds, 2 brokerage companies and one government fund " Samruk-Kasyna", which is also serves as financial institutions for the small and medium business in Kazakhstan. Board Size, Board Composition, Proportion of Non-Executive Directors (or independent directors), CEO/Chair Duality, Institutional Shareholding, Managerial shareholding (or Shareholding of Board Members), and private investor's shareholding are used as measures of Corporate Governance. Similarly, impact of control variables like Return on Assets and Financial Institution's Size on capital structure has also been studied. Variables included in study have been measured as follows.



#### 4.1.1 Dependent variable: leverage (or Debt to Equity Ratio)

Leverage is the dependent variable and it is quantified by using debt to equity ratio. Debt to equity ratio can be calculated either by using market value or by using book value. The use of book value measure of leverage is preferred in this study. The reason is that optimal level of leverage is determined by the trade-off between the benefits and costs of debt financing. It is an established fact that prime benefit of leverage is debt-tax shield and it is available on book value of the debt. Secondly, leverage can be calculated either by using total debt or by using long term debt as a percentage of total equity. Long term debt is better option but in this study total debt to total equity ratio was used because in Kazakhstan a tendency to use short-term financing even for longer term funding needs is fairly prevalent. There are number of institutions that do not have long term debt at all. There are a number of causes for this state of affair. The first is unwillingness of commercial banks to extend longer term facilities, especially after the prolonged financial crisis. The second is relative absence of financial institutions specializing in long term financing, except Kazakh Investment Bank. But this bank finances only the long-term government projects. The third reason is the pure state of capital market for long term debt. The only institution for that purposes is the government fund "Samruk-Kazyna", which is strongly regulated by government bodies. Most companies find it quite difficult to access the capital market for debt financing. Under these circumstances, we will consider to take the total debt figure for measuring the companies' gearing level.

#### 4.1.2 Independent variables

##### *Board size*

The board of directors is top body in the corporate set up, playing central role in a institution's strategic decisions like financial mix. It will therefore be considered an important variable to study the impact of corporate governance on capital structure. The variable Board size is measured as logarithm of number of board members. It is hypothesized that Board size influences on ownership structure and CEO/Chair duality.

##### *Board composition*

Presence of Independent directors on a company's board gives signal to the market that company is being monitored efficiently so lenders consider company more credit worthy. In turn, this makes it easier for the company to raise long term funds through debt financing. Variable Board composition represents the proportion of independent directors on board and is calculated as the number of independent directors

divided by total number of directors. It was examined the influence of this variable on the leverage level.

##### *CEO/Chair Duality*

If a person holds both positions of chief executive officer and chairman than it may create agency problems. Higher level of control by CEO may lead to managerial opportunistic behavior and can lead to lower gearing levels, as supposed to be analyzed in this study. It is tested that CEO/Chair duality is positively related to leverage levels. The variable CEO/Chair duality is included as a dummy variable. It is taken as 1 if CEO is chairman; otherwise it is taken as 0.

##### *Institutional Shareholding*

Presence of institutional shareholding in a company helps it to raise long term finance at an advantageous cost. In the first place, these institutional investors themselves act as a source of long term debt as they are willing to provide debt to a company over whose board they enjoy an influence. Secondly, these institutional investors serve as an effective monitoring device over the company's strategic decisions. They bring down the company's agency costs and also reduce managerial opportunism. This gives confidence to general public and other lenders – resulting in favorable terms of borrowing by the company. It is therefore suggested that firms with higher Institutional Shareholding are likely to have a higher debt to equity ratio. Institutional Shareholding is measured as percentage of shares held by institutions as disclosed in annual financial reports to KASE.

##### *Managerial Shareholding*

Large debt increases the threat of bankruptcy so higher managerial self interests in long term sustainability of the company may induce managers to reduce gearing levels. Therefore it is suggested that relationship between managerial equity holding and gearing levels is negative. Managerial shareholding is measured as percentage of shares held by members of board disclosed in annual financial reports to KASE.

##### *Private investor's Shareholding*

If the financial institutions have private investors in valuable size of shareholding, it also can be rise opportunity to get long-term financing at advantageous cost. There are cases where only few private investors, which are not included in the board of directors, but own the essential large part of shares in the financial institutions. Here it is suggested that relationship between private investor's equity holding and gearing levels is negative.

*Control Variables*

**Size of firm**

Large institutions generally have close links with their lenders and find it easy to arrange debt on favorable terms. So it is suggested that there exists a positive relationship between the Size of institutions and leverage level of the firm. The variable FI Size is measured as logarithm of total assets.

**Profitability as Return on Assets**

It is well known from the Pecking Order Theory of capital structure that companies use internally generated funds as first priority to finance project. Then as second priority debt is used and finally option of equity is exercised to finance company projects. Therefore it is assumed that profitability of institutions have negative or zero relationship with leverage levels. In this study Return on Assets (ROA) will be used as measure of profitability and it will be

calculated by dividing a company’s net earnings by its total assets

**4.1.3 An Econometric Model 1**

This study employs multivariate regression analysis in a panel data framework to measure the dependence of capital structure on corporate governance variables. The panel data analysis explores cross-sectional and time series data simultaneously. Pooled regression is used with assumption of constant coefficients. Constant coefficient model assumes intercept and slope terms are constant. Debt to Equity Ratio is not only the result of the various financial characteristics of the financial institutions; it is also determined by the decision-makers’ choice. Both managers and significant outside owners may influence on decision-making in the firm and, consequently, on financing decisions of the institutions. To investigate whether or not the structure of a firm’s ownership has a significant impact on leverage, and to test five hypotheses it was chosen the followed by many authors, presented in literature review, the following general form of model:

$$D_{it} = \alpha_0 + \alpha_1(\log BS)_{it} + \alpha_2(\%ID)_{it} + \alpha_3(\%IS)_{it} + \alpha_4(\%MS)_{it} + \alpha_5(\%Pr S)_{it} + \alpha_6(ROA)_{it} + \alpha_7(SZ)_{it} + \alpha_8(DLT)_{it} + \varepsilon_t \tag{1}$$

In (1)  $D_{it}$  = Leverage or Debt to Equity Ratio, BS = Board size, ID = Independent Directors, IS = Institutional Shareholding, MS = Managerial Shareholding, Pr S =Private Investors’ Shareholding, ROA = Return on Assets, SZ = Size of Financial Institution, DLT= CEO/Chair Duality,  $\varepsilon$  = Error Term,  $\alpha_0$  = Intercept of the equation and  $\alpha_i$  = marginal effect of variable on debt to equity ratio.

The first result of investigation of this model 1 (1) is the descriptive statistic shown in Panel A. The second result is the correlation matrix in Panel B, and the third result is multivariate regression analysis, shown in Panel C.

**4.2 Main listed banks**

The second part of this empirical research includes the quarterly data for 12 main listed banks from 2008 to 2013 with 288 observations. All data to compute Q for each bank were collected from Bloomberg, as follows: market value, historical market capitalization; book value, total shareholder equity; debt, total liabilities; and assets, total assets. ROA and ROE, the second and third performance variables,

were also collected directly from Bloomberg. We collected these accounting data from the site of agency of Financial control of NB of RK. The author of this research analyzed the theoretical predictions and qualified influence of MO on bank market value (Tobin’s Q), accounting performance (ROA, ROE), and risk-taking (Z- scores, NPL/L) across 12 main Kazakh banks controlling for bank-specific characteristics, regulatory restrictions, and macroeconomic factors through multivariate regression of a forward-looking measure of performance.

**4.2.1 An Econometric Model 2**

It was used the linear regression model (OLS) for these cross-sectional analyses, deploying alternative measures of the dependent variable both for market value and risk in the baseline specification (Agrawal and Knoeber (1996), Holderness et al. (1996), Belkhir (2004), Kaserer and Moldenhauer (2008), and Yermack (1996)). For example, the closed form for Q, one of the alternative dependent variables, is as follows:

$$Q_j = \alpha + \beta * MO_j + \gamma * controls + \varepsilon_j \tag{2}$$

and

$$Q_j = \frac{MarketValue}{BookValue}_j + \frac{Debt}{Asset}_j \tag{3}$$

In (3)  $\alpha$  is a constant;  $\beta$  and  $\gamma$  are coefficient estimates; controls pertain to bank and country characteristics;  $j$  refers to a specific bank; and  $\varepsilon_j$  is the error term. We hold the right-hand side of equation (1) in the closed forms for the other alternative dependent variables pertaining to performance and risk-taking.

#### 4.2.2 Dependent variables

Bank's market value and performance variables are Q - Tobin's Q (Demsetz and Villalonga, (2001); ROA - Return on assets (Mehran, 1995); and ROE - Return on equity (Short and Keasey, 1999). They are expressed by equations (2) and (3). Joh (2003) contended that accounting profitability indicators are better performance measures than stock market-based indicators because, unlike the latter, the former relate directly to firm survival. All data to compute Q for each bank were collected from data bases of NBK and KASE, as follows: market value, historical market capitalization; book value, total shareholder equity; debt, total liabilities; and assets, total assets. ROA and ROE, the second and third performance variables, were also collected directly from NBK.

Risk variables are NPL/L and Z - scores (Barry et al. (2010). NPL / L as proxy of loan portfolio risk is the alternative risk variable and Z-score expressed by (2). Z-score captures the probability of default, and compares a bank's buffers (capitalization and returns) with the volatility of those returns. Q and Z-score for each bank were calculated by author. The sample of 12 main banks in Kazakhstan for 2008-2013 years a homogeneous set of banks dedicated to the provision of a set of financial services consisting of retail banking, loans, and money transmissions. Thus, we not only avoid confounding effects that would amplify the sample variance and most probably hinder the efficiency of the regression coefficient estimates but also contribute to a more focused analysis of the influence of MO on the market value, performance, and risk of listed banks listed on KASE and included in a market index of Bloomberg. In Table 1 are shown, for example, Kazakh bank's characteristics for only 2013 year.

#### 4.2.3 Independent variables are:

MO - managerial ownership; there are several bank control variables that are significantly related to our dependent variables: SIZE - logarithm of gross operating revenue; AGE - number of years since incorporation ;GO - revenue growth; DI - Debt

intensity - debt divided to total assets; CI - Capital Intensity - total shareholders equity divided by revenues; NII\_OI - proxy for income diversity - net interest income, divided to total operating income; and proxies for development of financial market in Kazakhstan: PC\_GDP - private credits to GDP; SMC\_GDP - stock market capitalization- total value of shares traded on KASE to GDP. It was hold the right-hand side of equation (2) in the closed forms for the other alternative dependent variables pertaining to performance and risk-taking. For regression analysis were used three equations (4, 5 and 6) to analyze the relationship between banks performance variables, MO variables and control variables:

$$ROE_j = \alpha + \beta * MO_j + \gamma_1 * Size_j + \gamma_2 * Age + \gamma_3 * GO_j + \gamma_4 * DI_j + \gamma_5 * CI_j + \gamma_6 * NII\_OI_j + \gamma_7 * PC\_GDP_j + \gamma_8 * SMC\_GDP_j + \varepsilon_j \quad (4)$$

and

$$ROA_j = \alpha + \beta * MO_j + \gamma_1 * Size_j + \gamma_2 * Age + \gamma_3 * GO_j + \gamma_4 * DI_j + \gamma_5 * CI_j + \gamma_6 * NII\_OI_j + \gamma_7 * PC\_GDP_j + \gamma_8 * SMC\_GDP_j + \varepsilon_j \quad (5)$$

$$Q_j = \alpha + \beta * MO_j + \gamma_1 * Size_j + \gamma_2 * Age + \gamma_3 * GO_j + \gamma_4 * DI_j + \gamma_5 * CI_j + \gamma_6 * NII\_OI_j + \gamma_7 * PC\_GDP_j + \gamma_8 * SMC\_GDP_j + \varepsilon_j \quad (6)$$

Then were used two equations (7 and 8) to analyze the relationship between MO and bank risk using the percentage of non-performing loans in total loans (NPL/L), and the Z-Scores.

$$NPL\_L_j = \alpha + \beta * MO_j + \gamma_1 * Size_j + \gamma_2 * Age + \gamma_3 * GO_j + \gamma_4 * DI_j + \gamma_5 * CI_j + \gamma_6 * NII\_OI_j + \gamma_7 * PC\_GDP_j + \gamma_8 * SMC\_GDP_j + \varepsilon_j \quad (7)$$

$$Zscores_j = \alpha + \beta * MO_j + \gamma_1 * Size_j + \gamma_2 * Age + \gamma_3 * GO_j + \gamma_4 * DI_j + \gamma_5 * CI_j + \gamma_6 * NII\_OI_j + \gamma_7 * PC\_GDP_j + \gamma_8 * SMC\_GDP_j + \varepsilon_j \quad (8)$$

**Table 1.** Bank's characteristics for 2013\*

BANK	MO	Q	Z	ROA	ROE	NPL /L	SIZE	AGE	GO	DI	CI	NIL_OI	PC_Y	SMC_Y
Kazkommertsbank	0.64	4.00	3.79	0.01	0.00	0.40	18,32	21.00	0.10	0.88	3.57	0.00	1.11	8.13
Halyk Savings Bank	0.74	2.05	16.61	0.01	0.00	0.22	18.35	90.00	0.11	0.86	3.82	0.00	0.80	23.20
BTA Bank	0.97	3.74	0.76	0.01	0.00	0.87	21.31	88.00	1.73	0.82	0.16	0.00	0.17	90.55
Bank CenterCredit	0.73	1.60	3.09	0.00	0.00	0.16	20.53	25.00	0.12	0.92	0.11	0.00	0.48	1.92
ATFBank	1.00	2.52	0.67	-0.01	0.00	0.41	19.68	18.00	0.11	0.91	0.19	0.00	0.39	1.51
SB Sberbank of Russia	1.00	1.42	7.73	0.01	0.00	0.05	18.19	5.00	0.10	0.90	1.20	0.00	0.34	2.93
Tsesnabank	0.74	4.47	4.89	0.01	0.00	0.04	18.65	21.00	0.06	0.91	0.51	0.00	0.30	4.27
Alliance Bank	0.67	16.81	0.00	0.00	0.00	0.45	20.17	19.00	0.10	0.99	0.02	0.00	0.21	0.62
Kaspi Bank	0.89	2.80	20.42	0.00	0.00	0.18	20.08	16.00	0.12	0.91	0.12	0.00	0.27	4.53
Eurasian Bank	1.00	1.94	8.71	0.01	0.00	0.09	19.11	19.00	0.07	0.95	0.15	0.00	0.23	2.01
Temirbank	0.99	4.02	-0.32	-0.02	-0.02	0.47	18.62	21.00	0.10	0.81	0.46	0.00	0.11	0.55
Nurbank	0.79	3.23	2.55	0.00	0.00	0.50	18.85	21.00	0.13	0.75	0.47	0.00	0.09	11.01

\*) Source was constructed by author

## 5 Empirical Results

### 5.1 The empirical results of econometric model 1

Panel A in Table 1 shows the descriptive statistics. Results show that size of board in Kazakh listed financial institutions is 11 with largest number of board members (for government fund

"Samruk-Kasyrna") and minimum board size is 1 (which is the statutory lower limit for a public company as Insurance company). In table 1.1 the mean is shown as logarithm of number of board

members. Independent directors (IDs) constitute in average of 33% of boards which is a fairly good representation for Kazakh companies. Managerial ownership is approximately 7% which is significantly low in the companies which present the financial industry. Institutional shareholding is more than 50% which is reasonable, since most of the Kazakh listed financial institutions belong to the bank holding companies and their affiliate's holdings, and shareholding is distributed between national companies, pension funds and banks. Average rate of return on assets is 4%.

**Table 2.** Panel A - Descriptive statistics

	Minimum	Maximum	Mean	Std. Deviation
DE ratio	-6.34	26.48	3.2368	4.41810
Board Size	.00	1.11	.6645	.20575
Indep Dir	.00	.83	.3327	.17287
Inst Shr	.00	1.00	.5305	.43874
Mng Shr	.00	1.00	.0731	.22275
Prv Shr	.00	1.00	.1164	.25794
ROA	-3.28	2.80	.0408	.39973
FI Size	.71	13.13	10.1385	1.64361
CEO/Chair Duality	.00	1.00	.2921	.45603
N=1656				

Average debt to equity ratio is 3.93% representing a fairly reasonable overall debt to equity ratios for financial institutions which is more than 2 as is reasonable for non-financial companies.

Panel B in Table 3 shows the results of correlation analysis.

1. Profitability is almost zero correlated with debt to equity ratio which is not consistent with pecking order theory that firms use internally generated funds as first option to finance projects before resorting to debt. This

result is contract to the result with non-financial companies in the previous research

**Table 3.** Panel B- Correlations Matrix

	DE ratio	Board Size	Indep Dir	Inst Shr	Mng Shr	Prv Shr	ROA	FI Size	CEO/Chair Duality
DE ratio	1								
Board Size	<b>.232**</b>	1							
Indep Dir	.061	<b>.273**</b>	1						
Inst Shr	.088	-.041	<b>-.166*</b>	1					
Mng Shr	-.040	.104	.133	<b>-.306**</b>	1				
Prv Shr	<b>-.140*</b>	.004	.074	<b>-.317**</b>	-.059	1			
ROA	.038	.089	-.079	-.051	-.030	-.038	1		
FI Size	<b>.315**</b>	.037	.035	.025	-.054	-.109	<b>-.222**</b>	1	
CEO/Chair Duality	<b>.252**</b>	.078	-.114	.119	-.029	<b>-.273**</b>	-.028	<b>.279**</b>	1

N= 1656  
 \*\*) Correlation is significant at the 0.01 level  
 \*) Correlation is significant at the 0.05 level

2. There is a positive relationship between size of board and the size of financial institutions. This appears rational as larger institutions have more assets for collateral; they need a large board in order to negotiate better terms and easier for them with lenders. Also, after the crisis in 2007-2008 most commercial banks become very conservative in their lending policies. Prudential Regulations of AFC under the National bank of Kazakhstan make it extremely difficult for commercial banks extent their lending policies. Hence, presence of a large board is necessary for large assets base.

3. Correlation analysis indicates that managerial shareholding and private investor's shareholding are negatively correlated with debt to equity ratio. This is consistent with other studies which argue that as managers' shareholding in a company increases, they tend to bring down the size of firm's debt to reduce the risk and costs of bankruptcy. But for Kazakh financial institutions, management controlled companies are generally those whose majority equity is held by families, which are always averse to bankruptcy. Also correlation matrix indicates significant negatively relationship between private investors shareholding and debt to equity ratio, where private investors also are always averse to bankruptcy. Board size and debt to equity ratio are significantly positively correlated, which might be explained by fact that most of Kazakh listed companies with prevailing shareholding by the board of directors usually only who take the decision about the leverage of financial institutions.

4. Negative significant correlation between institutional shareholding and managerial (and private investors shareholding) might be explain by competition for the influence on the company management.

5. The size of board is found positively correlated with debt to equity ratio indicating larger

boards may apply pressure on managers to follow higher leverage and improve firm performance. An example of this observation is that larger companies have larger boards – and larger companies with larger assets are more motivated to acquire debt at favorable terms.

6. Relationship between percentage of independent directors and institutional shareholding is negative which shows that concentration of ownership leads to reduce the presence of independent directors on boards. This results in evidence of stronger control on firms. This phenomenon is common in government owned businesses in Kazakhstan and it can be said that equity market in Kazakhstan is dominated by government related trough families or close affiliates owned companies. This works against the spirit of good corporate governance. These practices unfavorably affect the performance of company as shown by the negative relationship between Return on Assets and ownership structure. But these results are insignificant.

7. CEO/Chair duality is significantly positively correlated with the capital structure and the Institutional size, and insignificantly negatively correlated with the private investor's shareholding. This evidence is common for Kazakh companies, where when the Chair of the board is represented also as a CEO, than the interests of board and CEO coincide in decision about the financing the firm. The negative correlation might be explained by the resistance of the private investors to the increasing of power of the board of directors by imposing them as CEO.

Panel C in Table 4 presents results of multivariate regression analysis of the leverage level using multiple regressions (1) for all financial institutions.

**Table 4.** Panel C. Multivariate Regression Analysis

	<b>Coefficients</b>	<b>t-Statistics</b>	<b>P-value</b>
Intercept	-7.996	-3.150	<b>.002</b>
Board Size	4.915*	2.695	<b>.008</b>
% of Independent Directors	1.197	.614	.540
% of Institutional shareholding	.628	.764	.446
% of Managerial shareholding	-.632	-.420	.675
% of Private investors shareholding	-1.041	-.764	.446
ROA	.503	.586	.559
Size of Financial Institution	.681*	2.947	<b>.004</b>
CEO/Chair Duality	1.496*	2.008	<b>.046</b>
*) significant at $\alpha = 0.05$			
N= 1656			

Results of multivariate analysis show that:

- Multivariate regression analysis provides that an increase of 1% in the size of institution leads to 0.68% increase in leverage and this relationship is significant at  $\alpha = 0.05$ . Results have economic relationship and consist with other studies that large firm have a greater debt to equity ratio.

- Debt to equity ratio is significantly affected by board size and CEO/Chair duality. Correlation analysis indicates the presence of significant relationship, and regression analysis provides evidence about existence of this significant relationship at  $\alpha = 0.05$ .

Presence of independent directors on the board has no significant impact on leverage. It may be due to fact that in family owned business independent directors are generally representatives of financial institutions; no statistics are available how these businesses choose the independent directors, or whether they have any

relationship to these businesses. The Code of Corporate Governance has made it mandatory to have independent directors in the board of directors.

### **5.2. The empirical results of the econometric model 2**

Table 5 shows the correlations between pairs of variables in years: from 2008 and 2013. We observed that:

- 1) MO negatively relates to performance variables: Q, ROA, and ROE
- 2) MO negatively relates to Risk variables: Z-scores and NPL/L
- 3) MO significantly negatively relates to SIZE, AGE, and PC/GDP
- 4) Z-scores significantly negatively related to DI, and
- 5) NPL/L significantly positively relates to CI.

**Table 5. Correlation Matrix**

In period of 2008-2013	MO	Q	Z-scores	ROA	ROE	NPL_L	SIZE	AGE	Growth	DI	CI	NII_OI	PC_GDP	SMC_GDP
MO	1	-.072	-.020	-.001	-.042	-.018	-.282*	-.251*	-.054	-.072	-.124	-.022	-.428**	-.096
Q		1	-.097	-.108	.396**	-.039	.092	-.241*	-.149	-.062	.066	.003	-.163	-.582**
Z-scores			1	.371**	-.047	-.262*	-.109	-.038	.004	-.502**	.358**	-.230	.150	-.207
ROA				1	-.561**	.027	-.105	-.094	.020	-.716**	.306**	-.518**	-.303**	.012
ROE					1	-.072	.159	-.116	.274*	.180	-.112	.145	.043	-.437**
NPL_L						1	.219	.321**	.258*	-.020	-.204	-.145	-.201	.329**
SIZE							1	.387**	.291*	.231	-.455**	.027	.435**	.183
AGE								1	.078	.236*	-.056	-.101	.353**	.576**
Growth									1	-.059	-.142	-.090	-.006	.239*
DI										1	-.424**	.668**	.368**	.281*
CI											1	-.226	-.016	-.161
NII_OI												1	.090	-.070
PC_GDP													1	.291*
SMC_GDP														1
N=288 observations														
**. Correlation is significant at the 0.01 level.														
*. Correlation is significant at the 0.05 level.														

The results for linear regressions (OLS) are presented in the left-hand column of Table 6 for the dependent variable Q and MO as the variable of interest, controlling for bank and country-specific traits deployed in the literature. As we can see from these results, the coefficients of MO are negative for Q, and ROA and statistically insignificant. But we can see also that Q significantly (at 1% ) positively depends from size and debt intensity, and statistically

negatively relates to NII/OI, PC/GDP and SMC/GDP. Also, ROE significantly negatively relates to SMC/GDP. The results reveal the negative relation between MO and bank market value (Q) but insignificantly. These results suggest that MO increases the agency costs, which means that managers are misaligned with shareholders in creating value for the bank in which they hold a stake.

**Table 6.** OLS regression results for the impact of managerial ownership (MO) on Q, ROA and ROE

	Q	ROA	ROE
	From 2008 to 2013	from 2008 to 2013	from 2008 to 2013
(Constant)	<b>-9.953*</b>	.070	-.019
MO	-2.156	-.098	.000
SIZE	<b>.588***</b>	.028*	.000
AGE	-.004	.000	9.064E-5
Growth	-.033	<b>-.005*</b>	<b>.001***</b>
DI	<b>4.202**</b>	-.551***	<b>.031***</b>
CI	.171	.008	-9.605E-5
NII_OI	<b>-47.682*</b>	-.018	-.213
PC_GDP	<b>-.181**</b>	<b>-.010**</b>	.000
SMC_GDP	<b>-.012***</b>	<b>.000***</b>	<b>-8.593E-5***</b>
R2	.460	.612	.532
N of obs.	288	288	288
Significance at the 1, 5 and 10% levels is denoted by ***, ** and *, respectively. Values in bold denote that significance level respectively.			

This finding is consistent with the finding of Belkhir (2004) in the context of U.S. bank and savings- and-loan holding companies (1995–2002). Finally, as shown in Table 7, we analyzed the link between MO and bank risk using the percentage of non-performing loans in total loans (NPL/L), and the Z-scores. The results suggest that the negative coefficients of MO are associated with lower bank risk, as NPL/L, and the positive coefficients of MO are associated with Z-scores, and they reflects the

direct influence of MO on the risk. This finding is consistent with the finding of Saunders et al. (1990). There are several control variables that are significantly related to our dependent variables. NII/OI and PC/GDP are positively related to Z-scores and statistically significant at 1% and 5% levels. But PC/GDP and SMC/GDP are significantly negatively related to our risk variables NPL/L and Z scores, and DI significantly negatively relates to Z-scores.

**Table 7.** OLS regression results for the impact of managerial ownership (MO) on NPL/L and Z-scores

	NPL/L	Z - scores
	from 2008 to 2013	from 2008 to 2013
(Constant)	-.231	<b>48.989***</b>
MO	-.128	9.340
SIZE	.030	-1.248
AGE	.002	<b>.077*</b>
GO	.003	.131
DI	.005	<b>-33.118***</b>
CI	-.006	-.024
NII_OI	-1.290	<b>210.884**</b>
PC_GDP	<b>-.025***</b>	<b>1.300***</b>
SMC_GDP	<b>.000*</b>	<b>-.014*</b>
R2	.348	.497
N of obs.	288	288
Significance at the 1, 5 and 10% levels is denoted by ***, ** and *, respectively. Values in bold denote these significance levels respectively.		



The development of financial markets in Kazakhstan, which is proxies by private credit (value of claims on the private sector by deposit money banks and other financial institutions) and stock market capitalization (the total value of shares traded in a country's stock exchange), both scaled o GDP of RK, negatively relates to the risk default measures.

The use of banks listed on the Bloomberg index guarantees comparability in terms of stock market capitalization, free float, transparency, and reporting standards that usefully reduce sample variance in a cross-banking analysis. The narrow definition of MO, a homogenous set of banks operating in Kazakhstan, and an analysis over a period during the on-going financial crisis with an appropriate econometric method could extent the mixed findings observed in previous studies and enable the generalization of findings.

## 6 Conclusions

This research employs level data for financial institutions, listed on KASE by using multivariate regression analysis under fixed effect model approach. Measures of corporate governance employed in this study are board's size, board's composition, and CEO/Chair duality. Also this study examines the impact of shareholding on financing decisions by using three ownership parts: managerial shareholding, institutional shareholding, and private investor's shareholding. Influence of controlled variables such as financial institution size and profitability (as a ROA) was also examined in this research. Results of this part of panel study showed that board size is significantly positively correlated with debt to equity ratio and with the number of independent directors, and only private investor's shareholding is significantly negatively correlated with debt to equity ratio. CEO/Chair duality is significantly positively correlated with the debt to equity ratio. The control variable, a financial institutions' size, has also significant effect on capital structure. Therefore, the found results suggest that corporate governance variables like board size, ownership structure and CEO have important role on decision about the leverage of the financial institutions in Kazakhstan.

Banks and their managers have been in the first view since the financial crisis was deepened. Governance failures in banking system and is now in the criticism. The agency costs arising from misalignment of shareholder and managerial interests have long been considered important and empirically relevant in the context of mainly manufacturing enterprises. Agency theory is most often applied to a non-crisis context. The on-going financial crisis has reinstated the critical importance of the costs of misalignment of interests of shareholders and managers in the banking industry. The Literature Review findings, however, do not cover the financial

crisis' period. This study was done as extension to the agency theory to assess the influence of managerial ownership on the market value, performance, and risk in crisis. First, our data showed very low levels of MO in Kazakh banking industry; Secondly, analysis of bank characteristics and macroeconomic conditions showed a negative relation between managerial ownership and both market value (Tobin's Q) and performance (ROA and ROE). This finding is consistent with the finding of Belkhir (2004) in the context of U.S. bank and savings- and-loan holding companies (1995–2002). Third, moreover, the findings showed a negative relation between managerial ownership and risk (NPL/L) and positive relationship between MO and Z-scores from 2008 to 2013. This finding is consistent with the finding of Saunders et al. (1990). Our findings suggest that management shareholdings resulted in better market value, performance, and risk-taking for banks and these findings do not weaken during the on-going financial crisis. In their effort to intertwine governance and regulation to immunize the financial system from a future financial crisis, National Bank of RK may find the role of MO as relevant.

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