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## Do family ownership and control influence banks performance and risktaking? A cross-country analysis of emerging economies

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# Do family ownership and control influence banks performance and risktaking? A cross-country analysis of emerging economies

**Abstract:** This study examines how family ownership and family-aligned board and management as well as government and foreign shareholdings influence profitability, valuation, and credit risk of banks in emerging economies. It is based on fixed effect regressions to analyse an unbalanced panel dataset on 546 bank-year observations from Turkey, Egypt, Jordan, Malaysia, and Indonesia covering a period of 7 years (2009-2015). Overall, the estimation results suggest that family ownership and family-aligned board and management are positively associated with bank performance and negatively associated with credit risk. In addition, ownership concentration has an inverse relationship with bank profitability and valuation. Moreover, foreign ownership and government shareholding show a positive association with bank performance and a negative association with credit risk. Altogether, the study results are consistent with the arguments of stewardship theory and resource-based view. The estimation results have policy implications for corporate governance reform in relation to family ownership and control as well as government and foreign ownerships in concentrated banking systems in emerging economies.

**Key words:** Family ownership, family-aligned board and management, ownership concentration, government and foreign shareholdings, bank profitability and valuation, bank risk-taking, emerging economies.

## **1** Introduction

The global financial crisis of 2008 has intensified the debate about the effectiveness of corporate governance and risk management in the financial sector, and hence, brought the significance of corporate governance reform in both developed and emerging economies (Barry et al., 2011). However, this reform is likely to be different between developed and emerging economies due to variations in governance structure of banks and heterogeneous regulatory framework within these economies (Martynova and Renneboog, 2011). Moreover, as Verbeke and Kano (2012) observe, the corporate sector in emerging economies largely rely on bank-based financing as opposed to capital market-based financing. For Beck et al. (2003), the banking sector in emerging economies has certain distinct characteristics, such as concentrated ownership structure as well as significant government and/or family ownership of banks. To maintain stable and competitive banking system, the policymakers need to understand the role of the key stakeholders of a bank such as controlling shareholders and/or families as well as the government.

Available literature highlights the significance of family businesses in both developed and emerging countries, since a significant proportion of firms in the US, Europe and East Asia are family owned, and that family members are directly or indirectly involved in managing businesses (Anderson and Reeb, 2003). Accordingly, a growing body of literature examines the effect of family ownership on performance of non-financial firms and find that family firms outperformed non-family firms in terms of profitability and valuation (Cirillo et al., 2019; Panicker et al., 2019; Barontini and Caprio, 2006; Herrero, 2011; Andres, 2008).

Apart from family ownership and control, ownership concentration as well as government and foreign ownerships are likely to have a significant influence on financial performance and risk-

taking behaviour of banks in emerging economies (Shehzad et al., 2010). Belkhir (2009) observes that large shareholders have the incentives and resources to monitor opportunistic behaviour of executive management, which in turn reduces agency costs. According to the development view, government ownership of banks is necessary for financial sector development in emerging economies (La Porta et al., 2002). Similarly, foreign ownership is likely to reduce agency costs through greater disclosures and more effective monitoring of managerial actions (Bonin et al., 2005). Based on a review of existing literature, Villalonga and Amit (2020) observe that family ownership and ownership concentration influence the performance of financial and non-financial firms.

Empirically, a little is known about the effects of family ownership and control on performance and risk-taking of banks in emerging economies (Azofra and Santamaria, 2011; Lensink and Naaborg, 2007). Although several studies (Iannotta et al., 2007; Barry et al., 2011) address the effect of family ownership on bank performance in the context of European countries, available literature provides less attention on the effect of ownership structure in the context of emerging economies in the Middle East and South East Asia. Among others, Al-Amarneh (2014) finds that family ownership has a positive influence on credit risk in Jordanian banks. Ariff et al. (2018) find that government and family ownerships have a negative influence on the extent of internet financial reporting of financial firms in the Gulf Cooperative Council (GCC) countries. Panicker et al. (2019) and Cirillo et al. (2019) also find a significant influence of family ownership in non-financial firms. However, there seems to be a dearth of literature on the impact of family ownership and family-aligned board and management on bank performance and risk-taking in emerging economies.

This study is intended to address this gap in the existing literature on family-based corporate governance system and its influence on bank performance and credit risk in the context of banking sector in emerging economies. This study addresses the following research questions: (i) How do family ownership as well as family-aligned board and management influence financial performance and credit risk of banks in emerging economies? (ii) Do ownership concentration as well as foreign and government shareholdings affect performance and credit risk of a bank? It is based on an unbalanced panel dataset covering 546 bank-year observations from the listed commercial banks from five emerging economies such as Malaysia, Turkey, Jordan, Egypt, and Indonesia, covering a period from 2009 to 2015. The empirical estimations are carried out using both univariate (e.g., correlations) and multivariate (e.g., fixed effect regressions) analyses.

The rest of the paper is structured as follows: following this introduction, section two provides a review of contextual, theoretical, and empirical literature, leading to the development of hypotheses. Section three outlines methodological details and section four describes the estimation results. Section five provides a discussion of the findings and section six outlines the practical implications of the study results. Finally, section seven concludes the paper.

## **2** Literature Review

#### 2.1 Characteristics of corporate governance and banking sector in emerging economies

A growing body of literature (Guest, 2009; Zubaidah et al., 2009; Al-Amarneh, 2014) highlights that corporate governance plays a critical role in the banking sector and capital market development by reducing information asymmetry and expropriation and improving risk management practices, which in turn improve investors' confidence, increase access to finance at a lower cost, and improve firms' financial performance. Accordingly, most of the emerging economies (including Middle East and South East Asian countries) used the Basel regulatory framework and Organisation of Economic Cooperation and Development (OECD) principles to design and implement corporate governance and baking reforms in the 1990s with an aim to restructure bank ownership, improve transparency and disclosures, improve investors' confidence, and discipline bank risk-taking behaviour (OECD, 2010).

Among others, Klapper and Love (2004) argue that the integration of financial markets worldwide is the main driver of corporate governance reform in emerging countries, as voluntary adoption of better corporate governance practices can overcome some of the problem of weak legal systems. For Demsetz and Villalonga (2001), ownership structure can be a useful measure of investor protection in an economy, where weak legal system is unable to protect minority shareholders' interests. However, as Beck et al. (2006) and Gillan (2006) argue, dominant family ownership and increased state interference can constrain investor protection and governance reform in a weak legal system.

The banking sector of the Middle East and Asia is generally well capitalised (Bonin et al., 2005), mainly due to various forms regulatory reform initiatives undertaken in this sector. Turkey has experienced an overall improvement in competitiveness in the corporate sector after the implementation of a hybrid model of legal, regulatory and disclosure reforms that were undertaken in other Asian and emerging economies (Sun et al., 2011). There has been an increase in regulations to discipline intra-group financing, controlling family influence, and state and foreign investors' control to make the governance system aligned with the international standards (Miller et al., 2007). Both Turkey and Malaysia have been trying to implement optimal corporate governance models to suit country specific needs (Johnson and Mitton, 2003). In addition,

Malaysia adopted financial repression policy by keeping the nominal interest rate below the prevailing inflation rate to avoid currency depreciation (Abdullah, 2004). In addition, Malaysian regulators have increased reserve requirements and disciplined credit allocations to minimise credit risks (Abdullah, 2004).

Indonesia has successfully implemented banking sector and corporate governance reforms after the crisis of 2007 to enhance investors' confidence and banking sector stability (IMF, 2016, Almunia et al., 2010). Specific regulatory reform initiatives include strengthening of banking supervisory framework, provisioning of greater transparency and disclosures, and ensuring equal participation of all types of shareholders (OECD, 2015). In addition, regulators upgraded the monetary policy framework and increased capital adequacy requirements to enhance financial sector efficiency, liquidity management and prudential credit extension (Bank Indonesia, 2009; OECD, 2015).

Corporate governance structure in Egypt and Jordan shares the attributes of most of the other emerging countries such as underdeveloped financial sector and concentrated ownership with significant family control and a civil law based legal system (Martynova and Renneboog, 2011). Egypt has adopted policies to a shift from a centrally planned system to a market-oriented governance model (Laeven and Fabian, 2010). Similarly, the Central bank of Jordan has implemented corporate governance reform in the banking sector of Jordan (Al-Amarneh, 2014). Banks in Jordan and Egypt have implemented market-oriented approaches to increase the capital base, liquidity, and asset diversification, and to improve human capital and competitive services (Qian and Strahan, 2007).

#### 2.2 Theoretical and empirical literature and hypotheses development:

This study uses a multi-theoretical framework to explain the influence of family ownership and control and other ownership pattern on bank performance and credit risks. *Firstly*, the influence of family aligned ownership, board and management is explained by a combination of stewardship theory and resource-based view (RBV). *Secondly*, agency theory is used to explain the influence of ownership concentration on bank performance and credit risk. *Thirdly*, the influence of government and foreign ownerships is explained by the 'developmental view of governance' and 'global advantage hypothesis', respectively.

#### 2.1.1 Family ownership and family-aligned board and management

According to stewardship theory, manager and shareholders make contribution for the longevity, strength, and value creation within a firm over and above their self-interest (Davis et al., 2000). This theory suggests that the controlling family becomes psychologically attached with the business and plays intrinsic role towards organisational success even at the cost of personal sacrifice (Miller and Le Breton-Miller, 2006). From this perspective, the most critical resource of a family-owned firm is the founder's attitude of stewardship that can create a significant value for a firm. This theory focuses on the role of family as equity provider (Ruiz- Mallorquí and Santana-Martin, 2011), who sacrifices self-interests and extends stewardship behaviour to serve organisational goal and to maximise benefits of all stakeholders (Sarkar and Sarkar, 2010). Stewardship theory suggests that family members show farsighted vision, long-term emotional commitment and alignment of interests that can enhance organisational performance and maximise family benefits (Davis et al., 2000; Dalton et al., 2007). Therefore, controlling families make long life commitments with firms, manage resources and host competencies, since their past, present and future are closely tied with the business performance (Maury and Pajuste, 2005; Barontini and

Caprio, 2006). For Barry et al. (2011) family owned banks are at the forefront in financial sector growth in emerging economies, because their investment activities are certain, predictable, diversified and less risk oriented.

However, related studies (De Anglo and De Anglo, 2000; Faccio et al., 2001) suggest that family members can take advantages of private benefits of control, excessive compensation, and expropriation through related party transactions. The notion of family expropriation might be particularly significant in emerging countries due to less transparent governance structure (Faccio et al., 2001).

Empirically, several studies (e.g., Herrero, 2011; Andres, 2008) find that family-owned firms outperform non-family firms in terms of profitability and valuation. Anderson and Reeb (2003) observe that family firms exhibit greater effectiveness and transparency in the decision-making process. Verbeke and Kano (2012) argue that stewardship attitude of equity provider tends to enhance bank performance and reduce excessive risk-taking. A few bank-specific studies (Barry et al., 2011; Martínez et al., 2007) find that higher equity stake of families is associated with lower credit and default risks in European banks. Panicker et al. (2019) find that family ownership moderates the preferences of pressure sensitive and pressure resistant investors towards international investment in Indian corporate sector.

However, Al-Amarneh (2014) finds family ownership having a positive influence on credit risk in Jordanian banks. Cirillo et al. (2019) also find that the presence of family ownership reduces research and development expenditures in a firm. Murro and Peruzzi (2019) find that family owned firms with concentrated ownership face more credit rational behaviour from banks in Italy. Therefore, the following hypothesis is developed: **H1a** *Ceteris paribus*, family ownership has a positive relationship with bank profitability and valuation and a negative relationship with credit risk.

Apart from family ownership, the involvement of family members in executive management results in an alignment of interests (Jensen and Meckling, 1976), as family-aligned management tends to overcome the agency cost of monitoring the hired executives (Shleifer and Vishny, 1986). According to stewardship theory, the behavioural attributes of family members can facilitate strategic decision making and improve firm performance (Miller et al., 2007). Family firms make better financial decisions due to long term focus of family managers, and thus, mitigate managers' myopia (Bae et al., 2002). However, as related studies (De Anglo and De Anglo, 2000; Faccio et al., 2001) argue, family firms are costly for the economy, since the founding family might induct incompetent family members into the business, and that family members might expropriate critical resources, whilst depriving other stakeholders from exercising their rights. Family-aligned managers can abuse excessive power by taking higher compensation and special dividends, leading to poor financial performance (Laeven and Levine, 2009).

Empirically, little is known about the effect of family-aligned management on bank performance. Allouche et al. (2008) and Barontini and Caprio (2006) find that family ownership and control has a positive effect on firm performance. Gonzalez (2005) also observes that family businesses and family-aligned executives in the Middle East and North Africa (MENA) region tend to have strong support networks in terms of access to finance, quick decision making and longer-term perspectives. Therefore, the following is hypothesis is developed: **H1b** *Ceteris paribus*, family-aligned executive management has a positive association with bank profitability and valuation and a negative association with credit risk.

Hillman and Dalziel (2003) use 'resource-based view (RBV)' to explain the resource provisioning role of the board of directors in influencing firm performance. According to them, RBV focuses on the human and relational capital of the board of directors (such as, legitimacy, advice, access to resources, and inter-firm linkages) that can provide critical resources for the success of a firm. Barontini and Caprio (2006) argue that firms can take advantage of the knowledge and expertise provided by the board of directors and managers.

According to this theory, family-aligned board and management can provide a firm with critical intangible resources in the forms of superior information, critical advice and expertise that facilitate the adoption of knowledge-based approach in the decision-making process (Leonard and Sensiper, 1998; Allouche et al., 2008; Tokarczyk et al., 2007). Family-aligned board members can provide a firm with competitive advantage by bringing unique intangible assets in terms of strong networking, greater access to financial and other resources, unique experience and expertise, and this is likely to have positive impact on financial performance (Pathan et al., 2007; Sanchez-Ballesta and Garcia-Meca, 2007). For Gonzalez (2005), family members have strong network in terms of financial support and quick decision-making. Empirically, Andres (2008) finds that family firms have higher performance in case if owners occupy the position of managers or directors. Hence, the following hypothesis is tested:

**H1c** *Ceteris paribus*, family-aligned board has a positive relationship with bank profitability and valuation and a negative relationship with credit risk.

#### 2.1.2 Concentration and types of ownership

Agency theory suggests that corporate governance problems arise due to the conflict of interests between owners and managers (Jensen and Meckling, 1976) and this conflict influences performance and risk preference of a firm (Leuz and Oberholzer-Gee, 2006). This theory also addresses how agency problems can be mitigated by aligning the interests of managers and shareholders (Fama and Jensen, 1983). According to this theory, large cash flow ownership or block holding of controlling shareholders tend to reduce the divergence of interests as well as monitoring costs, which in turn improve firm performance (Shleifer and Vishny, 1986; Jensen and Meckling, 1976). For Herrero (2011), family managed firms tend to perform better than non-family firms due to reduced agency problems. However, concentrated owners can also engage in tunnelling of assets for personal benefits at the expense of other shareholders (La Porta et al., 2002). Cornett et al. (2007) also support the agency theory-based arguments of a positive association between institutional ownership and corporate performance.

Empirically, Caprio et al. (2007) find that larger cash flow rights of controlling shareholders positively influence firm value. Shehzad et al. (2010) also find that ownership concentration reduces non-performing loans and increases bank performance, although Bae et al. (2002) find that block holding increases bank risk-taking behaviour. Zeitun (2009) shows that ownership concentration influences firm performance in Jordan. Based on the theoretical arguments and empirical evidence, the next hypothesis is developed as follows:

**H2a** *Ceteris paribus*, ownership concentration has a positive relationship with bank profitability and valuation and a negative relationship with credit risk.

According to the 'developmental view of governance', government ownership of banks is necessary to finance development projects and to generate employment in emerging economies (La Porta et al., 2002). Moreover, government ownership in the banking sector might be justified in the presence of monopoly power and distributional concerns (Shleifer and Vishny, 1997). However, government ownership can cause agency conflict in weak legal system, and give rise to bureaucracy, interest group politics, political and social conflicts, which in turn cause inefficiency, and thus impact negatively on performance and productivity (Shleifer and Vishny, 1997; Haw et al. 2010). According to 'global advantage hypothesis', foreign owned banks can take advantage of more advanced technologies, skilled human resources and superior risk management policies and practices (Lensink et al., 2008). Nonetheless, as Kobeissi and Sun (2010) observe, foreign banks face additional operating costs and difficulties in adapting to host country norms and policies.

Empirically, Iannotta et al. (2007) find poor performance of government-owned banks due to higher costs of intervention. However, Razak et al. (2008) find that government ownership has a positive influence on firms' profitability and valuation in Malaysia. Boudriga et al. (2009) show that the presence of foreign ownership enhances bank performance. Micco et al. (2007) and Beck et al. (2006) find that foreign ownership has a positive effect on bank performance in emerging and transition economies, although Haque and Brown (2017) find insignificant results on foreign ownership in the context of MENA countries. Considering these theoretical arguments and evidence, we expect government ownership having a negative effect, and foreign ownership having a positive effect, on bank performance. Therefore, the following hypothesis is developed:

**H2b** *Ceteris paribus*, government ownership reduces bank profitability and valuation and increases credit risk, whereas foreign ownership has an opposite effect.

## **3 Research Design**

#### 3.1 Data and sample

This study is based on an unbalanced panel dataset covering 546 bank-year observations from the listed commercial banks in five emerging economies (Turkey, Jordan, Egypt, Malaysia, and Indonesia) over a period of 7 years (2009-2015). Table 1 shows that there are a total 78 banks in the sample, out of which 8 banks are from Malaysia, 12 banks are from Turkey, 14 banks are from Egypt, 15 banks are from Jordan and 29 banks are from Indonesia. The sample includes commercial banks from five Muslim majority jurisdictions in the Middle East and South East Asian regions, with concentrated ownership structure and significant family control in the banking sector.

## \*\*\*Insert Table 1 about here\*\*\*

Corporate governance and financial data are collected from notable financial databases such as Bankscope, Datastream and Thomson One Banker (Gonzalez, 2005; Shehzad et al., 2010). In addition, annual reports, and websites of some of the sampled banks are consulted to get some missing financial and governance data. Finally, the World Bank's World Development Indicators (WDI) database is used to gather data on macroeconomic variables such as income level.

#### 3.2. Empirical model and variables

This study uses both univariate (e.g., correlations) and multivariate (e.g., fixed effect regressions) analyses. Based on the Hausman test results, fixed effect model is used for empirical estimation. Fixed effect model controls firm specific effect and unobserved heterogeneity. Among others, Coles et al. (2008) and Yermack (1996) use fixed effect model to examine the relationship between ownership structure and firm performance. The following regression model is developed:

$$PERF = \alpha_0 + \beta_1 * F_Own + \beta_2 * F_Mgt + \beta_3 * F_Bod + \beta_4 * Own_Con + \beta_5 * Gov_own + \beta_6 * Forgn_own + \beta_7 * Inst_own + \beta_8 * BS + \beta_9 * BC + \beta_{10} * Equity + \beta_{11} * Liquidity + \beta_{12} * Op_exp + \beta_{13} * Size + \beta_{14} * income + \varepsilon_0$$
(1)

In this model, PERF represents three alternative dependent variables namely, bank profitability (ROA), valuation (Tobin's Q) and credit risk (credit). This model includes three family related variables (family ownership, family-aligned board, and family-aligned management) and three other ownership variables (ownership concentration, government, and foreign ownerships) as the main test variables. It also includes several bank-specific and macroeconomic indicators as control variables. Table 2 provides a detailed description of the variables.

#### \*\*\*Insert Table 2 about here\*\*\*

#### 3.2.1 Dependent variables

The regression framework uses three widely used dependent variables, which include an accounting-based measure of profitability (ROA), a market-based measure of valuation (Tobin's

Q) and a risk-based measure (credit risk) (Dyer, 2006). ROA is measured as the ratio of net income over total assets. Tobin's Q is measured by dividing market capitalisation plus book value of debt with the book value of total assets (Almeida and Wolfenzon, 2006). The third measure of bank risk-taking is credit risk (credit), which is measured as the ratio of non-performing loans to total loans (Gonzalez, 2005).

#### 3.2.2 Independent and control variables

The study uses two categories of corporate governance indicators as the main explanatory variables. Firstly, three family related variables such as family ownership (F\_Own), family-aligned management (F\_Mgt) and family-aligned board (F\_BoD) are used as the main test variables. Prior studies (Miller et al., 2007; Herrero, 2011) provide guidance on measuring family related characteristics. F\_Own is measured as the proportion of shareholding of the controlling family (Barry et al. 2011; Anderson and Reeb, 2003). F\_Mgt is a dummy variable that equals 1, if at least one of the top three executives (CEO and two other top executives) belongs to the controlling family, and 0 otherwise (De Anglo and De Anglo, 2000; Faccio et al., 2001). F\_BoD is a dummy variable that equals 1, if 50% of the board members are family-aligned, and 0 otherwise (Barry et al. 2011). In accordance with the stewardship theory and resource-based view, all three family related test variables are expected to have a positive association with bank performance and negative association with credit risk.

The second category of explanatory variables include ownership concentration (Own\_Con), government ownership (Gov\_Own) and foreign ownership (Forgn\_Own). Own\_Con is measured as the percentage of total shares held by the top5 shareholders, whereas Gov\_Own and Forgn\_Own are measured as the percentages of shares held by the government and foreign shareholders, respectively. Ownership concentration and foreign ownership are expected to have a positive association with bank performance and a negative association with credit risk. On the other hand, government ownership is expected to have an inverse association with bank performance and a positive association with credit risk.

Following related studies (e.g., Shehzad et al., 2010; Das and Ghosh, 2009; Fiordelisi *et al.*, 2011; Iannotta *et al.*, 2007), several governance and financial characteristics as well as macroeconomic indicators are used as control variables. These include, institutional ownership (Inst\_Own), board size (BS), board composition (BC), bank size (Size), bank capitalisation (Equity), liquidity (Liquidity), operating performance (Op\_Ex), and income level (Income).

## **4** Empirical Results

#### 4.1 Descriptive statistics and univariate analysis

Table 3 shows summary statistics of all variables. It shows a higher concentration of ownership of the sampled firms, with the top5 shareholders owning around 69% shares. In addition, the government, foreign investors, and the controlling family own around 32%, 29%, and 17% shares, respectively. The Table also shows a higher engagement of family members in the decision-making process of the sampled firms, as 35% of the sampled firms have family-aligned board members, and 46% of the sampled firms have family-aligned executive management. This evidence is consistent with related literature (Boudriga et al., 2009). Table 3 also shows the skewness and kurtosis values of all the variables.

\*\*\*Insert Table 3 about here\*\*\*

Table 4 shows country-wise distribution of mean values of the governance variables. It is evident that the sampled firms of all five countries have a higher concentration of ownership, with the mean value of Own\_Con in Turkey being the highest (85%), followed by Egypt (69%), Malaysia (67%), Indonesia (64%) and Jordan (61%). The Table also shows that the controlling family owns the highest stake in the sampled banks in Jordan (25%), followed by Egypt and Indonesia (17%), Turkey (13%) and Malaysia (10%). It is also evident that the controlling family holds executive management or board positions in most of the banks in Jordan and Malaysia, and that these engagements are relatively lower for the Turkish banks. Finally, government ownership is higher in Turkey (49%) and Malaysia (39%), whereas foreign ownership is higher Jordan (39%) and Egypt (37%). Caprio et al. (2007) and Zeitun (2009) also find similar evidence in emerging economies.

#### \*\*\*Insert Table 4 about here\*\*\*

Table 5 presents a correlation matrix. It is shown that family ownership and family-aligned board and management have positive relationships with ROA and Tobin's Q, and a negative association with credit risk, as expected. This indicates that family ownership and control tend to increase bank performance and reduce bank risk-taking. Moreover, government ownership is found to have a negative relationship with ROA and Q, and a positive relationship with credit risk, as expected. In addition, both ownership concentration and foreign shareholding are found to be negatively correlated with ROA and Q, and positively associated with credit risk. Overall, the correlation results support the hypotheses on family ownership and control as well as government ownership, although it is important to analyse multivariate regression results to draw conclusive evidence on this issue. To test possible multicollinearity, this study performs Variance Inflation Factors (VIF) analysis. Table 6 shows that the VIF values of all the variables are much lower than the critical value of 10. Therefore, there seems to be no concern of multicollinearity among the explanatory variables used in the regression model.

\*\*\*Insert Tables 5 and 6 about here\*\*\*

#### 4.2 Multivariate results

Table 7 shows fixed effect regression results of Eq. (1) with three alternative dependent variables against family and other governance related test variables and all control variables. This estimation is based on the year and country fixed effects to control for time and cross-sectional heterogeneity among countries. Columns 1 to 3 show specification results of profitability (ROA), valuation (Tobin's Q) and credit risk (credit), respectively. Colum 1 shows that all three family-related explanatory variables (F\_Own, F\_Mgt and F\_BoD) as well as foreign ownership (Forgn\_Own) and government ownership (Gov\_Own) have statistically significant positive relationship with bank profitability. However, ownership concentration (Own\_Con) shows a negative relationship with profitability.

Column 2 shows similar specification results with Tobin's Q as the dependent variable. It shows that F\_Own, F\_Mgt and F\_BoD have positive relationships with the valuation measure. In addition, Gov\_Own and Forgn\_Own show positive associations, whereas Own\_Con shows an

inverse association, with Tobin's Q. Column 3 presents regression results of credit risk (credit) and shows F\_Own, F\_Mgt and F\_BoD having an inverse association with credit risk. Moreover, Own\_Con, Gov\_Own and Forgn\_Own are found have a negative association with credit risk.

#### 4.3 Robustness tests

The study has undertaken several robustness tests: *First*, as F\_Mgt has a higher correlation with F\_Own, all three regressions are run without F\_Mgt and found no significant difference in the results of the main variables (as shown in columns 4-6 of Table 7). *Second*, as government ownership has a higher correlation with F\_Mgt and firm size, all three regressions are run without Gov\_Own and found that the explanatory powers of our main test variables remain unchanged (as evident in columns 7-9 of Table 7). *Finally*, due to a possible multicollinearity between F\_Own and F\_Mgt (as evident from correlations results), this study uses an alternative dummy variable for family ownership that equal to 1 if the controlling family owns 10% or more in a bank, and 0 otherwise. Table 8 reports estimation results for all three dependent variable against alternative family ownership (dummy) variables, alongside other governance and financial control variables that are specified in Eq.(1). The estimation results are robust and confirm the initial findings of the study.

\*\*\*Insert Table 7 about here\*\*\*

\*\*\*Insert Table 8 about here\*\*\*

## **5** Discussions

Overall, the estimation results broadly support Hypotheses 1a and 1b in that family ownership and family-aligned executive management are positively associated with firms' profitability and

valuation and negatively associated with bank risk-taking. This evidence supports the arguments of stewardship theory that the founding family extends stewardship behaviour to serve organisational goal (Sarkar and Sarkar, 2010), and that active family engagement and long-term emotional commitment tend to be beneficial for a bank (Davis et al., 2000). Moreover, Barry et al. (2011) argue that family investment activities tend to remain certain, predictable, diversified and less risk oriented. These results are also consistent with the agency theory-based arguments that family-aligned management mitigates the agency cost of monitoring executives from outside (Shleifer and Vishny, 1986). The evidence on family ownership and family-aligned management is also consistent with the findings of related studies on financial and non-financial firms (Barry et al., 2011; Martínez et al., 2007; Beck et al., 2006; Herrero, 2011; Anderson and Reeb, 2003). Verbeke and Kano (2012) also observe that family ownership enhances bank performance and mitigates excessive bank risk-taking, although Al-Amarneh (2014) finds family ownership having a positive influence on credit risk in Jordanian banks.

The estimation results further support Hypotheses 1c in that family-aligned board has a positively relationship with profitability and valuation, and a negative relationship with credit risk of a bank. This evidence is consistent with the arguments of resource-based view (RBV) that the human and relational capital of family-aligned board members in the forms of critical advice, emotional commitment, strong networking and critical access to external resources might be beneficial to improve profitability and risk-management practices of a bank (Pathan et al., 2007; Sanchez-Ballesta and Garcia-Meca, 2007; Gonzalez, 2005). This result supports the finding of Andres (2008), who find family aligned board members having a positive influence on firms' financial performance.

The estimation results on ownership concentration also offers partial support for Hypothesis 2a, as Own\_Con is found to have an inverse association with credit risks, and thus partly support the prediction of the agency theory (Jensen and Meckling, 1976). However, ownership concentration is found to have a negative relationship with bank profitability and valuation. This evidence is contrary to the arguments of the agency theory and supports alternative view that concentrated owners might engage in maximising private benefits of control at the expense of overall firm performance (La Porta et al., 2002). This evidence is contrary to the findings of Shehzad et al. (2010), who find ownership concentration having a positive influence on bank performance.

Interestingly, our evidence suggests government ownership having a positive relationship with profitability and valuation, and a negative relationship with bank risk-taking, and thus partly contradicts Hypothesis 2a. As a whole, this evidence is consistent with the developmental view of state ownership that suggests a positive role of government ownership of banks in promoting socio-economic developments in the contexts of weak institutional framework, market inefficiencies and distributional concerns in emerging economies (Shleifer and Vishny, 1997; La Porta et al., 2002). For Razak et al. (2008), government-owned banks make more diversified investments, invest in underperforming projects, and make capital requirements compatible with the investment requirements. This result is consistent with the evidence of Razak et al. (2008) that shows a positive influence government ownership on firms' profitability and valuation in Malaysia, although it contradicts with the findings of Iannotta et al. (2007).

Finally, foreign ownership is found to have a positive association with bank profitability and valuation, and a negative association with credit risk, findings that support Hypothesis 2b. This evidence is consistent with the arguments of global advantage hypothesis that foreign-owned

banks can utilise advanced technologies, skilled human resources, and efficient risk management practices to enhance performance and mitigate risks (Lensink et al., 2008). This evidence supports the findings of Micco et al. (2007) and Beck et al., (2006) in the context of banking sector in emerging and transition economies.

Among the control variables, board size and board composition show positive association with both performance indicators, and negative association with credit risk. The findings on board size and board composition are broadly consistent with the resource-based view. In addition, institutional ownership is found to have a positive association with profitability and an inverse association with credit risk, findings that partly support the agency theory-based arguments of Cornett et al. (2007). Moreover, we find that firm size has a positive association with bank profitability, and thus support the observation of Iannotta *et al.* (2007) that large banks can improve profitability though economies of scale and diversified asset portfolio. We also find that liquidity has a positive association with profitability and credit risk This evidence partly contradicts Das and Ghosh (2009), who observe that higher liquid assets indicate poor cash management and lower interest income, leading to a decline in bank profitability. In addition, bank capitalisation shows a positive relationship with profitability and valuation, and a negative relationship with credit risk. This evidence partly supports the arguments of Fiordelisi *et al.*, (2011) that better capitalised banks have less risk-taking incentives for managers, leading to an improved profitability and valuation.

## 6. Practical implications

In addition to its contribution to the existing body of literature, this study has some important practical and policy implications in relation to corporate governance reform in concentrated banking system in emerging economies. Contrary to the widely held notions, family ownership and control as well as government ownerships do not necessarily cause poor performance or excessive risk-taking in banks in emerging economies, as it is shown in this study. Therefore, regulators should design and implement a flexible corporate governance framework for banks to enable successful entrepreneurs and controlling families to play stewardship and resourceprovisioning roles, and government owned banks to contribute to socio-economic development in emerging economies. It is also imperative to develop and enforce an efficient framework of transparency and accountability so that powerful families and controlling shareholders can be restrained from abusing excessive power to maximise private benefits. This might be particularly important considering the evidence of an inverse relationship between ownership concentration and bank performance, suggesting that controlling shareholders might engage in maximising private benefits of control at the expense of overall bank performance. The evidence also supports the regulatory initiatives to promote greater foreign shareholding to enhance overall stability and efficiency in the bank sector in emerging economies.

Altogether, this study supports the need to adopt a balanced approach in corporate governance reform in terms of promoting founding family as well as government and foreign shareholding requirements in the banking sector. In addition, it is worthwhile to develop an efficient and transparent corporate culture, so that the entrepreneurs and families as well as professional board members and management can bring professionalism and innovativeness towards banking sector development in emerging economies.

## 7. Conclusions and future research

This study examined how family ownership and control as well as the concentration and types of ownership influence profitability, valuation, and credit risk of banks in emerging economies. This is based on an unbalanced panel dataset on 546 bank-year observations from five Muslim majority emerging countries such as Turkey, Egypt, Jordan, Malaysia, and Indonesia, covering a period from 2009 to 2015. The empirical framework uses descriptive statistics as well as correlations and fixed effect regressions.

Overall, the estimation results suggest that family ownership and family-aligned board and executive management have positive associations with bank profitability and valuation and negatively associations with credit risk. Altogether, these results are consistent with the arguments of stewardship theory and resource-based view. In addition, ownership concentration is found to have an inverse association with bank profitability and valuation, findings that contradict the predictions of the agency theory. Consistent with the arguments of global advantage hypothesis, foreign shareholding is found to have a positive relationship with bank profitability and valuation, and a negative relationship with credit risk. Interestingly, government ownership shows a positive relationship with bank profitability and valuation, and a negative relationship with credit risk, findings that support the developmental view of governance in the contexts of weak institutional framework and market inefficiencies in emerging economies.

This study makes a number of important contributions to the extant literature: *First*, the selection of our sample provides interesting dimensions by capturing five Muslim majority jurisdictions in the Middle East and South East Asian regions, that are characterised by the

dominance of banking sector, concentrated ownership structure and significant family control. *Second*, the paper extends limited available literature by bringing family ownership as well as family-aligned board and management and other ownership characteristics in a single empirical framework in the context of the banking sector in emerging economies. *Third*, the evidence supports the notion of integrated theoretical framework of stewardship theory, resource-based view, and agency theory in relation to the influence of family ownership and control on bank performance and risk-taking. This study also supports the assumptions of global advantage hypothesis as well as the developmental view of state ownership in the context of emerging economies. *Fourth*, the estimation results have important practical and policy implications, as explained in the previous section.

The study has some limitations and implications for further research: *First*, this study captures a relatively shorter time span and a selection of sample from five emerging economies. Future studies can take a longer-term horizon and expand sample size to include banks from other emerging economies representing different regions such as Eastern Europe, Africa, Latin America, and Middle East, and South and South East Asia. *Second*, this study addresses the effects of bank-level corporate governance characteristics, rather than the institutional characteristics such as legal and regulatory framework, economic environment, and competitive conditions. Future studies can examine how family-oriented and other bank-level governance mechanisms and macro-level institutional characteristics individually and interactively influence bank performance and risk-taking. *Third*, this study uses fixed effect regressions that do not seem to address the problems of endogeneity and reverse causality. Further studies can use advanced regression framework such

as Generalised Method of Moments (GMM) approach to address these limitations. *Fourth*, one potential area of future research is to examine the impact of family ownership and family-aligned board and management on bank performance, efficiency and risk-taking by undertaking a comparative analysis between the developed and emerging economies.

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Country Name	No of banks	No of Observations
Malaysia	8	56
Turkey	12	84
Egypt	14	98
Jordan	15	105
Indonesia	29	203
Total	78	546

Table 1 Number of banks and observations across countries

Variables	Symbols	Descriptions
Dependent Variable		
Return on asset	ROA	The ratio of Net income to total Assets
Tobin's Q	Q	The ratio of market capitalization and total debt to total
Credit Risk	Credit	assets The ratio of non-performing loan to total outstanding loans.
Independent variables		
Family Ownership	F_Own	Percentage of family shareholding
Family-aligned management	F_Mgt	Dummy variable that equal to 1 if at least one of top three executives belong to the controlling family, and 0
Family members on board	F_BoD	Dummy variable that equal to 1 if 50% of the board
Ownership concentration	Own_Con	Total shareholdings of the top 5 shareholders (in
Government Ownership	Gov_Own	Proportion of equity held by government
Foreign Ownership	Forgn_Own	Proportion of equity held by foreign investors
Control variables		
Institutional Ownership	Inst_Own	Proportion of equity held by Institutions such as insurance companies, mutual fund and pensions funds
Size of the board	BS	Natural logarithm of total number of board members
Board composition	BC	Proportion of non-executive directors on the board
Bank capitalization	Equity	The ratio of total equity to total assets
Liquidity	Liquidity	The ratio of liquid assets to total assets
Operating performance	Op-Exp	Ratio of operating expenses to operating income.
Bank size	Size	Natural logarithm of total assets.
Income level	Income	Natural logarithm of gross domestic product (GDP) per capita of the country

## Table 2 Variable definitions

Variables	Mean	St. Dev	Minimum	Maximum	Pr(Skewness)	Pr(Kurtosis)
ROA	0.02	0.01	0	0.04	0.25	0.18
Q	0.36	0.19	0.08	1.23	0.91	0.14
Credit	0.04	0.04	-0.01	0.19	0.54	0.79
F_Own	0.17	0.22	0	0.93	0.46	0.68
F_Mgt	0.46	0.50	0	1.00	0.06	0.04
F_BoD	0.35	0.48	0	1.00	0.24	0.23
Own_Con	0.69	0.17	0	1.00	0.09	0.06
Gov_Own	0.32	0.25	0	1.00	0.06	0.27
Inst_Own	0.46	0.27	0	1.00	0.05	0.02
Forgn_Own	0.29	0.23	0	0.84	0.12	0.08
BS	1.03	0.20	0.62	1.51	0.55	0.32
BC	0.39	0.13	0.10	0.67	0.34	0.11
Equity	0.12	0.09	0.05	0.76	0.04	0.12
Liquidity	4.64	1.92	1.77	8.51	0.22	0.12
Size	0.17	0.10	0.01	0.79	0.03	0.04
Op_Exp	2.66	3.03	-10.00	29.50	0.01	0.01
Income	1.73	0.26	0.80	2.05	0.84	0.95

 Table 3 Descriptive Statistics

Notes: Please see Table 2 for a description of the variables that are used in Table 3. The descriptive statistics presented in Table 2 are based on the full sample of banks in Malaysia, Turkey, Egypt, Jordan, and Indonesia.

Variables	Malaysia	Turkey	Jordan	Egypt	Indonesia
F_Own	0.10	0.13	0.25	0.17	0.17
F_Mgt	0.50	0.25	0.61	0.44	0.49
F_BoD	0.50	0.17	0.53	0.25	0.35
Own_Con	0.67	0.85	0.61	0.69	0.64
Gov_Own	0.39	0.49	0.13	0.27	0.35
Forgn_Own	0.22	0.23	0.39	0.37	0.24
Inst_Own	0.60	0.40	0.44	0.46	0.45
BS	1.00	0.99	1.23	1.14	0.91
BC	0.51	0.42	0.33	0.36	0.38

**Table 4** Mean values of the main explanatory variables across counties.

Notes: Please see Table 2 for a description of the variables that are used in Table 4.

<b>Table 5</b> Correlation Matrix
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Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
ROA (1)	1													
Q (2)	0.47	1												
Credit (3)	-0.51	-0.42	1											
F_Own (4)	0.81	0.48	-0.45	1										
F_Mgt (5)	0.77	0.64	-0.61	0.77	1									
F_BoD (6)	0.25	0.30	-0.31	0.11	0.35	1								
BS (7)	0.12	0.14	0.09	0.08	0.09	0.01	1							
BC (8)	0.23	0.41	-0.48	0.15	0.43	0.36	-0.20	1						
Gov_Own (9)	-0.53	-0.40	0.14	-0.64	-0.69	-0.10	-0.43	-0.01	1					
Inst_Own (10)	0.14	0.26	-0.21	0.10	0.31	0.19	0.04	0.23	-0.23	1				
Forgn_Own (11)	-0.05	-0.07	0.21	0.06	0.02	-0.07	0.22	-0.34	-0.27	0.02	1			
Own_Con (12)	-0.15	-0.13	0.11	-0.06	-0.15	-0.27	-0.26	-0.08	0.10	-0.08	0.27	1		
Equity (13)	-0.06	-0.14	0.40	-0.04	-0.09	-0.14	-0.03	-0.11	0.02	0.12	0.00	0.24	1	
Liquidity (14)	0.22	0.24	0.08	0.22	0.21	-0.05	0.25	0.06	-0.34	0.29	0.03	0.03	0.18	1
Size (15)	-0.32	-0.25	-0.06	-0.48	-0.37	0.02	-0.23	0.23	0.61	-0.20	-0.35	0.19	-0.10	0.20

**Notes:** In Table 5, variables are abbreviated as follows: (1) return on assets (ROA), (2) Tobin's Q (Q), (3) Credit risk (Credit), (4) Family ownership (F\_Own), (5) Family aligned management (F\_Mgt), (6) Family aligned board members (F\_BoD), (7) Board size (BS), (8) Board composition (BC), (9) Government ownership (Gov\_Own), (10) Institutional ownership (Inst\_Own), (11) Foreign ownership (F\_Own), (12) Ownership concentration (Own\_Con), (13) Bank capitalization (Equity), (14) Liquid assets (Liquidity), and (15) Bank size (Size).

Variables	VIF	1/VIF
F_Own	2.9	0.344253
Own_Con	1.78	0.562244
B_size	1.78	0.560292
F_Mgt	1.46	0.683324
F_BoD	1.34	0.743725
Gov_own	2.93	0.341857
Inst_own	1.32	0.756243
Forgn_own	1.75	0.571391
Equity	1.23	0.811309
Op_Exp	1.21	0.829393
Liquidity	1.59	0.628482
Size	2.90	0.344253
BC	1.72	0.580237
Income	1.29	0.777985

Table 6 Variance Inflation Factors (VIF) Values

Notes: Please see Table 2 for a description of the variables that are used in Table 6. Table 6 presents the results of VIF analysis to examine the severity of multicollinearity among predictor variables. Value of VIF greater than 10 indicate the issue of multicollinearity.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
variables	ROA	Tobin's Q	Credit	ROA	Tobin's Q	Credit	ROA	Tobin's Q	Credit
Constant	-0.0039	-0.2345	0.1351***	-0.0049	-0.2072	0.1427***	-0.0120**	-0.2221	0.1086***
	(0.005)	(0.146)	(0.043)	(0.005)	(0.140)	(0.042)	(0.006)	(0.144)	(0.032)
F_Own	0.0111***	0.2798***	-0.0965***	0.0108***	0.2877***	-0.0943***	0.0152***	0.2736***	-0.0833***
	(0.002)	(0.068)	(0.018)	(0.002)	(0.068)	(0.018)	(0.002)	(0.068)	(0.015)
F_Mgt	0.0312**	0.0213**	-0.0059**				0.0070**	0.0211**	-0.0064**
	(0.001)	(0.038)	(0.006)				(0.001)	(0.038)	(0.007)
F_BoD	0.0017***	0.0439*	-0.0096**	0.0016***	0.0477*	-0.0086**	0.0017**	0.0439*	-0.0096**
	(0.001)	(0.029)	(0.004)	(0.001)	(0.028)	(0.004)	(0.001)	(0.029)	(0.004)
Own_Con	-0.0231**	-0.1241*	-0.0284*	-0.0030**	-0.1299*	-0.0268*	-0.0015**	-0.1218*	-0.0234**
	(0.003)	(0.074)	(0.016)	(0.003)	(0.075)	(0.017)	(0.003)	(0.073)	(0.015)
Forgn_own	0.0027**	0.0698*	-0.0130**	0.0025**	0.0645*	-0.0145*	0.0032**	0.0706**	-0.0146*
	(0.001)	(0.069)	(0.010)	(0.001)	(0.066)	(0.010)	(0.001)	(0.071)	(0.010)
Inst_own	0.0035***	0.0748	-0.0299***	-0.0037***	0.0799	-0.0285***	-0.0027**	0.0735	-0.0271***
	(0.001)	(0.052)	(0.010)	(0.001)	(0.056)	(0.009)	(0.001)	(0.051)	(0.009)
Gov_own	0.0080***	0.0123*	-0.0262**	0.0790***	0.0099**	-0.0269**			
	(0.002)	(0.072)	(0.017)	(0.002)	(0.072)	(0.017)			
BS	0.0017**	0.2217***	-0.0352**	0.0023**	0.2074***	-0.0392**	0.0054**	0.2160***	-0.0232*
	(0.002)	(0.072)	(0.017)	(0.002)	(0.072)	(0.016)	(0.002)	(0.073)	(0.014)
BC	0.0096***	0.5039***	-0.0683***	0.0101***	0.4906***	-0.0720***	0.0114***	0.5011***	-0.0625***
	(0.003)	(0.120)	(0.019)	(0.003)	(0.124)	(0.019)	(0.003)	(0.122)	(0.017)
Equity	0.0282***	0.2308***	-0.1311***	0.0287***	0.2435***	-0.1275***	0.0270***	0.2289***	-0.1271***
	(0.003)	(0.084)	(0.014)	(0.003)	(0.090)	(0.013)	(0.003)	(0.081)	(0.014)
Liquidity	0.0076**	0.0864	0.0500**	0.0076**	0.0877	0.0504**	0.0071*	0.0857	0.0516**
	(0.003)	(0.119)	(0.021)	(0.003)	(0.120)	(0.022)	(0.004)	(0.118)	(0.023)
Size	0.0020***	0.0065*	0.0810*	0.0021***	0.0081*	0.0014**	0.0180***	0.0062**	0.0017***
	(0.000)	(0.012)	(0.002)	(0.000)	(0.012)	(0.002)	(0.000)	(0.012)	(0.002)
Op_Exp	0.0002*	0.0061**	-0.0700*	-0.0021*	0.0060**	-0.0007	0.0030*	0.0060***	-0.0009*
	(0.000)	(0.002)	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.002)	(0.000)
Income	0.0014**	0.0327*	-0.0003	0.0015**	0.0310*	0.0020*	0.0014**	0.0328**	-0.0001
	(0.002)	(0.033)	(0.005)	(0.002)	(0.032)	(0.005)	(0.002)	(0.033)	(0.005)
Observations	546	546	546	546	546	546	546	546	546
R-squared	0.507	0.457	0.636	0.505	0.455	0.633	0.477	0.457	0.625
Year-FE	yes	yes	yes	yes	yes	yes	yes	yes	yes
country FE	yes	yes	yes	yes	yes	yes	yes	yes	yes
SE clustered	bank	bank	bank	bank	bank	bank	bank	bank	bank
Adjusted R-squared	0.484	0.432	0.620	0.483	0.431	0.616	0.454	0.433	0.608

Table 7 Fixed effect regression of profitability (ROA), valuation (Tobin's Q) and credit risk

Notes: Please see Table 2 for a description of the variables that are used in Table 7. Table 7 presents estimation results of fixed effects model with estimation in with profitability (ROA), valuation (Tobin's Q) and credit risk (Non-performing loans over Total loans) as three alternative dependent variables against different measures of corporate governance and other control variables. Family ownership is represented by percentage of family ownership, family management and family members in board. Each of the specifications includes country and year fixed effects. Numbers in parentheses are standard errors clustered at the bank level. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, &10%, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
v ariable	ROA	Tobin's Q	Credit	ROA	Tobin's Q	Credit	ROA	Tobin's Q	Credit
Constant	-0.0003	-0.2044	0.1159***	-0.0017	-0.1956	0.1287***	-0.0043	-0.0866	0.0667**
	(0.006)	(0.129)	(0.027)	(0.006)	(0.121)	(0.027)	(0.006)	(0.125)	(0.027)
F_dummy	0.0065***	0.2186***	-0.0670***	0.0062***	0.2204***	-0.0643***	0.0081***	0.1698***	-0.0466***
	(0.001)	(0.035)	(0.008)	(0.001)	(0.036)	(0.007)	(0.001)	(0.039)	(0.005)
F_Mgt	0.0011**	0.0068**	-0.0098**				0.0011**	0.0079**	-0.0093**
	(0.001)	(0.038)	(0.006)				(0.001)	(0.040)	(0.007)
F_BoD	0.0011**	0.0205**	-0.0026**	0.0090*	0.0215**	-0.0012**	0.0900**	0.0255**	-0.0047*
	(0.001)	(0.028)	(0.003)	(0.001)	(0.027)	(0.003)	(0.001)	(0.028)	(0.004)
Own_Con	-0.0030**	-0.1385**	-0.0327***	-0.0067**	-0.1404**	-0.0299**	-0.0012**	-0.1118**	-0.0215**
	(0.003)	(0.062)	(0.012)	(0.003)	(0.062)	(0.013)	(0.003)	(0.073)	(0.013)
Forgn_own	0.0017**	0.0880	-0.0202**	0.0015**	0.0865	-0.0224***	0.0019*	0.0916*	-0.0217**
	(0.001)	(0.058)	(0.008)	(0.001)	(0.054)	(0.008)	(0.001)	(0.061)	(0.008)
Inst_own	0.0052***	0.0252	-0.0138**	0.0054***	0.0263	-0.0122*	0.0052***	0.0230*	-0.0129*
	(0.001)	(0.050)	(0.007)	(0.001)	(0.053)	(0.007)	(0.002)	(0.049)	(0.008)
Gov_own	0.0053**	0.1543***	-0.0644***	0.0053**	0.1547**	-0.0638***			
	(0.003)	(0.058)	(0.017)	(0.003)	(0.059)	(0.017)			
BS	0.009**	0.2172***	-0.0312**	0.0016**	0.2127***	-0.0377***	0.0028**	0.1620**	-0.0082**
	(0.002)	(0.068)	(0.013)	(0.002)	(0.070)	(0.012)	(0.002)	(0.064)	(0.013)
BC	0.0030**	0.2526*	-0.0054**	0.0040**	0.2464*	-0.0036**	0.0020**	0.2818**	-0.0067*
	(0.003)	(0.129)	(0.014)	(0.003)	(0.135)	(0.014)	(0.003)	(0.130)	(0.014)
Equity	0.0278***	0.2266***	-0.1317***	0.0284***	0.2306***	-0.1259***	0.0272***	0.2095***	-0.1245***
	(0.003)	(0.078)	(0.012)	(0.003)	(0.084)	(0.011)	(0.003)	(0.076)	(0.013)
Liquidity	0.0069**	0.1180**	0.0412**	0.0070**	0.1187*	0.0422*	0.0064**	0.1037*	0.0472*
	(0.003)	(0.110)	(0.020)	(0.003)	(0.111)	(0.021)	(0.003)	(0.108)	(0.024)
Size	0.0017***	0.0156**	0.0022**	0.0018***	0.0161*	0.0014*	0.0015***	0.0103**	0.0098**
	(0.000)	(0.011)	(0.001)	(0.000)	(0.011)	(0.001)	(0.000)	(0.011)	(0.001)
Op_Exp	-0.0020**	-0.0054**	-0.009**	-0.0002*	-0.0053**	-0.009*	-0.0029**	-0.0046**	-0.0012***
	(0.000)	(0.002)	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.002)	(0.000)
Income	0.0018**	0.0542*	-0.0052*	0.0018**	0.0538*	-0.0057*	0.0019**	0.0499**	-0.0034**
	(0.002)	(0.031)	(0.003)	(0.002)	(0.030)	(0.003)	(0.002)	(0.032)	(0.004)
Observations	546	546	546	546	546	546	546	546	546
R-squared	0.512	0.503	0.723	0.509	0.503	0.713	0.502	0.492	0.669
Year-FE	yes								
country FE	yes								
SE clustered Adjusted R-squared	bank 0.490	bank 0.480	bank 0.710	bank 0.487	bank 0.481	bank 0.700	bank 0.480	bank 0.469	bank 0.654

Table 8 Fixed effect regression of profitability (ROA), valuation (Tobin's Q) and credit risk

Notes: Please see Table 2 for a description of the variables that are used in Table 8. Table 8 presents estimation results of fixed effects model with estimation in with profitability (ROA), valuation (Tobin's Q) and credit risk (Non-performing loan over Total loans) as three alternative dependent variables against different measures of corporate governance and other control variables. F\_Dummy is a dummy variable that equals 1 if the founding family owns at least 10% shares, and 0 otherwise. Each of the specifications includes country and year fixed effects. Numbers in parentheses are standard errors clustered at the bank level. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, &10%, respectively.