Crisis performance of European banks – does management ownership matter?

Hanna Westman*

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Abstract

Failure in bank corporate governance has been seen as a contributing factor to excessive risk-taking pre-crisis with devastating implications as risks realised during the financial crisis. Unfortunately, the empirical evidence on the impact of managerial incentives on bank crisis performance is scarce. Moreover, bank strategy has not previously been accounted for. Hence, this paper presents novel findings on drivers for risk-taking and crisis performance. Specifically, I find a positive impact of management ownership in small diversified banks and non-traditional banks, the monitoring of which is challenging due to their opacity. The impact is negative in traditional banks and large diversified banks, indicating that shareholders induce managers to take risk where the safety net creates incentives for risk-shifting to debt holders and taxpayers. These findings have implications for both academic research as well as policy making in the domain of corporate governance.

JEL classification: G01, G21, G28, G32, L25

Keywords: banks crisis performance; management ownership; traditional vs. non-traditional banking; diversification; safety net; bank opacity and complexity

*Bank of Finland, Snellmaninaukio, PO Box 160, FI-00101 Helsinki, Finland; Phone: +358 50 387 0351
E-mail address: hanna.westman@bof.fi

1. Introduction

To date many, also within the academia, have assessed the events of the recent financial crisis and presented conclusions on potential causes and subsequent consequences.[1] Weaknesses have been sought in the macroeconomic environment, in the structure and functioning of the financial system, in bank level characteristics, in the regulation and supervision of banks and in developments outside the regular banking sector, i.e. financial intermediation in what has been labelled the shadow banking system. Low capitalisation, insufficient liquidity buffers and the vulnerability created by increasing reliance on short-term wholesale funding are bank level characteristics that initially received most attention. Many also claimed that the increasing size and scope of banks had dramatic implications. Kane (2008) and Goodhart (2008), for example, claimed that the implicit government guaranteed safety net of banks seen as too-big-to-fail increased the risk appetite of banks tremendously thus sawing the seeds for the financial crisis. Simultaneously, the benefits of size in banking have been questioned. Davies & Tracy (2014) find that estimates of economies of scale are neglible when the impact of the implicit government guarantee on funding costs is accounted for. Similarly, Boyd & Heitz (2012) find that the social cost of the systemic risk created by banks seen as too-big-to-fail is significantly higher than the benefits of scale economies. The main finding of the research on economies of scope, on the other hand, is that increased focus on non-traditional banking operations increases not only bank level risk, but also a bank's contribution to systemic risk (Brunnermeier et al (2012); Demirguc-Kunt & Huizinga, 2010; DeYoung & Torna, 2013).

[1] For a summary see for example the Final Report of the High-level Expert Group on the structure of the EU banking sector, i.e. the Liikanen Report published in October 2012.

Managerial incentives aligning the interests of management to the ones of shareholders can partly explain shifts in strategy towards increased focus on risky activities (van Ewijk & Arnold, 2013; Acrey et al., 2011; DeYoung et al., 2013). This is particularly true in the presence of a safety net and if the bank is complex and opaque. The safety net reduces the incentives for outsiders to monitor the bank (Berlin et al., 1991; O'Hara & Shaw, 1990) and simultaneously induces the bank to take risk (Diamond & Dybvig, 1986). The complexity and opacity of the bank, on the other hand, makes it difficult for outsiders to monitor the bank, thus weakening market discipline. Opacity does also increase the probability of risk-taking (Bolton et al., 2011).

Unfortunately, there are still only a limited number of papers assessing the implications of managerial incentives on risk-taking and bank crisis performance. Moreover, the evidence presented in these papers focusing on the performance of US banks in the early years of the crisis is inconclusive. Fahlenbrach & Stulz (2011) find that banks, where CEO incentives are more aligned with shareholders through increasing share of equity ownership, had a greater drop in stock price performance and lower profitability in the early years of the crisis than other banks. These findings suggest that decisions which appear to be good and in the interest of the shareholders in normal times turn out poorly in times of crisis. Berger et al., (2014), on the other hand, do not find that the default risk is significantly higher in banks with CEO ownership, indicating that aligning management interests with the ones of the shareholders does not induce excessive risk-taking. Similarly, Cheng et al (2010) find some evidence that insider ownership mitigates risk-taking.

More importantly, none of the previous papers account for differences in bank strategy when assessing the impact of managerial incentives on the crisis performance of banks.[2] This is important as the appropriateness and efficiency of corporate governance mechanism vary with the importance of the regulatory setting, particularly the safety net, as well as with the opacity and complexity of banks (Levine, 2004), which in turn vary with whether the bank is focused on the traditional banking activities of taking deposits and issuing loans, is focused on non-traditional banking operations such as investment banking and trading, or has a diversified strategy.

Using a sample of 200 banks headquartered in 35 different European countries, I first confirm the findings of Westman (2011) by documenting a positive and significant impact of management ownership on pre-crisis performance of banks. Secondly, I find that banks with management ownership were only partly able to maintain the superior performance as the events of the financial crisis unravelled. The drop in profitability in the early stage of the crisis is significantly higher in banks with management ownership. This suggest that the superior pre-crisis performance of banks with management ownership was achieved by taking risks which were not fully visible at the time and generated significant losses only later on, a finding which is similar to the one presented in Fahlenbrach & Stulz (2011). This finding highlights the importance of separately assessing the impact of managerial incentives on bank performance in normal times and in times of crisis. Thirdly, I find even though the drop in performance is significant, it does remain at a higher level than in banks without management ownership. This finding is in line with the findings of Cheng et al., (2010). This is particularly true

[2] de Haan & Vlahu (2013) argue that the reason for the converging results of the implications of managerial incentives on bank crisis performance might lie in the fact that the impact of management ownership vary with the strategy of bank as shown in Westman (2011) on pre-crisis data.

in the latter part of the crisis, giving support to the notion that incentives induced managers to make good and timely decisions thus improving bank crisis performance.

In the main contribution of the paper, I confirm that the impact of management ownership on risk-taking pre-crisis, which has important implications for crisis performance, does vary with the strategy of the bank. First, I find that management ownership has a positive and significant impact not only on pre-crisis performance of non-traditional banks, which confirm the findings of Westman (2011), but also on the crisis performance of these banks. Secondly, I find that the impact of management ownership on the performance of diversified banks depend on the size of the bank. Management ownership appears to have a positive impact on the performance of small diversified banks, whereas the findings in the sub-sample of large diversified banks indicate that the crisis performance is lower than in other banks even though the drop in profitability has been more moderate. Thirdly, I find a negative impact of management ownership on the crisis performance of traditional banks, particularly in the early period of the crisis. The default probability is significantly higher in traditional banks with management ownership. These findings could not have been anticipated from the situation pre-crisis, suggesting that underlying risks become visible only in the midst of the crisis, highlighting the need to assess the impact of management incentives both in normal times and times of severe stress. These findings indicate that management ownership was used by shareholders to induce risk-taking pre-crisis in banks where the safety net created incentives for risk-taking and reduced incentives for monitoring by outsiders i.e. in traditional banks and large diversified banks. That is I find support for the argument of Fahlenbrach & Stulz (2011) that alignment of management incentives to the interest of the shareholders resulted in risk-taking that turned out (unexpectedly) poorly in

the turmoil of the financial crisis, but only in these sub-samples banks. The positive impact of management ownership on the crisis performance of small diversified banks and non-traditional banks, on the other hand, indicate that the finding presented in Cheng et al. (2010) can be found in banks not benefitting from a safety net, but that due to their opacity can be challenging for outsiders to monitor.

The main findings are confirmed in a number of robustness checks where the management ownership and strategy variables are refined. Moreover, measures taken by authorities to mitigate moral hazard and to restrict the scope and scale of banks by imposing activity restrictions are accounted for.

2. The impact of management incentives on bank crisis performance

In a world with limited liability, an equity stake in a bank can be likened to a call option, the value of which increases with risk. Shareholders do not account for the externality of a higher probability of bank failure in determining the target risk level as part of the risk is shifted to debt holders Bolton et al. (2011). Risk-taking incentives increase with leverage and with distance to default.

Management interests can be aligned with the long-run objectives and risk-taking preferences of the shareholders by means of management ownership (Jensen & Meckling, 1976), thus increasing the risk-taking incentives of managers, which otherwise would be lower than the ones of shareholders (Gropp & Köhler, 2010). However, managers become more risk averse than shareholders if an increasing share of their total wealth is tied to the bank as managers do not have the same possibility to diversify their investment portfolio as other shareholders have (Sullivan & Spong,

2007). Hence, the impact of management ownership on bank risk-taking becomes an empirical question.

On one hand, there is empirical evidence indicating that management ownership induced risk-taking. On pre-crisis data Saunders et al. (1990) and Sullivan & Spong (2007) for example find that US banks with management ownership had higher level of risk than banks without management ownership. Moreover, there is evidence that losses generated by risks taken pre-crisis are greater in banks with management ownership than in other banks. Focusing on the absolute size of CEO ownership in 98 large US bank holding companies and investment banks, Fahlenbrach & Stulz (2011) find that greater alignment with shareholder interests caused worse crisis performance measured as stock price performance and profitability (return on equity and return on assets).[3] Similarly, Balachandran et al. (2010) find that the risk of default was higher at banks offering higher equity-based pay and Berger et al. (2014), while assessing the reason for the default of 85 US banks in a sample of close to 350 observations, find that ownership among lower level managers, which are not constrained by reputational aspects to the same extent as the CEO, induces risk-taking which increase the probability of default. Consistent with the view that shareholders pushed banks to take on risk, which pre-crisis was thought to be value-increasing, but which eventually generated significant losses, Beltratti & Stulz (2012) find that banks with more pro-shareholder boards performed worse during the crisis. These findings suggest that some of the risk-taking induced by management incentives pre-crisis realised only later on, generating significant losses when business environment became really constrained during crisis. Hence, I expect that banks with

[3] A similar result is found when assessing the impact of percentage ownership and the ownership of the top-five managers on bank crisis performance, but the results are driven by the impact of CEO ownership as the impact of non-CEO management ownership on crisis performance is insignificant.

management ownership are riskier than banks without management ownership as interests of management are aligned to the ones of shareholders resulting in inferior crisis performance (**Hypothesis 1, H_1)**.

On the other hand, there is empirical evidence that management ownership result in superior bank performance. Using pre-crisis data from a sample of European banks, Westman (2011) finds that increased risk go together with higher profitability; banks with management ownership has higher profitability than banks without management ownership, whereas the impact on the risk-adjusted profitability is insignificant. Moreover, Berger et al. (2014) fail to find a connection between CEO ownership and default probability, indicating that risks induced by shareholders pre-crisis did not result in weaker performance. In a sample of US financial institutions, Cheng et al. (2010) find that insider ownership mitigates risk-taking resulting in above average returns both in the pre-crisis and crisis period when compared to the performance of banks without insider ownership. These findings support the notion that management ownership does not only induce risk-taking, but does also incentivise management to better performance. Therefore one could argue that banks where management has an ownership share would, for example, have handled the events of the crisis better and would have been more flexible and efficient in their decision making. Hence, an alternative expectation to the one presented in Hypothesis 1 is that banks with management ownership recovered more quickly as better and more rapid decisions were made in the midst of the financial crisis thus generating superior crisis performance, particularly in the latter period of the crisis (**Hypothesis 2, H_2)**.

Shareholders' greater appetite for risk is particularly evident in the presences of an insurance-like safety net, the value of which increases with the level of risk, as the

taxpayers are the ones ultimately bearing the cost of bank failure (VanHoose, 2011). The safety net consists of two elements; the explicit deposit insurance scheme and an implicit assumption that banks seen as too-big-to-fail will be rescued by the government. Since the deposit insurance covers potential losses to depositors, it reduces depositors' incentive to monitor banks (Berlin, Saunders, & Udell, 1991). On the other hand, deposit insurance increases the incentive of shareholders to engage in excessive risk-taking as this increases the value of the explicit, option like subsidy the deposit insurance can be likened to (Merton, 1977). Similarly, the incentives to monitor the bank decrease with the implicit too-big-to-fail government guarantee (O'Hara & Shaw, 1990; Deng et al., 2007). This weakens market discipline (Nier & Baumann, 2006). Moreover, the risk of the bank is not fully reflected in the funding costs of the bank as investors assume that the bank will be saved as the risk of default is looming.[4] The insurance-like implicit government guarantee and the artificially cheap funding induce banks to take risk (see for example Afonso et al., 2014; Dam & Koetter, 2012; Rajan, 2013).

It is therefore in the interest of shareholders to induce management to take on even more risk if the potential benefit of the explicit and implicit safety net is substantial. Management ownership once more serves to align the interest of shareholders and managers. Hence, I expect that banks with management ownership are riskier than banks without management ownership resulting in inferior crisis performance particularly if the bank benefits from a safety net (**Hypothesis 3, H_3)**. This line of argumentation highlights the flip side of good governance when defined as aligning the

[4] The average impact on the funding costs in a global sample of systemically important banks was in late 2013 the highest in the euro area (60 to 90 bps) followed by the UK (20 to 60 bps) (IMF, 2014).

interests of managers and shareholders; it might induce excessive risk-taking from a social point of view.

Bank corporate governance is different not only due to the safety net, but also due to the fact that banks are more opaque than non-bank companies (Morgan, 2002). This is particularly true for large banks and banks where financial assets, complex trading activities and off-balance sheet activity play a significant role (Caprio et al., 2008; Iannotta, 2006).

Opacity makes monitoring of banks challenging. Managers are more inclined to take on risk in the realm of opaque operations, where positions are not immediately visible to outside investors and can moreover be rapidly changed making it difficult for outsiders to evaluate the risk taken. For example, Bolton et al. (2011) show that risk-taking of CEO's increase if their actions are unobservable. Monitoring opaque banks become particularly challenging in times of crisis (Flannery et al., 2013). Demsetz & Lehn (1985) argue that management ownership is particularly beneficial in companies that are difficult for outsiders to monitor. Moreover, they show that managerial behaviour plays a greater role in the success of companies which are difficult to monitor, making them more prone to rely on a partnership structure. Hence, I expect that opaque banks with management ownership have superior crisis performance in comparison to opaque banks without management ownership (**Hypothesis 4, H_4)**.

The risk-taking incentive created by the safety net is aggravated if there is inside information privileged to the management (John et al., 2000). This can be assumed to be increasingly likely as the opacity and complexity of banks increase. Similarly, risk-taking induced by the safety net can be mitigated only if favourable conditions

for efficient monitoring prevail, i.e. when sufficient transparency enable insight into the operations. Hence, I expect that alignment of manager interest with shareholder risk-taking profile by means of management ownership result in greater risk and inferior crisis performance particularly in banks benefiting from the safety net and where the operations simultaneously are too opaque or complex in order to enable efficient market discipline (**Hypothesis 5, H_5)**.

Moreover, managerial difficulties and conflicts in corporate culture increase with the size and complexity of the bank (Berger et al., 1999). Thus for example economies of scale and scope might be foregone even when the management would have the incentives to deliver above average performance (Hughes et al., 2001). Hence, I expect that banks with management ownership recovered more quickly only if the bank was not too large or complex (**Hypothesis 6, H_6)**.

Table 1. Summary of the expected impact of management ownership on the crisis performance of banks

Hypothesis		Sample in focus
H_1	Banks with management ownership are riskier and have thus inferior crisis performance than banks without management ownership	Full
H_2	Banks with management ownership recovered more quickly and have thus better crisis performance, particularly in the latter phase of the financial crisis	Full
H_3	Banks with management ownership are riskier and have thusinferior crisis performance than banks without management ownership, particularly among banks benefitting from a **safety net**	Traditional banks, Large diversified banks
H_4	Banks with management ownership have superior crisis performance in comparison to banks without management ownership, particularly among **opaque** banks	Non-traditional banks
H_5	Banks with management ownership are riskier than banks without management ownership, particularly among banks which are **opaque and complex** and benefit from a **safety net**	Large diversified banks
H_6	Banks with management ownership recovered more quickly and have thus better crisis performance provided that the bank is **not too large or complex**	Large diversified banks

3. Methodology

3.1. Data and sample

The starting point is the sample of listed and unlisted European banks for which pre-crisis ownership data was available on the BankScope International Bank Database DVDs from 2004, 2005 and 2006, provided by Fitch/Bureau Van Dijk. Bank Holding Companies (BHCs), commercial and investment banks are included in the sample, whereas savings and cooperative banks are not included as in these banks ownership stakes are rarely held by the management.

A bank is included in the sample provided that consolidated financial data for at least the years 2005 to 2012 is available in BankScope as of May 2014. Observations with extreme values in the profitability variables, i.e. outside the 5% and 95% percentile, are excluded.[5] In regressions where a risk-adjusted profitability variable or an indicator of default risk is used as a dependent variable, observations with extreme values in these variables are also excluded. Moreover, observations are excluded if the financial ratios underlying the strategy variables, interest income to total operating income and loans to total earning assets, are not within the range of 0 to 100%.

The use of consolidated financial statements does impose a risk of multiple counting of entities of the same organisation at different level of consolidation. Hence, I impose a cap on institutional ownership and exclude banks which are majority owned by another European bank assumed to be included in the sample.

[5] In such a small sample extreme outliers that was even more common during the crisis has greater impact on the result and thus 5% of the tails rather than 1% of the tails are excluded.

The final sample includes 95 listed and 105 unlisted banks from 35 European countries[6]. More than two thirds of the 200 banks are headquartered in a western European country, about 10% from an eastern European country and almost one fifth from Belarus, Russia, Ukraine and Turkey. Banks from Great Britain, Russia and Switzerland has the greatest representation in the sample with a share of 12 to 14% of the banks each, followed by banks headquartered in Italy, France and Germany. Also the Netherlands, Spain and Austria are well represented. The great majority of the banks are commercial banks, 13% are BHCs and 10% are investment banks.

3.2. Definition of variables

3.2.1. Ownership variable

In the BankScope database an owner can be categorised as "Management and employees". However, the number of owners in this category was negligible on the 2004 to 2006 DVDs. Hence, I cross-checked the names of the owners categorised as "Individuals and families" with information on the individuals on the management team and board of directors found on the company home pages, annual reports and alike. As a result owners in these two categories were recoded as "Management", "Board", "Employees" and "Private" owners. The ownership variable is created based on this information. Management ownership, denoted *MGT*, is a dummy variable taking the value one if at least one of the eight owners or ownership groups included in the BankScope database is a member of the management team and zero otherwise. Note that shareholdings by middle management are not accounted for in the variable. The ownership data is with a few exceptions from 2005.

[6] Western Europe: Andorra, Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the Great Britain. Eastern Europe: Bulgaria, Croatia, Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. Other: Belarus, Russia, Ukraine and Turkey.

3.2.2. Strategy variables

Information neither on the magnitude of the safety nor on the opacity or complexity of banks is readily available for the pre-crisis period. There are recent estimates of the implicit government guarantee, but they are only available for a limited sample of (rated) banks. One can, however, assume that traditional banks benefit the most from the deposit insurance scheme, whereas large diversified banks most frequently are seen as too-big-to-fail (see Table 29. As to measures on opacity, distribution in analyst forecasts of bank performance and ratings has been used by for example (Iannotta, 2006; Flannery et al., 2004; Flannery et al., 2013), but these measures can also only be estimated for a limited sub-sample of banks. Their finding that large banks and banks focused on non-traditional banking operations are more opaque can, on the other hand, used when mapping the how opacity vary with the strategy of the bank. Cetorelli & Goldberg (2014) use the number of subsidiaries a bank has as a measure of complexity, but this measure tells more about the legal structure of the bank than the complexity of the operations. Complexity can also be proxied by a Herfindahl-type index the value of which approaches one as the share of each business line increasingly equal in proportions. This latter measure is similar to the underlying ratio used in this paper to determine whether a bank is focused or diversified, indicating that the selected approach to categorise banks by their strategy pick up differences in complexity of banks. In particularly one can argue that diversified banks are more complex than focused banks.

Table 2. Benefit of the safety net, opacity and complexity across banks with different strategy.

	TRAD	*LARGEDIV*	*SMALLDIV*	*NONTRAD*
Safety net	X	X	(X)	
Opacity		X	(X)	X
Complexity		X	(X)	

The definition of strategy variables is based on the average of two ratios; non-interest income to total operating income and other earning assets than loans plus off-balance sheet items to total earnings assets plus off-balance sheet items. The average of the ratios across the pre-crisis period (depending on data availability[7] 2004 or 2005 to 2006) is used. This approach is comparable to the one used in the diversification literature (see for example Laeven & Levine (2007) and in research distinguishing relationship vs. transaction banks (see e.g. van Ewijk, 2013). The cut-off points are based on Laeven & Levine (2007), where highly diversified banks are defined as banks with a non-interest income to total operating income ratio or other earning assets to total earnings assets in the range of 1/3 and 2/3. Thus the dummy variable for traditional banks, *TRAD*, takes the value one if the average ratio is less than 1/3 and zero otherwise and the dummy variable for non-traditional banks, *NONTRAD*, takes the value one if the average ratio is higher than 2/3 and zero otherwise. If the average ratio is within the range of 1/3 and 2/3 the bank is categorised as diversified. The observation is dropped from the sample if one ratio indicates that the bank is traditional, whereas the other

[7] Many banks changed accounting standards from national GAAP to IFRS as of 2005. Hence comparable data is best available only from this year onwards.

indicates that it is non-traditional, and vice versa. A similar approach is used in Westman (2011)

In a recent paper De Jonghe et al. (2014) examine the joint impact of size and scope on bank risk and interestingly find that an increased focus on non-traditional banking activities is less detrimental for systemic risk the larger the bank is. In order to fill the neglected gap in the literature assessing the impact of strategy on bank performance, I distinguish between large and small diversified banks. In order to ensure a sufficient number of banks with management ownership in each sub-sample I used the median size of diversified banks with management ownership (about 3.2 billion euro) as cut-off point. The sub-samples are denoted *SMALLDIV* and *LARGEDIV*.

3.2.3. Performance variables

When defining the performance variables I rely on accounting data as both listed and unlisted banks are included in the sample. The profitability variables are return on equity, denoted as *ROE*, and return on assets, denoted as *ROA*. Of the two profitability variables *ROE* is of greater interest to shareholders, whereas *ROA* reflect the performance on a more general level and is thus of greater interest to other stakeholders. Annual averages of the ratio are averaged over the pre-crisis period (depending on data availability, from 2004 or 2005 to 2006), the early crisis period (from 2007 to 2009) and latter crisis period (from 2010 to 2012 or 2013). The cut-off point of early 2010 set between the two crisis periods is selected based on the time when the sovereign crisis phase escalated.[8] To distinguish the performance variables from different periods the variables are given the extensions *PreCrisis*, *Crisis1* and *Crisis2*, respectively.

[8] See (Liikanen, 2012) for a description of the different phases of the crisis.

Acknowledging the importance of risk in the banking sector and recalling that increased returns are typically associated with increased risk, the impact of management ownership on risk-adjusted profitability is also assessed. To this end the averaged *ROE* and *ROA* from each of the periods are divided by the standard deviation in the respective profitability variable over the period in question, i.e. three years in most cases. These variables are denoted *ROERA* and *ROARA*.

The systemic perspective of bank activity is accounted for by including the *ZSCORE* as an indicator of risk (see Equation (1) for the definition, where *EQUITY* is the average amount of equity capital to total assets and *σ(ROA)* is the standard deviation in *ROA* in the particular time period. The objective is to fill the gap in the literature highlighted by Berger et al. (2014) that even evidence on whether corporate governance mechanisms affect the trivial performance measure of bank default is scarce.

$$ZSCORE = \frac{ROA + EQUITY}{\sigma(ROA)} \tag{1}$$

Finally, the deviation of crisis period performance from the pre-crisis period performance is applied as an indicator of underlying risk incurred pre-crisis, but which realised only during the crisis. A similar approach is taken in Gropp & Köhler (2010) as they assess the implications of shareholder rights and ownership concentration on losses realised during the crisis relative to performance in calm times. These variables are given the prefix *Δ*. For example the deviation of *ROE* in the latter crisis period from the pre-crisis period is estimated as *ROECrisis2 – ROEPreCrisis* and denoted *ΔROECrisis2*.

3.2.4. Control variables

A number of bank specific control variables are included in the model specification to ensure that the strategy variables stand for differences in monitoring incentives and ability as well as risk-taking incentives and ability rather than differences in operational characteristics.[9] All control variables based on balance sheet data are averaged of the pre-crisis period. First, bank size is measured as the natural logarithm of total assets and is denoted as *SIZE*. Second, differences in leverage are accounted for by including the total equity to total asset ratio, denoted as *EQUITY*, in the model specification. Third, I acknowledge that the funding structure of the bank affect performance (see e.g. Ayadi et al, 2012). First, I include the total deposits to total funding ratio, denoted *DEPOSITS*. In addition, the bank's liquidity position is accounted for. Rather than including liquid assets to total assets, the ratio of liquid assets to short term funding including customer deposits is used as an indicator of liquidity. This indicator, denoted *LIQUIDITY*, better reflects potential balance sheet mismatches. Forth, I account for differences in bank regulation faced by BHC and commercial banks, on one hand, and investment banks, on the other hand. The dummy variable *INVEST* takes the value one if a bank was categorised as an investment bank pre-crisis and zero otherwise. Moreover, I acknowledge that the need for effective internal corporate governance mechanisms depends, among other things, on the efficiency of external monitoring mechanisms, in particularly the efficiency of market discipline. One can assume that the monitoring of listed banks is more intrusive than the monitoring of unlisted banks. Hence, I include the dummy variable *LISTED* taking the value one if the bank was listed pre-crisis and zero otherwise in the model specification. Finally, performance persistence is

[9] Gropp & Köhler (2010) choose a different approach to this traditionally used. They state that bank accounting variables are not regarded as strictly exogenous to bank performance and bank risk and are does not included in the baseline model.

accounted for when assessing the impact of management ownership on the absolute level of crisis performance by including the pre-crisis performance in the model specification. When the impact of management ownership on the deviation in crisis performance from the pre-crisis performance is set as a dependent variable, this control variable is not included as performance persistence is indirectly accounted for as lagged performance is included in the dependent variable.

3.3. Model specification

In the baseline model specification, I examine the impact of management ownership of bank *i* in time *t-1* on the bank's performance in either the early or latter crisis period (*t*) (see Equation (2)). The impact on performance pre-crisis (*t-1*) is also assessed so that comparison to the results presented in Westman (2011) can be made. The performance variable *PERF* is either of the performance variables specified above. *MGT* is the dummy variable indicating whether the management has an ownership share in the bank or not. The strategy of the bank is accounted for by including the variables *SMALLDIV*, *LARGEDIV* and *NONTRAD* in the vector *STRATEGY* thus making the traditional banks the references group. The vector *BANK* includes the bank-specific control variables *SIZE*, *DEPOSITS*, *EQUITYASS*, *LIQUIDITY*, *INVEST* and *LISTED* as well as $PERF_{t-1}$ in some model specifications.[10] Country fixed effects are included in the model specification to capture country level variation in the data.

$$PERF_{i,t} = \alpha + \beta_1 * MGT_{i,t-1} + \beta * \left[STRATEGY_{i,t-1}\right] + \beta * \left[BANK_{i,t-1}\right] + \varepsilon_{i,t-1} \qquad (2)$$

In order to be able to study the impact of management ownership on the performance of a bank with a particular strategy, I include interaction terms in the model

[10] Apart from *LIQUIDITY*, *LISTED* and $PERF_{t-1}$, the same control variables were used in Westman (2011).

specification (see Equation (3)). The interaction terms with the strategy variables *SMALLDIV*, *LARGEDIV* and *NONTRAD* pick-up the additional impact of ownership variable in small diversified, large diversified and non-traditional banks, respectively, when compared to the impact of management ownership in the reference group of traditional banks, as indicated by the coefficient of *MGT*.

$$\begin{aligned} PERF_{i,t} = {} & \alpha + \beta_1 * MGT_{i,t-1} + \beta_2 * MGT_{i,t-1} * SMALLDIV_{i,t-1} \\ & + \beta_3 * MGT_{i,t-1} * LARGEDIV_{i,t-1} + \beta_4 * MGT_{i,t-1} * NONTRAD_{i,t-1} \\ & + \beta_5 * SMALLDIV_{i,t-1} + \beta_6 * LARGEDIV_{i,t-1} + \beta_7 * NONTRAD_{i,t-1} \\ & + \beta * [BANK_{i,t-1}] + \varepsilon_{i,t-1} \end{aligned} \quad (3)$$

There are some endogeneity concerns when the impact of management ownership on pre-crisis performance of banks is examined. On one hand, the level of profitability may trigger the selection of a particular ownership structure. On the other hand, a poorly performing bank in need of drastic changes may choose to motivate the managers with shareholdings. This is, however, less alarming in the main regression, where the impact of pre-crisis ownership and pre-crisis bank strategy and characteristics on crisis period performance is examined. Still, one have to bear in mind that ownership structures are rather stable over time making it difficult to pinpoint causality.

4. Empirical evidence

4.1. Descriptive statistics

Based on the pre-crisis data on interest income to total operating income, loans to earning assets and amount of off-balance sheet items 41 of the 200 banks in the sample is categorised as traditional, 119 as diversified of with 42 are small and 77 are large, and 40 as non-traditional. The mean in pre-crisis size measured as total assets is 98 billion euro (see *ASSETS* in Panel B of Table 3). The size of the banks varies with their

strategy. The large diversified banks are significantly larger than banks in the other sub-samples, traditional and non-traditional banks are of similar size and small diversified banks are the smallest (see *t*-tests of difference in means in *SIZE* in Panel A of Table 3). Capitalisation and funding structure also differ with the strategy of the bank. The small diversified banks, followed by non-traditional banks have the highest level of *EQUITY*, whereas the large diversified banks have the lowest level of *EQUITY*. Non-traditional banks have the largest buffer of liquid assets in comparison to short term funding, whereas the traditional banks have the lowest level of *LIQUIDITY*. The level of *DEPOSITS* is highest in small diversified banks, followed by non-traditional banks and surprisingly lowest in traditional banks. The share of *LISTED* banks is at 73% largest in the sub-sample of large diversified banks, whereas the share is around one third in the other sub-samples of banks.

[Insert table 3 about here]

In the sample of 200 banks there are 21 banks with management ownership (*MGT*) (see Panel C of Table 3). There are five banks with management ownership in each of the sub-samples of traditional, small and large diversified banks, whereas six of the non-traditional banks have management ownership. Banks with management ownership are generally smaller than other banks, have more *EQUITY* and *LIQUIDITY* and are to a greater extent funded by *DEPOSITS* (see difference in means of sub-sample of banks with and without management ownership in Column 22 of Table 3). The representation of BHCs, commercial and investment as well as listed banks in the sub-sample of banks with management ownership is similar to the one in banks without management ownership.

The financial crisis had significant impact on the profitability of the banks in the sample. *ROE* plummeted by 10 percentage units from more than 13% to close to 3% in the first phase of the crisis to recover to 7% (still 6 percentage units below the pre-crisis level) in the period starting in 2010 (see Panel D and G of Table 3). Similarly, *ROA* dropped from 1.2% to 0.4% to then recover to 0.7%. Pre-crisis *ROE* was highest in the large diversified banks reaching almost 15%, whereas *ROA* was highest in small diversified banks. However, the decline in profitability was also greatest in the large diversified banks; the *ROE* of large diversified banks dropped by close to 12 percentage units in the initial period of the crisis, whereas the *ROA* of small diversified banks dropped by 1.2 percentage units i.e. significantly less than the *ROA* of large diversified banks (the difference in mean *ΔROECrisis1* is significant). The descriptive statistics of the risk-adjusted profitability variables show a similar pattern to the one in *ROE* (see Panel E and G of Table 3). The pre-crisis *ROARA* is highest in large diversified banks and the drop in both risk-adjusted profitability variables is the greatest among these banks (note that measured by *ROERA* traditional banks had the best pre-crisis performance). These findings indicate that diversification did not reduce the overall risk of the bank, but rather that diversification made these banks more vulnerable to systemic chocks and more challenging to navigate through challenging crisis times. This finding moreover contradicts the finding of De Jonghe et al. (2014). The change in default risk measured by the *ZSCORE*, on the other hand, is greatest in non-traditional banks, being positive in the initial period of the crisis to decline by close to 30 to 22 in the latter period of the crisis (see Panel F of Table 3). This finding support the hypothesis that bank risk increase with increased focus on non-traditional banking activities.

When looking only at the sub-sample of banks where management has stock ownership, the decline in performance appears to have been even more dramatic. The *ROE* and *ROA* dropped from pre-crisis levels of 14.4% and 1.6%, respectively, to a loss at -1.9% and 0.3%, respectively, in the early period of the crisis. The profitability recovered to a *ROE* of above 10% and a *ROA* of about 1.1% already in the latter part of the crisis. The difference in means of *ROECrisis1*, *ΔROECrisis1* and *ΔROACrisis1*, in the sub-sample of banks with and without management, respectively, is negative and significant (see Column 22 of Table 3), indicating that management ownership induces risk-taking.

4.2. Impact of bank strategy on performance

Before the actual assessment of the impact of management ownership on the crisis performance of banks, I complement the assessment of differences in means presented in Table 3 by examining whether the categorisation into traditional, small and large diversified and non-traditional banks can explain differences in pre-crisis and crisis performance of banks while controlling for *SIZE*, *DEPOSITS*, *EQUITY*, *LIQUIDITY* and *INVEST*. The pre-crisis performance is controlled for when crisis performance is set as dependent variable.

The regression analysis confirms the previous results that the pre-crisis profitability in large diversified and non-traditional banks is higher than the one of traditional banks, but that the risk-adjusted profitability measured by *ROERA* was lower (see Panel A of Table 4). As to the control variables I find that *SIZE* has a positive and significant impact on risk-adjusted profitability and default risk, there is a negative and significant impact of *LIQUIDITY* on profitability and risk-adjusted profitability and listed banks where more profitable than unlisted banks.

[Insert table 4 about here]

The explanatory power of the strategy variables of crisis performance is weaker and inconclusive. There are some indications that large diversified banks fared rather well in the initial phase of the crisis as the profitability did not plummet to the same extent than in other banks: there is a positive and significant impact of *LAREGDIV* on *ROARACrisis1*, *ΔROERACrisis1* and *ΔROARACrisis1* (see Panel B of Table 4). On the other hand, there is a negative and significant impact of *SIZE* on performance particularly in the early period of the crisis. This needs to be accounted for when assessing the performance of large diversified banks in comparison to other banks and when comparing these results to the ones of the assessment of differences in means.

4.3. Impact of management ownership on bank performance

When assessing the impact of management ownership on the pre-crisis performance of banks as specified in Equation (2), I find that *MGT* has a positive and significant impact both on *ROE* and *ROA* (see Panel A of Table 5). This is in line with Westman (2011). Moreover, the significance is stronger being at 1% rather than 10% level. The economic significance of the impact is large when comparing the coefficient of 3.5 (0.35) to the average pre-crisis *ROE* (*ROA*) of 13.2 (1.2). In addition, the impact on the risk-adjusted *ROA* is positive and significant. A 1.8 percentage unit change in *ROARA* is economically significant when compared to the pre-crisis average of 5.7. On the other hand, management ownership does not appear to have an impact on banks default risk pre-crisis as the positive coefficient is insignificant.

[Insert table 5 about here]

Turning to the implications of managerial incentives on the performance of European banks during the crisis, I find a positive and significant impact of management ownership on the risk-adjusted *ROE* in the initial period of the crisis even though the drop in profitability is statistically significant (see *ROERACrisis1* and *ΔROECrisis1* in Panel B of Table 5). When comparing the coefficient of 3.4 to the average *ROERACrisis1* of 4.1 the first finding is economically significant. However, the difference in profitability of banks with and without management ownership could have been even greater as the latter result indicates that banks with management ownership were not able to maintain the above average pre-crisis performance when the crisis hit. Comparing the drop of 7.5 percentage units to the average drop of 10 percentage units, the result is economically significant almost doubling the decline in performance. However, banks with management ownership appear to have been able to recover rather well from the initial dramatic events of the crisis. Management ownership has a positive and significant impact on *ROE* in the latter part of the crisis period spanning from 2010 to 2013 (see Panel C of Table 5).

These findings can interestingly be reconciled with both Fahlenbrach & Stulz (2011) and Cheng et al. (2010). The finding on a significant impact on the drop in performance support Hypothesis 1 that banks with management ownership are riskier and have thus inferior crisis performance than banks without management ownership and is thus line with the findings of Fahlenbrach & Stulz (2011). The finding of a superior performance support Hypothesis 2 that banks with management ownership recovered more quickly and have thus better performance in the latter phase of the financial crisis is in line with the finding of Cheng et al. (2010). I fail to find a significant impact of management ownership on the default probability of banks,

which is in line with the finding of Berger et al. (2014) that CEO ownership does not induce risk-taking.

As in Westman (2011), I find that the impact of management ownership on pre-crisis performance depends on the strategy of the bank. Management ownership has a positive and significant impact on the profitability of non-traditional banks (see *F*-tests in Panel A of Table 6). In addition, I find a positive and significant impact of management ownership in small diversified banks, whereas the impact appear to be negative in large diversified banks (the coefficient is, however, insignificant). The conflicting results might explain why no impact of management ownership on the performance of diversified banks was found in Westman (2011), where the diversified banks were treated as a homogenous group. Management ownership does not appear to have an impact on the pre-crisis risk-adjusted profitability or default risk in any of the sub-samples of banks.

[Insert table 6 about here]

When examining whether the impact of ownership structure on crisis performance vary with the strategy of the bank, I find that management ownership does have a positive and significant impact not only on the pre-crisis performance of non-traditional banks, but also on the crisis performance of these banks. There is a positive and significant impact on *ROE* and *ROA* of non-traditional banks in the early period of the crisis (see Panel B of Table 6) and on *ROA* of non-traditional banks in the latter period of the crisis (see Panel C of Table 6) giving support to Hypothesis 3 that opaque banks with management ownership have superior crisis performance in comparison to opaque banks without management ownership. When comparing to the average crisis performance of non-traditional banks (*ROECrisis1* is 5.9, *ROACrisis1* is 0.5 and

ROACrisis2 is 1.0), I find that the results (the coefficients are 7.7, 1.0 and 1.2, respectively) are economically significant. The positive and significant impact on *ROERACrisis1* in non-traditional banks indicates that profitability has not been sought by taking excessive risk. The negative, but insignificant, coefficient of *MGT* on *ZSCORECrisis2*, on the other hand, indicates that risks that realised in the later stage of the crisis were taken pre-crisis in non-traditional banks. However, the positive and significant impact on *ΔROACrisis2* indicates that risk taken pre-crisis did not deteriorate profitability in the latter period of the crisis alarmingly.

The impact of management ownership on the performance of diversified banks is inconclusive; the coefficients indicate a positive impact in small diversified banks and a negative impact in large diversified banks in the early period of the crisis (see Panel B of Table 6). Taken together with the positive impact of management on the profitability of non-traditional banks, the finding in the sub-sample of small diversified banks gives support to Cheng et al. (2010), but only in banks not benefitting from a safety net. The negative impact of management ownership on the performance of large diversified banks indicates that management ownership has induced excessive risk-taking in these banks, potentially in order to benefit from the option like too-big-to-fail subsidy giving support to Hypothesis 5 that management ownership induces risk-taking particularly in banks benefitting from the safety net and which are complex. Excessive risk-taking has been possible due to the complexity of the bank.

The finding of a negative impact on the performance of traditional banks is robust. There is a negative and significant impact on *ROACrisis1* and Δ*ROERACrisis1* as well as on the default probability in both crisis periods. Comparing to the average *ZSCORE*

of traditional banks in the early and latter crisis period, i.e. 47.6 and 30.4, respectively, the coefficients of -49.1 and -18.9 can be seen as economically significant. Moreover, the impact of management ownership on the ability to maintain a low default probability and superior (risk-adjusted) profitability is significantly smaller in traditional banks than in small diversified and non-traditional banks in the early period of the crisis (see *MGT*SMALLDIV* and *MGT*NONTRAD* in Panel B of Table 6). The latter two sub-samples of banks can be assumed to benefit less from the safety net. These findings support the notion presented in Fahlenbrach & Stulz (2011) that management ownership has induced management to take on excessive risk, but as argued in Hypothesis 3 only in a regulatory setting where the safety net already induces banks to take on risk and reduces the incentives for outsiders to monitor the bank. These findings also trigger the question whether managerial incentives ought to be based on corporate governance mechanisms other than ownership in regulatory settings where the safety net incentivises the bank to take on excessive risk. Moreover, the results indicate that the complexity and opacity of large diversified banks and non-traditional banks have not been expropriated to take on risk to the extent that the risk-adjusted profitability would be endangered.

4.4. Implications of measures taken by authorities to shape the regulatory environment

In an attempt to gain further insight in the impact of the safety net on the appropriateness of management ownership as a corporate governance mechanism, I acknowledge that authorities have taken measures to mitigate moral hazard thus reducing the incentives to grow, increase leverage and take excessive risks. Authorities have also imposed restrictions on bank operations. These measures can be used as

alternative indicators of the safety net and opacity and complexity of banks, which are proxied by the strategy variables in the main analysis.

Firstly, I account for measures taken to reduce moral hazard. Based on survey data Barth et al. (2013) have created a moral hazard index, which indicates the extent of measures taken to mitigate moral hazard in a country. Based on this information, I define the variable *LowMoralHazard*. It is a dummy variable taking the value one if the authorities in the country in which the bank is headquartered have taken substantial steps to mitigate moral hazard, i.e. the moral hazard index takes the value 2 or 3 on the scale from 0 to 3.[11]

The impact of management ownership on pre-crisis profitability is somewhat higher in banks headquartered in countries with high moral hazard than in countries with low moral hazard, being positive and significant in both sub-samples (see Panel A in Table 7). However, I find a positive and significant impact of management ownership on risk-adjusted pre-crisis profitability only in banks headquartered in countries with low moral hazard, a finding indicating that management ownership has induced management to take on too much risk in banks headquartered in countries where measures taken to constrain moral hazard have been limited. This connection appears to continue throughout the initial phase of the financial crisis; the interaction term *MGT* LowMoralHazard* is positive in all regressions apart from when *ΔROERACrisis1* is set as dependent variable (see Panel B in Table 7). The connection is significant for *ROERACrisis1* and *ΔROARACrisis1* indicating that management ownership induced banks to take excessive risks only in banks headquartered in countries where limited

[11] The following countries are categorised as low moral hazard countries: Belgium, Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Malta, Norway, Poland, Portugal, Romania, Slovakia and United Kingdom.

attempts had been made pre-crisis to constrain moral hazard. These findings are in line with the findings that management ownership has induced excessive risk-taking in traditional banks, i.e. in banks benefitting from the safety net.

[Insert table 7 about here]

In the second period of the crisis, however, the results reverse. There is a positive and significant impact of management ownership on the performance of banks headquartered in high moral hazard countries, whereas the performance of banks headquartered in low moral hazard countries is significantly weaker (see Panel C in Table 7). One explanation for the result could be that the propensity of authorities to support banks in the midst of the crisis in the form of state aid is greater in countries where moral hazard was high already pre-crisis. The government support does improve the performance of these banks in comparison to banks not given state aid. The results do, however, not change when rerunning the regression while excluding banks which have received state aid directly channelled to them rather than in the form of a banking sector wide recapitalisation scheme or guarantee.[12] Another reason for the unexpected results might be that measures taken to mitigate moral hazard have not been sufficiently credible constraining incentives to take risks only partially thus postponing subsequent losses to the later period of the crisis. This alternative explanation is unfortunately challenging to test.

Secondly, I acknowledge that the room for strategic and operational decisions and thus also risk-taking has been constrained in some countries as authorities have imposed restrictions on bank operations. These restrictions do also have implications for the opacity and complexity of banks, which in turn has implications for corporate

[12] The European Commission provide information on the state aid (see http://ec.europa.eu/competition/elojade/isef/index.cfm?fuseaction=dsp_result).

governance. IMF (2014) for example find that the importance of risk control to mitigate risk is less in countries where activity restrictions has been imposed on banks. Using the survey data presented in Barth et al. (2011) once more, *HighRestrict* is defined as a dummy variable taking the value one if the authorities in the country in which the bank is headquartered imposed above median (6 or greater on a scale from 4 to 9) restrictions on activities vis-à-vis non-bank financial institutions and on restrictions between banks and non-financial companies[13] in the pre-crisis period. *HighDivRestrict* is a dummy variable taking the value one if the authorities impose above median (2 or greater on a scale from 0 to 3) restrictions on diversification and investments abroad[14].

The impact of management on pre-crisis performance is positive and significant in countries with high activity restrictions, particularly if they target asset diversification and investments abroad (see Panel A in Table 8). However, the impact of management ownership on bank pre-crisis performance is higher in countries where the activity restrictions are more lax. The interaction terms *MGT*HighRestrict* and *MGT*HighDivRestrict* are negative and significant in most of the regressions. This finding indicates that attractive opportunities, which banks with management ownership in other countries could pursue, were foregone in banks headquartered in countries with activity restrictions. The outcome of these opportunities did, however, turn out poorly as the events of the financial crisis unravelled. The impact of management ownership on performance is negative and significant in banks headquartered in countries with low restrictions on operations, whereas the impact is significantly higher in banks headquartered in countries where activity restrictions were in place pre-crisis. The

[13] The index is described by Barth et al. (2011) as "overall financial conglomerates restrictiveness accounting for restrictions on banks' owing nonfinancial companies, on nonfinancial companies owning banks and on nonbank financial firms owning banks".

[14] The index is described by Barth et al. (2011) as "whether there are explicit, verifiable, quantifiable guidelines for asset diversification, and banks are allowed to make loans abroad".

finding is stronger in the early period of the crisis, but is also found in the latter period (see *MGT* Panel B and C in Table 8). The interaction terms *MGT*HighRestrict* and *MGT*HighDivRestrict* are positive and significant in most of the regressions. One can draw parallels to the findings on the joint impact of management ownership and bank strategy, particularly to the findings that management ownership has a positive impact on performance in small diversified banks, whereas the impact is negative in large diversified banks, where the business line portfolio presumably is greater than in the small diversified banks. Apparently management ownership induces banks to take on too much risk in an environment where restrictions on bank operations are not imposed and where the scale and scope of the diversification strategy has become on the brink of being too challenging for the management to handle. Hence, these findings give support to proposals of structural reform in a world were management incentives are aligned to the interests of shareholders rather than bank stakeholders more broadly thus inducing mangers to take on risky activities.

[Insert table 8 about here]

On the other hand, I do also find support to the argument presented by Laeven and Levine (2009) that banks might seek to explore other, more adventurous risk-taking opportunities in order to compensate for the utility loss from strict activity restrictions. The connection between *MGT*HighRestrict* and *ROARACrisis2* and *ZSCORECrisis2*, respectively, is negative and significant and management ownership has a negative impact on *ROECrisis1* and *ZSCORECrisis2* in banks headquartered in countries with high activity restrictions. Hence, consequences of alternative risk-taking opportunities induced by potential structural reform ought to be closely monitored.

4.5. Robustness checks

The ownership structure of banks is rather constant. However, in some banks there are some changes during the pre-crisis years. To acknowledge this, the management ownership variable is altered so that the bank is categorised as a bank without management ownership if the management received ownership only in 2005 (one bank in the sample). Similarly, if there was management ownership before the year 2005, but not in the later years, the bank is categorised as having management ownership (five banks in the sample). The results are in line with the main findings (see Table 9, where control variables are suppressed for brevity).

[Insert table 9 about here]

Blockholder ownership has been used as an indication of inside control and the room managers have to pursue private interests. It is assumed that a blockholder owner can better induce the management to behave in the interest of the shareholders than numerous and dispersed shareholders. To explore this alternative approach to measure whether management interests are aligned with the ones of the shareholders, I run the regressions with a dummy variable taking the value one if the largest direct owner in the bank has an ownership share of less than 10 %, which indicate that the bank is management controlled. The results confirm the main finding that aligning the interests of management to the ones of the shareholders does improve the performance of the bank; there is a negative and significant impact of *MGTCONTROL* on crisis performance (see Panel A and B of Table 10). Moreover, the performance of management controlled non-traditional banks is significantly weaker than the shareholder controlled banks (see Panel C and D of Table 10).

[Insert table 10 about here]

Some banks switch strategy during the crisis. Specifically, there is movement from the sub-sample of large diversified banks to traditional banks in the early crisis period and from small diversified banks to traditional banks in the latter period (see Table 11). Moreover, some traditional banks become large diversified banks in the latter crisis period.

Table 11. Number of banks that switched strategy

		Strategy in early period of crisis			
		TRAD	*SMALLDIV*	*LARGEDIV*	*NONTRAD*
Strategy pre-crisis	*TRAD*		0	3	
	SMALLDIV	4 (1)		0	1
	LARGEDIV	**15**	0		4
	NONTRAD		2	4	
		Strategy in latter period of crisis			
		TRAD	*SMALLDIV*	*LARGEDIV*	*NONTRAD*
Strategy in early crisis period	*TRAD*		0	**7 (1)**	
	SMALLDIV	**12 (1)**		0	0
	LARGEDIV	4	0		4
	NONTRAD		3 (1)	6	

This table shows the number of banks that had a different strategy in the pre-crisis period and the early crisis period (Panel A) and the number of banks that had a different strategy in the early crisis period and the latter crisis period (Panel B). The strategy of the previous period is depicted in vertically and the strategy in the latter period is depicted horizontally. The number of banks with management ownership among the sub-samples of banks that changed strategy is shown in parenthesis.

In unreported results, I find that the default probability of the large diversified banks that became traditional banks in the early period is higher than the one of other banks, and that the performance remain weaker throughout the crisis period. Similarly, traditional banks that broaden the scope of their operations in the latter part of the crisis to become diversified appear to have had weaker performance, even though the results are insignificant. Small and diversified banks that shifted to a traditional banking strategy in the latter crisis period, on the other hand, avoided a significant drop in profitability. Hence, the average performance of traditional and large diversified banks

is weakened by the performance of banks changing strategy, whereas the average performance of small diversified banks is improved. Thus these banks are dropped from the sample to check the robustness of the main result. I find that the results are robust to this change in model specification (see Table 12).

[Insert table 12 about here]

Finally, I interact the management ownership variable with the continuous variables underlying the strategy variables. The average of the two ratios non-interest income to total operating income and other earning assets than loans plus off-balance sheet items to total earnings assets plus off-balance sheet items is denoted *NONTRADITIONAL* and *SIZE* is the control variable used in the main regressions. The impact of the interaction term *MGT*NONTRADITIONAL* on performance in the early period of the crisis is positive and significant in most regression indicating that the benefit of management ownership increases as the focus shifts from traditional to non-traditional banking operations (see Table 13). This finding is in line with positive and significant impact of management ownership in non-traditional banks. Moreover, there is some indications of a negative impact of the interaction term *MGT*SIZE* indicating that management ownership might not create sufficient incentives for managers to steer large and presumable complex banks to superior performance.

[Insert table 13 about here]

5. Conclusion

The contribution of this paper to the ownership literature is two-fold. First, it provides new insight in the impact of management ownership on the crisis performance of European banks. Particularly, I find that while management ownership has induced

risk-taking to the extent that the decline in performance in the early period of the crisis is significantly more dramatic in banks with management ownership, the performance does remain on a superior level in comparison to banks without management ownership. Second, I acknowledge the complexity in bank corporate governance by examining the joint impact of ownership structure and bank strategy, which proxy for the safety net and the opacity and complexity of banks. Importantly I confirm the argument presented in de Haan & Vlahu (2013) that the diverging results of previous research on the impact of managerial incentives on crisis performance of banks can be explained by the fact that the impact of management ownership vary with the strategy of the bank. Particularly the positive and significant impact of management ownership on crisis performance of small diversified banks and non-traditional banks support the finding of Cheng et al. (2010), but only in this sub-sample of banks categorised as opaque. Among the traditional banks and large diversified banks, on the other hand, I find a negative and significant impact of management ownership on crisis performance. Hence, in this sub-sample of banks, where the safety net is substantial, I find support for the finding of Fahlenbrach and Stulz (2011) that aligning shareholder and management interests by means of shareholdings induced managers to take on too much risk. This finding highlights the need for a discussion on what good corporate governance is. Should it align managerial incentives with the interests of shareholders only, or should the interests of stakeholders more broadly be accounted for?

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Table 3. Descriptive statistics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
	FULL SAMPLE					*TRAD*		*SMALLDIV*		*LARGEDIV*		*NONTRAD*		*MGT*		*t*-tests of difference in means						
	Obs	Mean	Std.	Min	Max	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean	Obs	Mean	*TRAD-SMALLDIV*	*TRAD-LARGEDIV*	*TRAD-NONTRAD*	*SMALLDIV-LARGEDIV*	*SMALLDIV-NONTRAD*	*LARGEDIV-NONTRAD*	*MGT-NoMGT*
Panel A. Control variables																						
SIZE	200	15.744	2.406	11.203	21.021	41	15.255	42	13.553	77	17.512	40	15.145	21	14.771	1.702***	-2.256***	0.111	-3.958***	-1.591***	2.367***	-1.088**
EQUITY	200	9.902	6.326	1.127	37.988	41	10.206	42	12.937	77	6.764	40	12.444	21	12.575	-2.730**	3.442***	-2.237	6.173***	0.493	-5.680	2.987**
DEPOSITS	200	59.981	25.732	0.002	99.993	41	52.814	42	68.022	77	56.569	40	65.452	21	71.589	-15.208***	-3.755	-12.638*	11.453***	2.570	-8.883*	12.9670**
LIQUIDITY	200	46.490	31.545	5.359	193.523	41	28.193	42	43.619	77	40.769	40	79.272	21	55.290	-15.426***	-12.576***	-51.079***	2.850	-35.653***	-38.503***	9.832
INVEST	200	0.105	0.307	0.000	1.000	41	0.024	42	0.048	77	0.078	40	0.300	21	0.095	-0.023	-0.054	-0.276***	-0.030	-0.252***	-0.222***	-0.011
LISTED	200	0.460	0.500	0.000	1.000	41	0.268	42	0.333	77	0.727	40	0.275	21	0.429	-0.065	-0.459***	-0.007	-0.394***	0.058	0.452***	-0.035
Panel B. Additional pre-crisis bank characteristics																						
ASSETS	200	98.200	259.000	0.075	1350.000	41	18.100	42	1.141	77	195.000	40	95.200	21	72.300	16.959***	-176.900***	-77.100*	-193.859***	-94.059**	99.800(11.39%)	-28.700
BHC	200	0.130	0.337	0.000	1.000	41	0.049	42	0.024	77	0.221	40	0.150	21	0.143	0.025	-0.172**	-0.101	-0.197***	-0.126**	0.071	0.014
COMMERCIAL	200	0.765	0.425	0.000	1.000	41	0.927	42	0.929	77	0.701	40	0.550	21	0.762	-0.002	0.226***	0.377***	0.227***	0.379***	0.151(10.55%)	-0.003
Panel C. Ownership variable																						
MGT	200	0.105	0.307	0.000	1.000	41	0.122	42	0.119	77	0.065	40	0.150	21	1.000	0.003	0.057	-0.028	0.054	-0.031	-0.085	1.000
Panel D. Profitability variables																						
ROEPreCrisis	200	13.208	5.899	2.432	28.454	41	11.851	42	12.517	77	14.688	40	12.476	21	14.402	-0.666	-2.838***	-0.625	-2.171*	0.041	2.212*	1.334
ROECrisis1	200	3.199	12.023	-58.858	31.822	41	1.514	42	3.001	77	2.819	40	5.866	21	-1.877	-1.487	-1.305	-4.352	0.182	-2.865	-3.047(11.18%)	-5.672**
ROECrisis2	200	7.189	10.140	-41.230	30.095	41	5.910	42	8.207	77	6.928	40	7.932	21	10.432	-2.296	-1.018	-2.021	1.278	0.275	-1.003	3.623
ROAPreCrisis	200	1.216	0.793	0.121	3.948	41	1.121	42	1.569	77	0.998	40	1.365	21	1.603	-0.448***	0.124	-0.244	0.572***	0.204	-0.367**	0.431**
ROACrisis1	200	0.355	0.918	-2.930	2.399	41	0.312	42	0.364	77	0.304	40	0.485	21	0.276	-0.051	0.008	-0.173	0.059	-0.122	-0.181	-0.088
ROACrisis2	200	0.747	0.877	-2.838	4.737	41	0.589	42	0.966	77	0.579	40	1.005	21	1.164	-0.378**	0.010	-0.416*	0.388***	-0.038	-0.426**	0.466**
Panel E. Risk-adjusted profitability variables																						
ROERAPreCrisis	162	6.106	5.637	0.598	36.281	33	7.639	35	4.595	55	6.591	39	5.482	18	7.781	3.044**	1.049	2.157	-1.996**	-0.887	1.109	1.884
ROERACrisis1	162	4.063	7.414	-3.006	54.284	33	3.644	35	3.091	55	4.968	39	4.014	18	4.886	0.553	-1.324	-0.370	-1.877	-0.923	0.955	0.926
ROERACrisis2	162	2.553	4.836	-1.087	45.696	33	3.573	35	1.989	55	2.104	39	2.828	18	1.953	1.585	1.470	0.745	-0.115	-0.840	-0.725	-0.675
ROARAPreCrisis	162	5.765	4.530	0.614	25.822	33	6.000	35	4.461	55	6.871	39	5.177	18	5.895	1.538	-0.872	0.823	-2.410**	-0.715	1.694*	0.147
ROARACrisis1	162	2.923	5.021	-7.878	40.698	33	2.299	35	2.065	55	3.845	39	2.919	18	2.980	0.234	-1.545	-0.620	-1.780	-0.855	0.925	0.064
ROARACrisis2	162	2.300	3.980	-1.013	37.766	33	2.613	35	2.131	55	2.619	39	1.740	18	2.271	0.482	-0.006	0.873	-0.488	0.391	0.879	-0.034
Panel F. Default risk variables																						
ZSCOREPreCrisis	162	54.031	41.421	7.864	286.956	33	56.856	35	51.276	55	56.213	39	51.037	18	55.713	5.580	0.642	5.818	-4.937	0.239	5.176	1.892
ZSORECrisis1	162	50.525	62.163	1.680	515.781	33	47.585	35	41.329	55	49.587	39	62.589	18	50.709	6.256	-2.003	-15.004	-8.258	-21.260*	-13.002	0.206
ZSORECrisis2	162	28.890	41.111	1.091	373.035	33	30.363	35	31.664	55	31.068	39	22.084	18	23.708	-1.301	-0.706	8.279	0.595	9.580	8.984	-5.830
Panel G. Indicators of realised risk measured as deviation in performance variables																						
ΔROECrisis1	200	-10.009	13.033	-77.043	14.037	41	-10.336	42	-9.516	77	-11.870	40	-6.610	21	-16.279	-0.820	1.533	-3.727	2.354	-2.906	-5.260**	-7.005**
ΔROECrisis2	200	-6.019	10.691	-59.015	13.505	41	-5.940	42	-4.310	77	-7.760	40	-4.544	21	-3.970	-1.630	1.820	-1.396	3.450*	0.234	-3.216	2.290
ΔROACrisis1	200	-0.862	1.083	-6.057	0.761	41	-0.809	42	-1.206	77	-0.693	40	-0.880	21	-1.327	0.397	-0.116	0.070	-0.513**	-0.326	0.186	-0.520**
ΔROACrisis2	200	-0.469	0.840	-6.090	1.942	41	-0.533	42	-0.603	77	-0.419	40	-0.360	21	-0.439	0.070	-0.114	-0.172	-0.184	-0.242	-0.059	0.034
ΔROERACrisis1	162	-2.043	8.742	-28.166	40.342	33	-3.995	35	-1.504	55	-1.623	39	-1.468	18	-2.895	-2.491	-2.373	-2.527	0.118	-0.036	-0.154	-0.958
ΔROERACrisis2	162	-3.554	6.318	-28.144	21.800	33	-4.066	35	-2.607	55	-4.487	39	-2.654	18	-5.828	-1.459	0.421	-1.412	1.880*	0.047	-1.833	-2.559(10.54%)
ΔROARACrisis1	162	-2.843	5.664	-18.393	22.402	33	-3.700	35	-2.397	55	-3.027	39	-2.257	18	-2.916	-1.304	-0.674	-1.443	0.630	-0.139	-0.769	-0.082
ΔROARACrisis2	162	-3.465	5.608	-22.532	32.473	33	-3.387	35	-2.331	55	-4.253	39	-3.437	18	-3.625	-1.056	0.866	0.050	1.922	1.106	-0.816	-0.180
ΔZSORECrisis1	162	-3.506	71.454	-283.383	445.214	33	-9.271	35	-9.947	55	-6.626	39	11.552	18	-5.004	0.676	-2.645	-20.823	-3.321	-21.499	-18.178	-1.685
ΔZSORECrisis2	162	-25.141	53.166	-266.965	343.109	33	-26.493	35	-19.612	55	-25.145	39	-28.953	18	-32.004	-6.881	-1.348	2.460	5.533	9.341	3.808	-7.721

This table shows the summary statistics for the full sample, the sub-samples of banks categorised as traditional (*TRAD*), small diversified (*SMALLDIV*), large diversified (*LARGEDIV*) and non-traditional (*NONTRAD*) banks based on pre-crisis data as well as for the sub-sample of banks with managment ownership (*MGT*). Panel A and B of this table present the summary statistics of the bank specific control variables as defined in section 3.2.4 and some additional pre-crisis bank characteristics. *ASSETS* is the average total assets (billion euro) of the bank over the pre-crisis period, whereas *BHC* is a dummy variables taking the value one if the bank is a bank holding company and *COMMERCIAL* is a dummy variables taking the value one if the bank is a commercial bank. The summary statistics of the ownership variable *MGT* as defined in section 3.2.1 is presented in Panel C. Summary statistics of the performance variables defined in section 3.2.3 are presented in Panel D, E anf F. The results of the unpaired *t*-tests for the difference in means of the variables in sub-samples of banks with different strategy and ownership structure are included in columns (16) to (22) to the far right of the table. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.

Table 4. Impact of strategy and control variables on performance

Panel A. Pre-crisis performance

Variables	(1) *ROE*	(2) *ROA*	(3) *ROERA*	(4) *ROARA*	(5) *ZSCORE*
Constant	9.123	0.569	-6.678	-9.172*	-65.195
	[5.467]	[0.627]	[8.694]	[4.612]	[45.251]
SMALLDIV	0.578	0.105	-2.533	0.136	2.996
	[1.140]	[0.155]	[1.516]	[0.865]	[10.810]
LARGEDIV	1.272	0.201**	-2.592*	-0.787	-12.210
	[0.835]	[0.093]	[1.304]	[1.179]	[10.237]
NONTRAD	5.501***	0.566***	-2.319**	-0.104	-18.956
	[1.663]	[0.195]	[1.001]	[1.592]	[13.583]
SIZE	0.229	-0.024	0.908**	0.977***	7.783***
	[0.308]	[0.033]	[0.422]	[0.270]	[2.557]
EQUITY	-0.259***	0.065***	0.117	0.037	1.167*
	[0.063]	[0.011]	[0.148]	[0.064]	[0.625]
DEPOSITS	0.022	0.002	0.012	0.021	0.099
	[0.017]	[0.002]	[0.018]	[0.021]	[0.181]
LIQUIDITY	-0.040**	-0.004*	-0.038*	-0.035**	-0.119
	[0.016]	[0.002]	[0.021]	[0.015]	[0.105]
INVEST	-0.452	0.012	-0.092	0.441	3.419
	[0.766]	[0.059]	[0.678]	[1.099]	[10.385]
LISTED	4.205***	0.421***	1.274*	0.079	-14.622
	[0.879]	[0.096]	[0.663]	[0.838]	[9.226]
Observations	200	200	162	162	162
Number of Country	35	35	29	29	29
R-squared	0.311	0.459	0.167	0.196	0.095
Adjusted R-squared	0.278	0.433	0.117	0.149	0.0414

Panel B. Performance in early crisis period

Variables	(1) *ROECrisis1*	(2) *ROACrisis1*	(3) *ROERACrisis1*	(4) *ROARACrisis1*	(5) *ZSCORECrisis1*	(6) *ΔROECrisis1*	(7) *ΔROACrisis1*	(8) *ΔROERACrisis1*	(9) *ΔROARACrisis1*	(10) *ΔZSCORECrisis1*
Constant	15.501	1.517*	7.865	9.192**	93.244	6.739	1.055	13.356	15.353***	146.329**
	[12.111]	[0.822]	[6.296]	[3.374]	[75.817]	[8.678]	[0.665]	[11.298]	[4.243]	[58.244]
SMALLDIV	0.664	0.002	0.998	0.325	-7.867	0.109	-0.084	3.081	0.234	-10.306
	[2.881]	[0.202]	[1.652]	[0.600]	[13.719]	[2.462]	[0.191]	[2.330]	[1.008]	[8.448]
LARGEDIV	2.192	0.226	1.245	2.250**	20.539	0.971	0.063	3.377**	2.779**	30.481**
	[3.041]	[0.197]	[1.990]	[0.920]	[14.519]	[3.104]	[0.198]	[1.624]	[1.199]	[12.729]
NONTRAD	3.454	0.224	-0.790	1.113	19.288	-1.830	-0.236	1.117	1.182	34.723
	[2.995]	[0.155]	[2.443]	[1.046]	[24.709]	[2.744]	[0.199]	[2.199]	[1.289]	[23.726]
PERFPreCrisis	0.040	0.189	0.178***	0.328*	0.186					
	[0.243]	[0.150]	[0.056]	[0.176]	[0.135]					
SIZE	-0.733	-0.056	-0.070	-0.457***	-3.961	-0.953*	-0.037	-0.817	-1.113***	-10.298***
	[0.627]	[0.044]	[0.342]	[0.146]	[3.986]	[0.474]	[0.034]	[0.567]	[0.240]	[3.343]
EQUITY	-0.174	-0.020	-0.126	-0.085	0.949	0.075	-0.073***	-0.222	-0.109	-0.001
	[0.148]	[0.022]	[0.125]	[0.100]	[1.565]	[0.154]	[0.019]	[0.226]	[0.118]	[1.629]
DEPOSITS	-0.044	-0.006**	-0.014	-0.012	-0.078	-0.065	-0.008**	-0.024	-0.026	-0.159
	[0.039]	[0.003]	[0.029]	[0.023]	[0.340]	[0.042]	[0.003]	[0.030]	[0.025]	[0.349]
LIQUIDITY	0.001	-0.002	-0.019	-0.000	0.105	0.040	0.001	0.012	0.023	0.201
	[0.025]	[0.001]	[0.017]	[0.009]	[0.132]	[0.025]	[0.002]	[0.026]	[0.018]	[0.155]
INVEST	2.004	0.184	-0.835	-0.892	-27.983***	2.438	0.174	-0.759	-1.188	-30.767***
	[2.104]	[0.185]	[1.005]	[0.753]	[7.477]	[1.978]	[0.201]	[1.237]	[0.985]	[9.861]
LISTED	2.487	-0.064	-2.300**	-0.914	-18.160**	-1.551	-0.406*	-3.348***	-0.967	-6.254
	[4.291]	[0.257]	[1.062]	[0.943]	[8.177]	[3.192]	[0.233]	[1.186]	[0.997]	[12.174]
Observations	200	200	162	162	162	200	200	162	162	162
Number of Country	35	35	29	29	29	35	35	29	29	29
R-squared	0.034	0.056	0.078	0.109	0.099	0.055	0.246	0.084	0.125	0.118
Adjusted R-squared	-0.0176	0.00576	0.0172	0.0499	0.0392	0.00997	0.211	0.0293	0.0736	0.0654

Panel C. Performance in latter crisis period

Variables	(1) *ROECrisis2*	(2) *ROACrisis2*	(3) *ROERACrisis2*	(4) *ROARACrisis2*	(5) *ZSCORECrisis2*	(6) *ΔROECrisis2*	(7) *ΔROACrisis2*	(8) *ΔROERACrisis2*	(9) *ΔROARACrisis2*	(10) *ΔZSCORECrisis2*
Constant	2.085	-0.716	6.668	6.747*	71.122**	-2.562	-1.085**	11.999*	15.211**	128.313**
	[9.744]	[0.623]	[5.830]	[3.721]	[31.980]	[9.250]	[0.500]	[6.794]	[6.047]	[53.002]
SMALLDIV	0.236	0.183	-0.855	-1.258	-7.092	-0.058	0.115	1.167	-1.383	-9.720
	[2.874]	[0.256]	[1.863]	[1.922]	[15.488]	[2.885]	[0.236]	[2.347]	[2.500]	[22.722]
LARGEDIV	1.125	0.064	-1.370	0.595	5.743	0.477	-0.066	0.700	1.321	16.454
	[2.118]	[0.127]	[1.239]	[1.786]	[17.704]	[2.112]	[0.140]	[1.575]	[1.768]	[19.530]
NONTRAD	-0.375	0.349	-1.350	-1.288	-22.401	-3.177	-0.018	0.501	-1.192	-5.772
	[2.750]	[0.298]	[2.393]	[1.869]	[17.925]	[3.356]	[0.326]	[2.461]	[1.513]	[15.767]
PERFPreCrisis	0.491***	0.351**	0.202	0.077	0.123					
	[0.137]	[0.146]	[0.192]	[0.112]	[0.127]					
SIZE	-0.261	0.042	-0.134	-0.161	-1.787	-0.377	0.057	-0.859**	-1.063***	-8.614***
	[0.634]	[0.043]	[0.358]	[0.211]	[1.670]	[0.610]	[0.036]	[0.352]	[0.346]	[2.976]
EQUITY	-0.004	0.017	-0.036	-0.042	-0.858	0.128	-0.026	-0.129	-0.076	-1.882**
	[0.141]	[0.023]	[0.076]	[0.050]	[0.691]	[0.171]	[0.026]	[0.186]	[0.094]	[0.795]
DEPOSITS	0.047**	0.003	-0.015*	-0.006	-0.007	0.036*	0.002	-0.024	-0.025	-0.093
	[0.018]	[0.002]	[0.008]	[0.005]	[0.112]	[0.019]	[0.002]	[0.021]	[0.021]	[0.165]
LIQUIDITY	0.010	-0.001	-0.012	-0.018	-0.062	0.030	0.001	0.017	0.014	0.042
	[0.026]	[0.002]	[0.012]	[0.011]	[0.110]	[0.027]	[0.002]	[0.021]	[0.020]	[0.128]
INVEST	1.020	-0.135	-2.306***	-0.544	6.354*	1.250	-0.142	-2.232**	-0.951	3.354
	[1.759]	[0.164]	[0.780]	[0.408]	[3.439]	[1.774]	[0.166]	[1.082]	[0.957]	[8.970]
LISTED	-2.272	-0.063	-0.327	-0.597	-10.214*	-4.414**	-0.336**	-1.344	-0.670	2.612
	[2.193]	[0.152]	[0.978]	[0.799]	[5.643]	[2.123]	[0.154]	[1.090]	[0.963]	[9.150]
Observations	200	200	162	162	162	200	200	162	162	162
Number of Country	35	35	29	29	29	35	35	29	29	29
R-squared	0.099	0.201	0.121	0.092	0.113	0.107	0.074	0.076	0.093	0.055
Adjusted R-squared	0.0518	0.159	0.0630	0.0315	0.0538	0.0648	0.0302	0.0211	0.0396	-0.000981

This table shows results of the regressions for the impact of the strategy and control variables on the performannce variables as defined in sections 3.2.3. In Panel A the dependent variable is pre-crisis performance (from 2004 or 2005 to 2006), in Panel B the dependent variable is performance in the early crisis period (from 2007 to 2009) and in Panel C the dependent variable is performance in the latter crisis period (from 2010 to 2012 or 2013). The strategy variables are as defined in section 3.2.2, whereas the bank specific control variables are as defined in section 3.2.4. In Panel B and Panel A *PERFPreCrisis* denote the average pre-crisis value of the dependent variable. Country fixed effects are included in the model specification. Robust standard errors are stated in brackets. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.

Table 5. Impact of management ownership on performance

Panel A. Pre-crisis performance

Variables	(1) *ROE*	(2) *ROA*	(3) *ROERA*	(4) *ROARA*	(5) *ZSCORE*
Constant	7.900	0.445	-8.170	-9.998**	-68.828
	[5.212]	[0.600]	[9.190]	[4.607]	[45.364]
MGT	3.449***	0.350***	3.174	1.757*	7.728
	[0.959]	[0.102]	[2.723]	[0.994]	[9.309]
SMALLDIV	0.580	0.105	-2.600	0.099	2.834
	[1.084]	[0.155]	[1.580]	[0.831]	[10.820]
LARGEDIV	1.419*	0.216**	-2.594*	-0.788	-12.215
	[0.764]	[0.095]	[1.326]	[1.155]	[10.178]
NONTRAD	5.809***	0.597***	-2.096*	0.020	-18.412
	[1.613]	[0.188]	[1.082]	[1.653]	[13.779]
SIZE	0.332	-0.013	1.036**	1.047***	8.093***
	[0.293]	[0.031]	[0.474]	[0.274]	[2.609]
EQUITY	-0.271***	0.064***	0.106	0.031	1.141*
	[0.057]	[0.009]	[0.126]	[0.061]	[0.623]
DEPOSITS	0.016	0.002	0.007	0.018	0.087
	[0.016]	[0.002]	[0.017]	[0.021]	[0.185]
LIQUIDITY	-0.047***	-0.004**	-0.044**	-0.038**	-0.135
	[0.016]	[0.002]	[0.020]	[0.016]	[0.106]
INVEST	-0.252	0.032	0.196	0.601	4.121
	[0.621]	[0.062]	[0.753]	[1.104]	[10.373]
LISTED	3.893***	0.390***	0.833	-0.165	-15.694
	[0.785]	[0.088]	[0.963]	[0.809]	[9.795]
Observations	200	200	162	162	162
Number of Country	35	35	29	29	29
R-squared	0.341	0.480	0.193	0.211	0.098
Adjusted R-squared	0.306	0.452	0.139	0.158	0.0385

Panel B. Performance in early crisis period

Variables	(1) *ROECrisis1*	(2) *ROACrisis1*	(3) *ROERACrisis1*	(4) *ROARACrisis1*	(5) *ZSCORECrisis1*	(6) *ΔROECrisis1*	(7) *ΔROACrisis1*	(8) *ΔROERACrisis1*	(9) *ΔROARACrisis1*	(10) *ΔZSCORECrisis1*
Constant	16.552	1.497*	6.059	8.651**	95.776	9.405	1.132	13.048	15.465***	151.659**
	[12.232]	[0.827]	[6.689]	[3.341]	[75.304]	[9.319]	[0.739]	[12.544]	[4.347]	[58.286]
MGT	-4.399	0.069	3.371**	0.959	-5.062	-7.520*	-0.218	0.656	-0.239	-11.337
	[3.509]	[0.335]	[1.593]	[1.160]	[7.970]	[3.783]	[0.325]	[3.310]	[1.283]	[12.211]
SMALLDIV	0.629	0.002	0.843	0.306	-7.768	0.104	-0.084	3.067	0.239	-10.069
	[2.886]	[0.200]	[1.618]	[0.618]	[13.691]	[2.491]	[0.192]	[2.329]	[1.020]	[8.629]
LARGEDIV	1.933	0.230	1.157	2.242**	20.571	0.649	0.054	3.377**	2.779**	30.488**
	[3.206]	[0.191]	[2.058]	[0.939]	[14.623]	[3.316]	[0.205]	[1.633]	[1.199]	[12.859]
NONTRAD	2.754	0.234	-0.630	1.179	18.976	-2.501	-0.255	1.163	1.166	33.925
	[3.081]	[0.145]	[2.352]	[1.017]	[24.996]	[2.922]	[0.196]	[2.051]	[1.319]	[24.001]
PERFPreCrisis	0.095	0.181	0.145***	0.318*	0.188					
	[0.220]	[0.157]	[0.045]	[0.175]	[0.135]					
SIZE	-0.879	-0.054	0.095	-0.409***	-4.182	-1.179**	-0.043	-0.791	-1.123***	-10.753***
	[0.639]	[0.045]	[0.382]	[0.146]	[3.944]	[0.510]	[0.038]	[0.682]	[0.253]	[3.465]
EQUITY	-0.145	-0.020	-0.134	-0.087	0.963	0.099	-0.072***	-0.225	-0.108	0.037
	[0.154]	[0.022]	[0.126]	[0.103]	[1.575]	[0.162]	[0.019]	[0.221]	[0.118]	[1.617]
DEPOSITS	-0.038	-0.006**	-0.019	-0.014	-0.071	-0.052	-0.007**	-0.025	-0.026	-0.141
	[0.039]	[0.003]	[0.031]	[0.023]	[0.333]	[0.042]	[0.003]	[0.030]	[0.025]	[0.344]
LIQUIDITY	0.012	-0.002	-0.028	-0.003	0.115	0.054*	0.002	0.010	0.023	0.225
	[0.028]	[0.002]	[0.018]	[0.008]	[0.134]	[0.030]	[0.002]	[0.027]	[0.018]	[0.152]
INVEST	1.774	0.188	-0.532	-0.800	-28.451***	2.002	0.162	-0.700	-1.210	-31.796***
	[2.356]	[0.188]	[0.925]	[0.766]	[7.772]	[2.323]	[0.219]	[1.238]	[1.030]	[10.286]
LISTED	2.650	-0.067	-2.726**	-1.046	-17.423**	-0.873	-0.386	-3.439**	-0.934	-4.680
	[4.237]	[0.255]	[1.097]	[0.930]	[7.990]	[3.329]	[0.229]	[1.466]	[1.011]	[12.637]
Observations	200	200	162	162	162	200	200	162	162	162
Number of Country	35	35	29	29	29	35	35	29	29	29
R-squared	0.047	0.056	0.098	0.113	0.099	0.089	0.250	0.084	0.126	0.120
Adjusted R-squared	-0.00861	0.00109	0.0317	0.0475	0.0333	0.0407	0.210	0.0235	0.0677	0.0615

Panel C. Performance in the latter crisis period

Variables	(1) *ROECrisis2*	(2) *ROACrisis2*	(3) *ROERACrisis2*	(4) *ROARACrisis2*	(5) *ZSCORECrisis2*	(6) *ΔROECrisis2*	(7) *ΔROACrisis2*	(8) *ΔROERACrisis2*	(9) *ΔROARACrisis2*	(10) *ΔZSCORECrisis2*
Constant	1.324	-0.799	7.395	6.289*	70.324**	-3.019	-1.102**	13.808*	15.598**	130.754**
	[9.688]	[0.649]	[6.300]	[3.653]	[32.187]	[9.387]	[0.536]	[7.442]	[6.248]	[54.935]
MGT	3.184***	0.286	-1.357	0.812	1.594	1.288	0.048	-3.848	-0.824	-5.191
	[1.101]	[0.218]	[1.028]	[0.743]	[9.958]	[1.355]	[0.267]	[2.836]	[1.260]	[10.413]
SMALLDIV	0.261	0.186	-0.792	-1.273	-7.123	-0.058	0.115	1.248	-1.365	-9.611
	[2.931]	[0.258]	[1.825]	[1.934]	[15.587]	[2.917]	[0.237]	[2.317]	[2.498]	[22.759]
LARGEDIV	1.312	0.083	-1.334	0.587	5.733	0.532	-0.064	0.702	1.321	16.457
	[2.248]	[0.128]	[1.193]	[1.799]	[17.758]	[2.160]	[0.134]	[1.452]	[1.761]	[19.529]
NONTRAD	0.131	0.393	-1.415	-1.231	-22.302	-3.062	-0.014	0.230	-1.250	-6.137
	[2.876]	[0.294]	[2.408]	[1.888]	[17.869]	[3.391]	[0.316]	[2.330]	[1.539]	[15.810]
PERFPreCrisis	0.450***	0.319**	0.215	0.069	0.122					
	[0.141]	[0.143]	[0.191]	[0.114]	[0.129]					
SIZE	-0.156	0.049	-0.200	-0.121	-1.717	-0.339	0.058	-1.013**	-1.096***	-8.823***
	[0.636]	[0.043]	[0.392]	[0.207]	[1.725]	[0.625]	[0.037]	[0.408]	[0.367]	[3.156]
EQUITY	-0.025	0.018	-0.033	-0.044	-0.863	0.124	-0.026	-0.116	-0.073	-1.865**
	[0.143]	[0.024]	[0.076]	[0.052]	[0.696]	[0.172]	[0.025]	[0.163]	[0.091]	[0.795]
DEPOSITS	0.043**	0.003	-0.013	-0.007	-0.009	0.034*	0.002	-0.019	-0.024	-0.085
	[0.017]	[0.002]	[0.008]	[0.005]	[0.110]	[0.019]	[0.002]	[0.019]	[0.022]	[0.162]
LIQUIDITY	0.002	-0.002	-0.009	-0.020	-0.065	0.028	0.001	0.026	0.016	0.053
	[0.027]	[0.002]	[0.013]	[0.012]	[0.114]	[0.028]	[0.002]	[0.023]	[0.021]	[0.129]
INVEST	1.186	-0.118	-2.427**	-0.466	6.501*	1.324	-0.140	-2.582**	-1.026	2.883
	[1.750]	[0.150]	[0.898]	[0.378]	[3.321]	[1.809]	[0.164]	[1.215]	[1.024]	[9.594]
LISTED	-2.390	-0.075	-0.155	-0.709	-10.446	-4.530**	-0.341**	-0.809	-0.556	3.333
	[2.271]	[0.154]	[1.031]	[0.789]	[6.372]	[2.206]	[0.157]	[1.097]	[0.969]	[9.841]
Observations	200	200	162	162	162	200	200	162	162	162
Number of Country	35	35	29	29	29	35	35	29	29	29
R-squared	0.109	0.212	0.127	0.095	0.113	0.109	0.074	0.105	0.095	0.056
Adjusted R-squared	0.0571	0.166	0.0633	0.0291	0.0477	0.0615	0.0254	0.0462	0.0354	-0.00666

This table shows results of the regressions for the impact of management ownership as defined in section 3.2.1 on the performannce variables as defined in sections 3.2.3. In Panel A the dependent variable is pre-crisis performance (from 2004 or 2005 to 2006), in Panel B the dependent variable is performance in the early crisis period (from 2007 to 2009) and in Panel C the dependent variable is performance in the latter crisis period (from 2010 to 2012 or 2013). The strategy variables are as defined in section 3.2.2, whereas the bank specific control variables are as defined in section 3.2.4. In Panel B and Panel A *PERFPreCrisis* denote the average pre-crisis value of the dependent variable. Country fixed effects are included in the model specification. Robust standard errors are stated in brackets. The results of the *F* -tests of the impact of management ownership in small diversified banks, large diversified banks and non-traditional banks, respectively, are presented at the bottom of the table. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.

Table 6. Impact of management ownership on performance while accountinf for strategy

Panel A. Pre-crisis performance

Variables	(1) *ROE*	(2) *ROA*	(3) *ROERA*	(4) *ROARA*	(5) *ZSCORE*
Constant	7.689	0.492	-9.286	-10.172*	-66.501
	[4.561]	[0.513]	[9.905]	[5.026]	[47.684]
MGT	3.788	0.221	6.454	2.016	5.443
	[3.767]	[0.414]	[7.865]	[2.800]	[20.855]
*MGT*SMALLDIV*	1.502	0.468	-6.185	-0.615	-1.327
	[4.331]	[0.533]	[8.311]	[4.058]	[39.962]
*MGT*LARGEDIV*	-5.467	-0.283	-0.624	-0.816	7.212
	[3.981]	[0.407]	[4.833]	[2.290]	[18.031]
*MGT*NONTRAD*	2.656	0.304	-5.158	0.381	2.448
	[3.896]	[0.427]	[8.142]	[2.847]	[21.697]
SMALLDIV	0.464	0.043	-1.779	0.219	3.133
	[0.895]	[0.126]	[2.119]	[1.329]	[15.537]
LARGEDIV	1.780*	0.235**	-2.594*	-0.738	-12.648
	[0.908]	[0.103]	[1.401]	[1.202]	[10.458]
NONTRAD	5.437***	0.565***	-1.558	-0.053	-18.556
	[1.558]	[0.180]	[1.556]	[1.824]	[14.811]
SIZE	0.371	-0.013	1.068**	1.063***	7.975***
	[0.269]	[0.028]	[0.482]	[0.296]	[2.728]
EQUITY	-0.284***	0.064***	0.102	0.027	1.138*
	[0.060]	[0.010]	[0.105]	[0.067]	[0.667]
DEPOSITS	0.013	0.001	0.012	0.018	0.083
	[0.013]	[0.001]	[0.020]	[0.021]	[0.186]
LIQUIDITY	-0.047***	-0.004**	-0.043**	-0.039**	-0.138
	[0.016]	[0.002]	[0.020]	[0.016]	[0.103]
INVEST	-0.499	0.017	0.361	0.529	4.160
	[0.545]	[0.060]	[0.768]	[1.055]	[10.031]
LISTED	3.770***	0.384***	0.818	-0.196	-15.495
	[0.655]	[0.082]	[1.108]	[0.854]	[10.081]
Observations	200	200	162	162	162
Number of Country	35	35	29	29	29
R-squared	0.368	0.496	0.213	0.212	0.099
Adjusted R-squared	0.324	0.461	0.144	0.143	0.0197
Impact of *MGT* when *SMALLDIV=1; F*-test $\beta_1 + \beta_2 = 0$					
Sum of coefficients	5.290***	0.689***	0.269	1.401	4.116
F-value	[21.220]	[16.450]	[0.020]	[0.410]	[0.020]
Impact of *MGT* when *LARGEDIV=1; F*-test $\beta_1 + \beta_3 = 0$					
Sum of coefficients	-1.679	-0.062	5.830	1.200	12.655
F-value	[2.530]	[0.350]	[1.570]	[0.380]	[0.620]
Impact of *MGT* when *NONTRAD=1; F*-test $\beta_1 + \beta_4 = 0$					
Sum of coefficients	6.444***	0.525**	1.296	2.397	7.891
F-value	[9.000]	[6.640]	[0.280]	[1.330]	[0.250]

Panel B. Performance in the early period of the crisis

Variables	(1) *ROECrisis1*	(2) *ROACrisis1*	(3) *ROERACrisis1*	(4) *ROARACrisis1*	(5) *ZSCORECrisis1*	(6) *ΔROECrisis1*	(7) *ΔROACrisis1*	(8) *ΔROERACrisis1*	(9) *ΔROARACrisis1*	(10) *ΔZSCORECrisis1*
Constant	23.827*	2.156**	8.460	9.963***	118.700	16.140	1.737**	15.952	16.936***	172.735***
	[13.095]	[0.868]	[5.920]	[3.153]	[70.463]	[10.491]	[0.797]	[11.952]	[4.628]	[55.744]
MGT	-17.219	-1.150*	-2.946	-1.614	-49.063**	-21.006	-1.338*	-8.152	-2.996	-53.485**
	[12.582]	[0.592]	[1.786]	[2.133]	[18.702]	[15.129]	[0.718]	[6.995]	[2.034]	[21.651]
*MGT*SMALLDIV*	20.545	1.322	12.185**	1.954	49.283**	19.044	0.923	17.175**	2.376	50.361
	[13.857]	[0.856]	[4.667]	[2.159]	[21.908]	[16.701]	[1.179]	[7.526]	[2.575]	[29.730]
*MGT*LARGEDIV*	4.494	1.190	0.959	1.505	39.218	9.959	1.432	1.463	2.064	33.358
	[19.653]	[0.923]	[4.026]	[4.129]	[43.508]	[22.373]	[1.013]	[6.470]	[3.797]	[44.586]
*MGT*NONTRAD*	24.892*	2.156***	9.391**	5.666*	70.915***	22.236	1.897**	13.552*	5.405**	68.926**
	[12.652]	[0.639]	[3.725]	[2.798]	[18.621]	[13.478]	[0.731]	[7.067]	[2.618]	[26.952]
SMALLDIV	-1.802	-0.143	-0.677	0.207	-13.193	-2.266	-0.180	0.758	0.057	-15.738
	[3.817]	[0.273]	[1.993]	[0.704]	[15.336]	[3.507]	[0.235]	[2.865]	[1.188]	[9.906]
LARGEDIV	1.736	0.154	1.296	2.176**	18.593	-0.043	-0.045	3.388*	2.682**	28.870**
	[4.439]	[0.257]	[2.087]	[0.996]	[15.526]	[4.658]	[0.274]	[1.947]	[1.307]	[13.197]
NONTRAD	0.726	0.032	-1.501	0.551	11.865	-4.709	-0.449***	-0.244	0.587	26.943
	[2.937]	[0.139]	[2.586]	[1.139]	[25.375]	[2.849]	[0.144]	[2.156]	[1.272]	[23.543]
PERFPreCrisis	0.000	0.149	0.193***	0.315*	0.187					
SIZE	-1.041	-0.077	-0.013	-0.439**	-5.021	-1.412**	-0.066	-0.875	-1.168***	-11.501***
	[0.684]	[0.049]	[0.371]	[0.165]	[3.960]	[0.597]	[0.045]	[0.627]	[0.291]	[3.526]
EQUITY	-0.191	-0.019	-0.129	-0.096	0.945	0.093	-0.074***	-0.212	-0.115	0.021
	[0.152]	[0.024]	[0.091]	[0.095]	[1.486]	[0.169]	[0.020]	[0.158]	[0.105]	[1.522]
DEPOSITS	-0.062	-0.008***	-0.027	-0.019	-0.142	-0.075*	-0.009***	-0.037	-0.031	-0.209
	[0.040]	[0.003]	[0.029]	[0.023]	[0.310]	[0.043]	[0.003]	[0.030]	[0.024]	[0.318]
LIQUIDITY	-0.003	-0.003**	-0.028	-0.007	0.077	0.045*	0.001	0.007	0.020	0.189
	[0.026]	[0.001]	[0.021]	[0.009]	[0.131]	[0.025]	[0.002]	[0.030]	[0.018]	[0.150]
INVEST	0.850	0.124	-0.820	-1.087**	-30.666***	1.349	0.109	-1.111	-1.450	-34.046***
	[1.634]	[0.134]	[0.683]	[0.492]	[7.667]	[1.792]	[0.161]	[0.884]	[0.937]	[10.751]
LISTED	3.073	-0.034	-2.739**	-1.030	-16.463**	-0.696	-0.360	-3.399*	-0.896	-3.873
	[4.239]	[0.245]	[1.164]	[0.882]	[7.836]	[3.541]	[0.237]	[1.698]	[0.987]	[12.865]
Observations	200	200	162	162	162	200	200	162	162	162
Number of Country	35	35	29	29	29	35	35	29	29	29
R-squared	0.130	0.133	0.149	0.132	0.114	0.135	0.290	0.158	0.137	0.131
Adjusted R-squared	0.0642	0.0670	0.0685	0.0495	0.0293	0.0745	0.240	0.0842	0.0617	0.0544
Impact of *MGT* when *SMALLDIV=1; F*-test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	3.326	0.172	9.239**	0.340	0.220	-1.962	-0.415	9.023**	-0.620	-3.124
F-value	[0.510]	[0.060]	[4.260]	[0.060]	[0.000]	[0.190]	[0.340]	[4.450]	[0.180]	[0.030]
Impact of *MGT* when *LARGEDIV=1; F*-test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	-12.725	0.040	-1.987	-0.109	-9.845	-11.047	0.094	-6.689***	-0.932	-20.127
F-value	[2.240]	[0.010]	[0.530]	[0.000]	[0.130]	[1.470]	[0.060]	[10.940]	[0.250]	[0.600]
Impact of *MGT* when *NONTRAD=1; F*-test $\beta_1 + \beta_4 = 0$										
Sum of coefficients	7.673**	1.006***	5.445*	4.052	21.852	1.230	0.559	5.400	2.409	15.441
F-value	[6.520]	[7.890]	[4.110]	[2.290]	[0.910]	[0.100]	81.160]	[1.860]	[0.610]	[0.310]

Panel C. Performance in the latter period of the crisis

Variables	(1) *ROECrisis2*	(2) *ROACrisis2*	(3) *ROERACrisis2*	(4) *ROARACrisis2*	(5) *ZSCORECrisis2*	(6) *ΔROECrisis2*	(7) *ΔROACrisis2*	(8) *ΔROERACrisis2*	(9) *ΔROARACrisis2*	(10) *ΔZSCORECrisis2*
Constant	1.916	-0.487	8.270	6.858*	79.610**	-2.244	-0.836	15.457*	16.313**	137.966**
	[10.951]	[0.874]	[7.411]	[3.952]	[30.666]	[11.076]	[0.782]	[8.260]	[6.734]	[56.715]
MGT	2.046	-0.219	-3.177	-0.769	-18.911**	-0.004	-0.376	-8.172	-2.642	-23.687
	[5.826]	[1.081]	[4.152]	[1.226]	[7.443]	[7.438]	[1.347]	[8.217]	[3.217]	[24.230]
*MGT*SMALLDIV*	-0.091	0.326	2.332	3.707	41.214	-0.904	-0.005	7.119	4.279	42.379
	[8.173]	[1.301]	[4.340]	[3.180]	[25.309]	[10.456]	[1.678]	[8.972]	[4.728]	[36.849]
*MGT*LARGEDIV*	2.550	0.178	0.774	1.082	23.528*	5.508	0.379	1.257	1.840	17.199
	[6.954]	[1.106]	[3.198]	[1.434]	[11.913]	[8.186]	[1.340]	[6.405]	[3.066]	[24.151]
*MGT*NONTRAD*	1.741	1.440	3.313	1.157	12.647	0.304	1.224	7.305	0.803	10.498
	[5.943]	[1.116]	[4.522]	[1.304]	[9.743]	[7.348]	[1.391]	[7.900]	[3.097]	[22.075]
SMALLDIV	0.306	0.181	-1.019	-1.846	-13.532	0.055	0.150	0.358	-2.050	-16.281
	[3.234]	[0.273]	[2.228]	[2.441]	[19.645]	[3.142]	[0.205]	[2.837]	[3.242]	[28.882]
LARGEDIV	1.125	0.073	-1.333	0.537	4.462	0.162	-0.093	0.674	1.223	15.561
	[2.097]	[0.108]	[1.302]	[1.879]	[18.671]	[1.912]	[0.098]	[1.665]	[1.905]	[20.891]
NONTRAD	-0.098	0.242	-1.748	-1.303	-22.798	-3.039	-0.159	-0.542	-1.254	-6.514
	[2.889]	[0.245]	[2.779]	[2.015]	[18.451]	[3.323]	[0.240]	[2.516]	[1.878]	[17.756]
PERFPreCrisis	0.459***	0.292**	0.226	0.070	0.122					
SIZE	-0.187	0.042	-0.233	-0.152	-2.246	-0.387	0.052	-1.060**	-1.140***	-9.244***
	[0.679]	[0.047]	[0.433]	[0.222]	[1.634]	[0.684]	[0.041]	[0.424]	[0.380]	[3.152]
EQUITY	-0.025	0.016	-0.036	-0.036	-0.753	0.128	-0.029	-0.115	-0.061	-1.751**
	[0.140]	[0.020]	[0.066]	[0.043]	[0.672]	[0.167]	[0.024]	[0.133]	[0.086]	[0.770]
DEPOSITS	0.042**	0.001	-0.016*	-0.008	-0.023	0.035**	0.001	-0.025	-0.025	-0.096
	[0.016]	[0.002]	[0.008]	[0.005]	[0.110]	[0.016]	[0.002]	[0.021]	[0.021]	[0.156]
LIQUIDITY	0.001	-0.003	-0.010	-0.019	-0.061	0.027	0.000	0.023	0.017	0.060
	[0.026]	[0.002]	[0.014]	[0.012]	[0.119]	[0.027]	[0.002]	[0.022]	[0.021]	[0.129]
INVEST	1.156	-0.183	-2.569***	-0.406	7.591*	1.426	-0.195	-2.848***	-0.897	3.941
	[1.836]	[0.133]	[0.842]	[0.380]	[3.831]	[1.951]	[0.141]	[1.003]	[1.032]	[9.928]
LISTED	-2.376	-0.066	-0.152	-0.664	-9.578	-4.416*	-0.337*	-0.785	-0.482	4.020
	[2.289]	[0.153]	[1.020]	[0.804]	[5.631]	[2.205]	[0.166]	[1.179]	[1.052]	[9.726]
Observations	200	200	162	162	162	200	200	162	162	162
Number of Country	35	35	29	29	29	35	35	29	29	29
R-squared	0.111	0.257	0.133	0.106	0.125	0.115	0.108	0.129	0.103	0.064
Adjusted R-squared	0.0433	0.201	0.0508	0.0209	0.0415	0.0532	0.0459	0.0526	0.0240	-0.0185
Impact of *MGT* when *SMALLDIV=1; F*-test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	1.955	0.107	-0.845	2.938	22.303	-0.908	-0.381	-1.053	1.637	18.692
F-value	[0.490]	[0.190]	[0.750]	[1.260]	[0.840]	[0.070]	[1.080]	[0.210]	[0.570]	[0.930]
Impact of *MGT* when *LARGEDIV=1; F*-test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	4.596	-0.041	-2.403*	0.313	4.617	5.504**	0.003	-6.915	-0.802	-6.488
F-value	[2.580]	[0.160]	[3.530]	[0.310]	[0.200]	[4.250]	[0.000]	[2.540]	[0.150]	[0.110]
Impact of *MGT* when *NONTRAD=1; F*-test $\beta_1 + \beta_4 = 0$										
Sum of coefficients	3.787	1.221***	0.136	0.388	-6.264	0.300	0.848**	-0.867	-1.839	-13.189
F-value	[1.650]	[10.610]	[0.010]	[0.180]	[0.350]	[0.010]	[4.230]	[0.110]	[0.650]	[0.630]

This table shows results of the regressions for the impact of management ownership as defined in section 3.2.1 on the performannce variables as defined in sections 3.2.3. In Panel A the dependent variable is pre-crisis performance (from 2004 or 2005 to 2006), in Panel B the dependent variable is performance in the early crisis period (from 2007 to 2009) and in Panel C the dependent variable is performance in the latter crisis period (from 2010 to 2012 or 2013). MGT pick up the impact in the reference group of traditional banks, whereas the interaction terms with the strategy variables *SMALLDIV, LARGEDIV* and *NONTRAD* pick up the additional effect of management ownership in small diversified, large diversified and non-traditional banks compared to banks in the reference group of traditional banks. The bank specific control variables are as defined in section 3.2.4. In Panel B and Panel A *PERFPreCrisis* denote the average pre-crisis value of the dependent variable. The strategy variables are as defined in section 3.2.2 and the bank specific control variables are as defined in section 3.2.4. Country fixed effects are included in the model specification. Robust standard errors are stated in brackets. The results of the *F*-tests of the impact of management ownership in small diversified banks, large diversified banks and non-traditional banks, respectively, are presented at the bottom of the table. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.

Table 7. Impact of management ownership on performance while measures taken to mitigate moral hazard

Panel A. Pre-crisis performance

Variables	(1) *ROE*	(2) *ROA*	(3) *ROERA*	(4) *ROARA*	(5) *ZSCORE*
Constant	6.858	0.256	-5.777	-7.955**	-42.100
	[4.920]	[0.595]	[8.957]	[3.869]	[39.566]
MGT	3.613*	0.382**	-1.961	1.155	9.615
	[2.037]	[0.149]	[1.690]	[1.455]	[15.015]
*MGT*LowMoralHazard*	-0.950	-0.121	8.496***	0.943	-1.740
	[2.163]	[0.162]	[3.006]	[1.843]	[18.237]
SIZE	0.364	-0.004	0.883*	0.913***	6.374***
	[0.271]	[0.032]	[0.465]	[0.226]	[2.237]
EQUITY	-0.247***	0.067***	0.042	0.018	0.987
	[0.061]	[0.009]	[0.116]	[0.067]	[0.736]
DEPOSITS	0.029	0.003	-0.002	0.015	0.023
	[0.017]	[0.002]	[0.019]	[0.019]	[0.154]
LIQUIDITY	-0.016	-0.001	-0.058**	-0.038***	-0.226**
	[0.018]	[0.002]	[0.021]	[0.011]	[0.086]
INVEST	0.870	0.145	-0.226	0.575	-0.125
	[0.728]	[0.088]	[0.929]	[1.173]	[9.576]
LISTED	3.617***	0.364***	0.666	-0.099	-12.281
	[0.738]	[0.083]	[1.053]	[0.751]	[9.165]
Observations	197	197	159	159	159
Number of Country	33	33	27	27	27
R-squared	0.266	0.433	0.219	0.207	0.068
Adjusted R-squared	0.235	0.409	0.177	0.165	0.0178
Impact of *MGT* when *LowMoralHazard=1; F* -test $\beta_1 + \beta_2 = 0$					
Sum of coefficients	2.663***	0.261***	6.535**	2.098*	7.875
F -value	[11.360]	[9.670]	[5.200]	[3.540]	[0.550]

Panel B. Performance in the early period of the crisis

Variables	(1) *ROECrisis1*	(2) *ROACrisis1*	(3) *ROERACrisis1*	(4) *ROARACrisis1*	(5) *ZSCORECrisis1*	(6) *ΔROECrisis1*	(7) *ΔROACrisis1*	(8) *ΔROERACrisis1*	(9) *ΔROARACrisis1*	(10) *ΔZSCORECrisis1*
Constant	14.441	1.126	4.525	5.211	46.319	8.533	0.927	9.607	10.761*	81.618
	[13.422]	[1.075]	[7.947]	[5.153]	[81.521]	[9.782]	[0.827]	[12.479]	[5.573]	[68.711]
MGT	-5.637	-0.239	2.399	-1.160	-13.858*	-8.751	-0.537	4.124	-1.966***	-21.920$^{(11.5\%)}$
	[6.342]	[0.692]	[2.663]	[1.119]	[8.016]	[5.657]	[0.577]	[3.418]	[0.668]	[13.433]
*MGT*LowMoralHazard*	1.391	0.439	2.002	3.550*	13.131	2.210	0.533	-5.473	2.893*	14.590
	[7.255]	[0.780]	[3.208]	[1.748]	[11.401]	[6.724]	[0.702]	[4.398]	[1.594]	[18.980]
PERFPreCrisis	0.138	0.221	0.120*	0.302*	0.162					
	[0.198]	[0.148]	[0.063]	[0.170]	[0.140]					
SIZE	-0.780	-0.030	0.238	-0.155	-0.985	-1.093*	-0.027	-0.539	-0.792**	-6.330
	[0.727]	[0.058]	[0.441]	[0.267]	[4.133]	[0.604]	[0.045]	[0.712]	[0.336]	[3.759]
EQUITY	-0.140	-0.024	-0.140	-0.102	1.067	0.072	-0.076***	-0.176	-0.115	0.239
	[0.140]	[0.023]	[0.121]	[0.111]	[1.626]	[0.158]	[0.020]	[0.209]	[0.129]	[1.807]
DEPOSITS	-0.027	-0.005*	-0.016	-0.002	0.044	-0.051	-0.007**	-0.014	-0.012	0.025
	[0.037]	[0.003]	[0.038]	[0.024]	[0.375]	[0.036]	[0.003]	[0.031]	[0.023]	[0.391]
LIQUIDITY	0.026	-0.001	-0.034	0.001	0.203	0.040	0.000	0.017	0.027	0.392**
	[0.020]	[0.001]	[0.027]	[0.010]	[0.163]	[0.029]	[0.002]	[0.033]	[0.016]	[0.184]
INVEST	2.310	0.242	-0.646	-0.479	-23.645**	1.560	0.129	-0.447	-0.880	-23.541***
	[2.570]	[0.214]	[1.030]	[0.880]	[8.846]	[2.641]	[0.262]	[1.087]	[0.883]	[7.107]
LISTED	2.571	-0.086	-2.708**	-1.233	-21.483**	-0.546	-0.369	-3.293*	-1.164	-11.186
	[4.051]	[0.241]	[1.130]	[0.913]	[8.435]	[3.428]	[0.238]	[1.612]	[0.980]	[11.630]
Observations	197	197	159	159	159	197	197	159	159	159
Number of Country	33	33	27	27	27	33	33	27	27	27
R-squared	0.044	0.052	0.093	0.106	0.084	0.084	0.249	0.074	0.109	0.087
Adjusted R-squared	-0.00227	0.00658	0.0380	0.0517	0.0282	0.0446	0.217	0.0242	0.0611	0.0388
Impact of *MGT* when *LowMoralHazard=1; F* -test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	-4.246	0.200	4.401**	2.39$^{(10.36\%)}$	-0.727	-6.541	-0.004	-1.349	0.927	-7.330
F -value	[1.190]	[0.340]	[4.370]	[2.850]	[0.000]	[1.980]	[0.000]	[0.120]	[0.280]	80.220]

Panel C. Performance in the latter period of the crisis

Variables	(1) *ROECrisis2*	(2) *ROACrisis2*	(3) *ROERACrisis2*	(4) *ROARACrisis2*	(5) *ZSCORECrisis2*	(6) *ΔROECrisis2*	(7) *ΔROACrisis2*	(8) *ΔROERACrisis2*	(9) *ΔROARACrisis2*	(10) *ΔZSCORECrisis2*
Constant	-1.267	-0.610	8.515	2.171	32.846	-5.076	-0.772	12.894*	9.629	69.365
	[7.863]	[0.701]	[5.492]	[4.092]	[42.417]	[7.745]	[0.591]	[7.543]	[5.690]	[55.474]
MGT	5.819***	0.564***	-0.043	2.375*	22.078	3.812**	0.321	1.444	1.292	13.738**
	[1.332]	[0.173]	[0.758]	[1.177]	[15.462]	[1.759]	[0.213]	[1.037]	[0.948]	[6.564]
*MGT*LowMoralHazard*	-4.304*	-0.511	-2.295*	-2.488*	-31.236**	-3.776	-0.435	-8.735**	-3.372**	-29.726***
	[2.145]	[0.332]	[1.232]	[1.250]	[13.323]	[2.536]	[0.371]	[3.395]	[1.251]	[10.020]
PERFPreCrisis	0.445***	0.366**	0.242	0.063	0.133					
	[0.141]	[0.136]	[0.203]	[0.115]	[0.157]					
SIZE	0.001	0.035	-0.310	0.116	0.473	-0.201	0.037	-0.979**	-0.740**	-5.056
	[0.524]	[0.038]	[0.362]	[0.248]	[2.809]	[0.518]	[0.034]	[0.418]	[0.332]	[3.196]
EQUITY	0.002	0.018	-0.027	-0.021	-0.599	0.139	-0.025	-0.058	-0.037	-1.456*
	[0.132]	[0.026]	[0.070]	[0.038]	[0.609]	[0.163]	[0.026]	[0.142]	[0.081]	[0.752]
DEPOSITS	0.049*	0.003	-0.019**	-0.005	-0.005	0.033	0.001	-0.018	-0.019	-0.025
	[0.024]	[0.002]	[0.009]	[0.013]	[0.113]	[0.028]	[0.002]	[0.017]	[0.022]	[0.167]
LIQUIDITY	0.004	0.000	-0.013	-0.024**	-0.163**	0.013	0.001	0.030	0.012	0.033
	[0.026]	[0.002]	[0.020]	[0.010]	[0.074]	[0.026]	[0.002]	[0.028]	[0.017]	[0.102]
INVEST	1.179	-0.069	-2.733***	-0.656*	2.378	0.696	-0.161	-2.562**	-1.195	2.486
	[1.622]	[0.125]	[0.969]	[0.338]	[3.221]	[1.745]	[0.164]	[1.083]	[1.088]	[9.109]
LISTED	-2.222	-0.082	-0.031	-0.748	-9.625	-4.230*	-0.313*	-0.536	-0.654	1.028
	[2.271]	[0.143]	[1.060]	[0.725]	[6.000]	[2.163]	[0.160]	[1.164]	[0.942]	[9.739]
Observations	197	197	159	159	159	197	197	159	159	159
Number of Country	33	33	27	27	27	33	33	27	27	27
R-squared	0.112	0.205	0.125	0.079	0.085	0.100	0.076	0.141	0.079	0.038
Adjusted R-squared	0.0695	0.167	0.0724	0.0232	0.0294	0.0613	0.0368	0.0954	0.0302	-0.0137
Impact of *MGT* when *LowMoralHazard=1; F* -test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	1.515	0.053	-2.338	-0.113	-9.158	0.036	-0.114	-7.291	-2.080$^{(10.52\%)}$	-15.988
F -value	[0.890]	[0.030]	[2.120]	[0.030]	[2.330]	[0.000]	[0.100]	[4.240]	[2.820]	[2.180]

This table shows results of the regressions for the impact of management ownership on performance while accounting for the level of moral hazard. In Panel A the dependent variable is pre-crisis performance (from 2004 or 2005 to 2006), in Panel B the dependent variable is performance in the early crisis period (from 2007 to 2009) and in Panel C the dependent variable is performance in the latter crisis period (from 2010 to 2012 or 2013). *LowMoralHazard* is a dummy variable taking the value one if the moral hazard index as defined by Barth et al. (2013) takes the value 2 or 3 on the scale from 0 to 3. *MGT* pick up the impact in the reference group of banks headquartered in a country with a high level of moral hazard, whereas the interaction terms with *LowMoralHazard* pick up the additional effect of management ownership in banks headquartered in a country with a high level of moral hazard compared to banks in the reference group. The bank specific control variables are as defined in section 3.2.4. *PERFPreCrisis* denote the average pre-crisis value of the dependent variable. Country fixed effects are included in the model specification. Robust standard errors are stated in brackets. The results of the *F* -test of the impact of management ownership in banks headquartered in a country with low level of moral hazard are presented at the bottom of the table. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.

Table 8. Impact of management ownership on performance while accounting for restrictions on banking operations

Panel A. Pre-crisis performance

Variables	(1) *ROE*	(2) *ROA*	(3) *ROERA*	(4) *ROARA*	(5) *ZSCORE*
Constant	7.094	0.277	-7.239	-8.320**	-48.373
	[4.953]	[0.601]	[8.607]	[3.851]	[38.489]
MGT	3.179***	0.440***	9.908**	3.838**	35.187**
	[0.669]	[0.107]	[3.723]	[1.747]	[15.176]
*MGT*HighRestrict*	-0.654	-0.246*	-6.365	-2.864*	-40.444***
	[1.219]	[0.136]	[4.231]	[1.573]	[11.732]
*MGT*HighDivRestrict*	0.546	0.005	-7.380**	-1.026	-5.560
	[1.789]	[0.154]	[3.144]	[1.574]	[12.403]
SIZE	0.351	-0.005	0.903*	0.924***	6.734***
	[0.271]	[0.032]	[0.449]	[0.225]	[2.195]
EQUITY	-0.253***	0.066***	0.071	0.024	1.075
	[0.057]	[0.009]	[0.109]	[0.061]	[0.682]
DEPOSITS	0.029	0.003	0.003	0.015	0.018
	[0.017]	[0.002]	[0.016]	[0.019]	[0.165]
LIQUIDITY	-0.017	-0.001	-0.046**	-0.036***	-0.212**
	[0.018]	[0.002]	[0.019]	[0.011]	[0.081]
INVEST	0.928	0.171*	0.696	0.923	4.552
	[0.642]	[0.088]	[1.089]	[1.160]	[9.484]
LISTED	3.683***	0.375***	0.559	-0.131	-13.675
	[0.720]	[0.083]	[0.993]	[0.742]	[8.724]
Observations	199	199	161	161	161
Number of Country	34	34	28	28	28
R-squared	0.270	0.435	0.230	0.217	0.099
Adjusted R-squared	0.235	0.408	0.184	0.171	0.0453
Impact of *MGT* when *HighRestrict=1; F* -test $\beta_1 + \beta_2 = 0$					
Sum of coefficients	2.525**	0.194**	3.543	0.974	-5.257
F -value	[6.620]	[6.720]	[1.760]	[0.690]	[0.300]
Impact of *MGT* when *HighDivRestrict=1; F* -test $\beta_1 + \beta_3 = 0$					
Sum of coefficients	3.725**	0.445***	2.528	2.812**	29.627***
F -value	[6.490]	[11.640]	[0.340]	[5.980]	[26.340]

Panel B. Performance in the early crisis period

Variables	(1) *ROECrisis1*	(2) *ROACrisis1*	(3) *ROERACrisis1*	(4) *ROARACrisis1*	(5) *ZSCORECrisis1*	(6) *ΔROECrisis1*	(7) *ΔROACrisis1*	(8) *ΔROERACrisis1*	(9) *ΔROARACrisis1*	(10) *ΔZSCORECrisis1*
Constant	14.904	1.122	4.361	4.603	47.016	8.736	0.906	10.540	10.332*	87.420
	[13.715]	[1.074]	[8.068]	[4.873]	[79.504]	[9.974]	[0.807]	[12.505]	[5.225]	[64.228]
MGT	-9.114***	-0.301	2.647*	-0.060	-22.620(11.4%)	-11.878***	-0.645***	-5.810	-2.702	-52.010**
	[2.816]	[0.219]	[1.328]	[1.552]	[13.831]	[3.032]	[0.231]	[4.219]	[2.033]	[23.671]
*MGT*HighRestrict*	0.424	0.064	-0.097	0.482	15.046	0.993	0.257	5.336	2.453	48.827**
	[4.515]	[0.488]	[2.210]	[2.153]	[14.972]	[4.203]	[0.473]	[4.193]	[2.084]	[20.339]
*MGT*HighDivRestrict*	11.550**	0.837*	2.230	1.779	18.123	11.075***	0.832*	8.530**	2.485	22.767
	[4.442]	[0.455]	[2.280]	[2.210]	[22.978]	[3.936]	[0.477]	[3.571]	[2.535]	[26.982]
PERFPreCrisis	0.131	0.217	0.146**	0.311*	0.165					
	[0.197]	[0.145]	[0.064]	[0.176]	[0.137]					
SIZE	-0.767	-0.029	0.225	-0.138	-1.090	-1.072*	-0.025	-0.545	-0.774**	-6.715*
	[0.741]	[0.059]	[0.444]	[0.253]	[4.032]	[0.618]	[0.045]	[0.704]	[0.329]	[3.560]
EQUITY	-0.097	-0.018	-0.120	-0.070	1.171	0.123	-0.070***	-0.181	-0.086	0.273
	[0.147]	[0.021]	[0.125]	[0.110]	[1.633]	[0.155]	[0.020]	[0.204]	[0.124]	[1.771]
DEPOSITS	-0.038	-0.006**	-0.017	-0.004	0.033	-0.063*	-0.008***	-0.020	-0.015	0.017
	[0.036]	[0.003]	[0.037]	[0.023]	[0.377]	[0.036]	[0.003]	[0.033]	[0.024]	[0.410]
LIQUIDITY	0.018	-0.001	-0.033	0.002	0.196	0.033	-0.000	0.007	0.026	0.373*
	[0.019]	[0.001]	[0.026]	[0.010]	[0.164]	[0.026]	[0.002]	[0.032]	[0.016]	[0.182]
INVEST	1.824	0.199	-0.702	-0.598	-25.906***	1.017	0.065	-1.295	-1.234	-29.708***
	[2.369]	[0.175]	[0.887]	[0.652]	[8.240]	[2.508]	[0.209]	[1.076]	[0.820]	[7.272]
LISTED	2.880	-0.060	-2.565**	-1.102	-19.688**	-0.322	-0.354	-3.042**	-1.012	-8.266
	[3.992]	[0.227]	[1.084]	[0.854]	[8.124]	[3.343]	[0.226]	[1.464]	[0.912]	[11.109]
Observations	199	199	161	161	161	199	199	161	161	161
Number of Country	34	34	28	28	28	34	34	28	28	28
R-squared	0.067	0.069	0.093	0.096	0.084	0.102	0.259	0.095	0.111	0.097
Adjusted R-squared	0.0175	0.0195	0.0329	0.0359	0.0230	0.0595	0.224	0.0415	0.0579	0.0437
Impact of *MGT* when *HighRestrict=1; F* -test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	-8.690*	-0.237	2.550	0.422	-7.574	-10.885**	-0.388	-0.474	-0.249	-3.183
F -value	[3.900]	[0.180]	[1.420]	[0.060]	[0.280]	[6.070]	[0.540]	[0.060]	[0.040]	[0.070]
Impact of *MGT* when *HighDivRestrict=1; F* -test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	2.436	0.536*	4.877**	1.719	-4.497	-0.803	0.187	2.720	-0.217	-29.243
F -value	[0.690]	[2.950]	[5.500]	[1.060]	[0.100]	[0.080]	[0.310]	[0.280]	[0.020]	[2.660]

Panel C. Performance in the latter crisis period

Variables	(1) *ROECrisis2*	(2) *ROACrisis2*	(3) *ROERACrisis2*	(4) *ROARACrisis2*	(5) *ZSCORECrisis2*	(6) *ΔROECrisis2*	(7) *ΔROACrisis2*	(8) *ΔROERACrisis2*	(9) *ΔROARACrisis2*	(10) *ΔZSCORECrisis2*
Constant	-0.578	-0.472	8.965	2.414	36.128	-4.515	-0.642	14.324*	10.275*	78.737
	[7.826]	[0.749]	[5.615]	[4.267]	[45.152]	[7.663]	[0.643]	[7.279]	[5.646]	[54.515]
MGT	1.729	-0.364	-4.888*	0.967	11.235	-0.036	-0.635***	-12.222***	-2.659	-19.759
	[1.184]	[0.224]	[2.517]	[0.756]	[13.330]	[1.274]	[0.179]	[2.761]	[1.832]	[16.829]
*MGT*HighRestrict*	-0.155	0.804**	3.917**	-1.357*	-23.957*	0.208	0.956***	8.629**	1.348	11.667
	[1.982]	[0.382]	[1.732]	[0.731]	[11.729]	[2.246]	[0.341]	[3.282]	[1.788]	[15.550]
*MGT*HighDivRestrict*	4.257*	0.458	2.746	1.762*	15.221	3.954(10.9%)	0.455	8.209**	2.731(11.3%)	20.118
	[2.126]	[0.331]	[2.656]	[0.928]	[13.867]	[2.399]	[0.326]	[3.229]	[1.667]	[12.603]
PERFPreCrisis	0.445***	0.385***	0.260	0.055	0.119					
	[0.141]	[0.137]	[0.205]	[0.117]	[0.158]					
SIZE	-0.008	0.032	-0.319	0.115	0.430	-0.202	0.036	-0.987**	-0.757**	-5.502*
	[0.520]	[0.039]	[0.359]	[0.257]	[2.945]	[0.515]	[0.036]	[0.409]	[0.328]	[3.129]
EQUITY	-0.009	0.014	-0.031	-0.030	-0.732	0.131	-0.027	-0.084	-0.052	-1.679**
	[0.132]	[0.026]	[0.072]	[0.040]	[0.658]	[0.160]	[0.025]	[0.138]	[0.075]	[0.683]
DEPOSITS	0.045*	0.003	-0.022**	-0.006	-0.009	0.029	0.001	-0.024*	-0.020	-0.025
	[0.024]	[0.002]	[0.008]	[0.013]	[0.114]	[0.028]	[0.002]	[0.013]	[0.023]	[0.168]
LIQUIDITY	-0.001	-0.000	-0.017	-0.026**	-0.180**	0.009	0.000	0.017	0.008	0.007
	[0.027]	[0.002]	[0.021]	[0.011]	[0.079]	[0.028]	[0.002]	[0.025]	[0.018]	[0.102]
INVEST	1.095	-0.159	-3.244**	-0.552	4.605	0.580	-0.264	-3.759***	-1.424	0.595
	[1.661]	[0.132]	[1.186]	[0.364]	[3.551]	[1.737]	[0.166]	[1.110]	[1.086]	[9.209]
LISTED	-2.171	-0.096	-0.057	-0.690	-9.228	-4.215*	-0.327**	-0.471	-0.566	2.817
	[2.272]	[0.141]	[1.014]	[0.694]	[5.617]	[2.165]	[0.159]	[1.009]	[0.897]	[9.458]
Observations	199	199	161	161	161	199	199	161	161	161
Number of Country	34	34	28	28	28	34	34	28	28	28
R-squared	0.112	0.227	0.139	0.079	0.085	0.102	0.109	0.171	0.077	0.037
Adjusted R-squared	0.0644	0.186	0.0813	0.0172	0.0237	0.0587	0.0666	0.121	0.0225	-0.0203
Impact of *MGT* when *HighRestrict=1; F* -test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	1.574	0.440	-0.971	-0.390	-12.722*	0.172	0.321	-3.593	-1.311	-8.092
F -value	[0.600]	[2.300]	[0.560]	[0.320]	[3.540]	[0.000]	[1.170]	[1.810]	[1.460]	[1.150]
Impact of *MGT* when *HighDivRestrict=1; F* -test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	5.986***	0.094	-2.142***	2.729**	26.456	3.918	-0.180	-4.013	0.072	0.359
F -value	[9.290]	[0.070]	[21.460]	[6.000]	[2.210]	[3.620]	[0.360]	[1.080]	[0.000]	[0.000]

This table shows results of the regressions for the impact of management ownership on performance while accounting for restrictions on bank operations. *HighRestrict* is defined as a dummy variable taking the value one if the authorities in the country in which the bank is headquartered imposed above median restrictions on activities vis-à-vis non-bank financial institutions and on restrictions between banks and non-financial companies in the pre-crisis period as defined by Barth et al. (2013). *HighDivRestrict* is a dummy variable taking the value one if the authorities impose above median restrictions on diversification and investments abroad. *MGT* pick up the impact in the reference group of banks headquartered in a country with low restrictions on bank operations, whereas the interaction terms with *HighRestrict and* HighDivRestrict pick up the additional effect of management ownership in banks headquartered in a country with high activity restriction and high diversification restrictions, respectively, compared to banks in the reference group. The bank specific control variables are as defined in section 3.2.4. In Panel B the *PERFPreCrisis* denote the average pre-crisis value of the dependent variable. Country fixed effects are included in the model specification. Robust standard errors are stated in brackets. The results of the *F* -test of the impact of management ownership in banks headquartered in a country with high activity restriction and high diversification restrictions, respectively, are presented at the bottom of the table. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.

Table 9. Robustness check with revised management ownership variable

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Observations	200	200	162	162	162	200	200	162	162	162
Panel A. Impact of management ownership on performance in early period of crisis										
	ROECrisis1	*ROACrisis1*	*ROERACrisis1*	*ROARACrisis1*	*ZSCORECrisis1*	*ΔROECrisis1*	*ΔROACrisis1*	*ΔROERACrisis1*	*ΔROARACrisis1*	*ΔZSCORECrisis1*
MGT_REVISED	-3.487	0.232	3.975**	1.631	-0.880	-6.109	-0.008	0.953	-0.000	-9.649
	[3.577]	[0.254]	[1.892]	[1.024]	[8.843]	[3.954]	[0.280]	[3.865]	[1.323]	[12.316]
Panel B. Impact of management ownership on performance in latter period of crisis										
	ROECrisis2	*ROACrisis2*	*ROERACrisis2*	*ROARACrisis2*	*ZSCORECrisis2*	*ΔROECrisis2*	*ΔROACrisis2*	*ΔROERACrisis2*	*ΔROARACrisis2*	*ΔZSCORECrisis2*
MGT_REVISED	3.730**	0.324	-1.738	0.855	0.565	2.176	0.128	-4.472	-1.344	-8.892
	[1.614]	[0.260]	[1.221]	[0.885]	[11.090]	[1.963]	[0.341]	[2.995]	[1.262]	[11.061]
Panel C. Impact of management ownership on performance in early period of crisis while accounting for bank strategy										
	ROECrisis1	*ROACrisis1*	*ROERACrisis1*	*ROARACrisis1*	*ZSCORECrisis1*	*ΔROECrisis1*	*ΔROACrisis1*	*ΔROERACrisis1*	*ΔROARACrisis1*	*ΔZSCORECrisis1*
MGT_REVISED	-17.048	-1.117*	-2.530	-1.400	-47.968**	-20.833	-1.311*	-7.837	-2.940	-52.961**
	[12.602]	[0.585]	[1.890]	[2.278]	[19.579]	[15.114]	[0.714]	[7.101]	[2.124]	[22.159]
*MGT_REVISED*SMALLDIV*	23.722*	1.949***	14.151***	3.026	57.855**	23.175	1.730**	18.348***	2.873	52.488
	[12.280]	[0.565]	[4.780]	[2.668]	[25.498]	[14.277]	[0.671]	[6.532]	[2.722]	[32.512]
*MGT_REVISED*LARGEDIV*	4.584	1.198	0.849	1.503	39.332	9.969	1.445	1.332	2.113	33.499
	[19.632]	[0.913]	[3.971]	[4.217]	[43.784]	[22.279]	[0.993]	[6.416]	[3.820]	[44.740]
*MGT_REVISED*NONTRAD*	23.670*	1.987***	9.601**	6.001**	73.059***	22.662	1.756**	13.939**	5.270**	69.705***
	[12.480]	[0.610]	[3.768]	[2.665]	[18.040]	[13.633]	[0.693]	[6.785]	[2.268]	[24.344]
Impact of *MGT_REVISED* when *SMALLDIV=1; F*-test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	6.674**	0.832***	11.621**	1.626	9.887	2.342	0.419	10.511	-0.067	-0.473
F-value	[4.660]	[8.360]	[5.510]	[1.370]	[0.430]	[0.810]	[3.020]	[4.080]	[0.000]	[0.000]
Impact of *MGT_REVISED* when *LARGEDIV=1; F*-test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	-12.464	0.081	-1.681	0.103	-8.636	-10.864**	0.134*	-6.505***	-0.827	-19.462
F-value	[2.150]	[0.040]	[0.550]	[0.000]	[0.100]	[1.430]	[0.120]	[8.410]	[0.210]	[0.570]
Impact of *MGT_REVISED* when *NONTRAD=1; F*-test $\beta_1 + \beta_4 = 0$										
Sum of coefficients	6.622**	0.870***	7.071**	4.601*	25.091	1.829	0.445	6.102	2.330	16.744
F-value	[4.960]	[7.580]	[4.60]	[3.960]	[1.250]	[0.180]	[0.840]	[2.390]	[0.690]	[0.450]
Panel D. Impact of management ownership on performance in latter period of crisis while accounting for bank strategy										
	ROECrisis2	*ROACrisis2*	*ROERACrisis2*	*ROARACrisis2*	*ZSCORECrisis2*	*ΔROECrisis2*	*ΔROACrisis2*	*ΔROERACrisis2*	*ΔROARACrisis2*	*ΔZSCORECrisis2*
MGT_REVISED	2.177	-0.208	-3.279	-0.685	-18.692**	0.114	-0.367	-8.299	-2.736	-24.070
	[5.858]	[1.089]	[4.195]	[1.246]	[7.648]	[7.472]	[1.353]	[8.303]	[3.255]	[24.483]
*MGT_REVISED*SMALLDIV*	1.583	0.581	1.728	4.010	41.378	1.285	0.402	5.698	3.807	35.595
	[7.042]	[1.137]	[4.694]	[3.312]	[28.943]	[8.797]	[1.385]	[10.421]	[5.149]	[40.171]
*MGT_REVISED*LARGEDIV*	2.551	0.199	0.835	1.016	22.999*	5.486	0.401	1.292	1.830	16.715
	[6.909]	[1.101]	[3.216]	[1.459]	[12.062]	[8.128]	[1.330]	[6.463]	[3.100]	[24.364]
*MGT_REVISED*NONTRAD*	1.683	1.130	2.758	1.350	13.810	1.134	0.942	6.862	0.376	10.197
	[5.874]	[1.080]	[4.274]	[1.390]	[9.972]	[6.981]	[1.347]	[7.260]	[2.894]	[20.652]
Impact of *MGT_REVISED* when *SMALLDIV=1; F*-test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	3.760*	0.373**	-1.551	3.325	22.686	1.399	0.035	-2.601	1.071	11.525
F-value	[3.430]	[6.630]	[1.120]	[1.210]	[0.590]	[0.300]	[0.030]	[0.660]	[0.180]	[0.280]
Impact of *MGT_REVISED* when *LARGEDIV=1; F*-test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	$4.728^{(10.21\%)}$	-0.009	-2.444*	0.331	4.307	5.600	0.034	-7.007	-0.906	-7.355
F-value	[2.820]	[0.010]	[3.520]	[0.320]	[0.160]	[4.400]	[0.080]	[2.630]	[0.190]	[0.140]
Impact of *MGT_REVISED* when *NONTRAD=1; F*-test $\beta_1 + \beta_4 = 0$										
Sum of coefficients	3.860	0.922***	-0.521	0.665	-4.882	1.248	0.575	-1.437	-2.360	-13.873
F-value	[1.520]	[8.620]	[0.080]	[0.380]	[0.200]	[0.230]	[2.330]	[0.290]	[1.240]	[0.770]

This table shows results of the regressions for the impact of the revised version of the management ownership variable (*MGT_REVISED*) on the crisis performance of banks in the early crisis period (from 2007 to 2009) (Panel A and C) and in the latter crisis period (from 2010 to 2012 or 2013) (Panel B and D). Whether the impact of managment ownership vary with the strategy of the bank as defined in section 3.2.2 is accounted for in Panels C and D. The results of the *F*-tests of the impact of management ownership in small diversified banks, large diversified banks and non-traditional banks, respectively, are presented at the bottom of the table. Bank specific control variables are as defined in section 3.2.4 and country fixed effects are included in the model specification. Robust standard errors or *F*-values are stated in brackets. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.

Table 10. Robustness check with management control variable

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Observations	200	200	162	162	162	200	200	162	162	162
Panel A. Impact of management control on performance in early period of crisis										
	ROECrisis1	*ROACrisis1*	*ROERACrisis1*	*ROARACrisis1*	*ZSCORECrisis1*	*ΔROECrisis1*	*ΔROACrisis1*	*ΔROERACrisis1*	*ΔROARACrisis1*	*ΔZSCORECrisis1*
MGTCONTROL	0.902	-0.118	-2.486***	-1.310**	-10.208	-1.123	-0.218	-4.434***	-1.535	-7.490
	[3.178]	[0.188]	[0.793]	[0.524]	[6.044]	[3.169]	[0.235]	[1.347]	[1.259]	[10.462]
Panel B. Impact of management control on performance in latter period of crisis										
Variables	*ROECrisis2*	*ROACrisis2*	*ROERACrisis2*	*ROARACrisis2*	*ZSCORECrisis2*	*ΔROECrisis2*	*ΔROACrisis2*	*ΔROERACrisis2*	*ΔROARACrisis2*	*ΔZSCORECrisis2*
MGTCONTROL	-4.475**	-0.309***	-0.155	-1.173**	-8.776**	-5.453**	-0.388***	-2.095	-1.483	-5.848
	[2.071]	[0.096]	[1.315]	[0.523]	[3.504]	[2.047]	[0.119]	[1.713]	[1.456]	[10.212]
Panel C. Impact of management control on performance in early period of crisis while accounting for bank strategy										
	ROECrisis1	*ROACrisis1*	*ROERACrisis1*	*ROARACrisis1*	*ZSCORECrisis1*	*ΔROECrisis1*	*ΔROACrisis1*	*ΔROERACrisis1*	*ΔROARACrisis1*	*ΔZSCORECrisis1*
MGTCONTROL	13.276	0.304	0.149	-0.370	0.376	15.260	0.399	-7.005	-1.212	-20.595
	[9.570]	[0.421]	[2.795]	[0.958]	[34.753]	[10.242]	[0.552]	[4.181]	[1.365]	[22.880]
*MGTCONTROL*SMALLDIV*	-21.782*	-1.240	-1.854	-0.647	-12.852	-27.019*	-1.868	6.671	1.397	27.478
	[12.548]	[0.928]	[3.768]	[1.336]	[50.561]	[13.953]	[1.264]	[5.002]	[1.306]	[31.722]
*MGTCONTROL*LARGEDIV*	-14.103	-0.334	-2.994	-1.482	-10.516	-17.947*	-0.455	1.596	-1.739	8.191
	[9.229]	[0.401]	[3.281]	[1.281]	[35.350]	[10.452]	[0.561]	[4.948]	[1.264]	[26.484]
*MGTCONTROL*NONTRAD*	-14.161	-0.522	-5.296	-0.484	-22.594	-23.095*	-0.781	4.903	2.622*	32.448*
	[8.726]	[0.426]	[4.274]	[1.560]	[35.352]	[11.887]	[0.749]	[5.258]	[1.498]	[18.819]
Impact of *MGTCONTROL* when *SMALLDIV=1; F* -test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	-8.506	-0.936	-1.705	-1.017	-12.476	-11.759*	-1.469	-0.334	0.185	6.883
F -value	[1.850]	[1.450]	[1.430]	[0.230]	[0.400]	[4.000]	[2.530]	[0.040]	[0.040]	[0.190]
Impact of *MGTCONTROL* when *LARGEDIV=1; F* -test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	-0.827	-0.030	-2.845**	-1.852	-10.140	-2.687	-0.056	-5.409***	-2.951**	-12.404
F -value	[0.100]	[0.030]	[5.050]	[1.340]	[2.540]	[1.010]	[0.090]	[9.090]	[5.250]	[1.100]
Impact of *MGTCONTROL* when *NONTRAD=1; F* -test $\beta_1 + \beta_4 = 0$										
Sum of coefficients	-0.885	-0.218	-5.147**	-0.854	-22.218**	-7.835*	-0.382	-2.102	1.410	11.853
F -value	[0.180]	[1.520]	[5.890]	[0.100]	[4.590]	[3.870]	[0.850]	[1.130]	[0.490]	[0.420]
Panel D. Impact of management control on performance in latter period of crisis while accounting for bank strategy										
	ROECrisis2	*ROACrisis2*	*ROERACrisis2*	*ROARACrisis2*	*ZSCORECrisis2*	*ΔROECrisis2*	*ΔROACrisis2*	*ΔROERACrisis2*	*ΔROARACrisis2*	*ΔZSCORECrisis2*
MGTCONTROL	-12.514**	-0.494	5.961	-1.247	-1.113	-11.537*	-0.416	-1.386	-2.407	-23.322
	[5.806]	[0.343]	[8.556]	[1.661]	[13.173]	[6.262]	[0.536]	[4.563]	[2.256]	[19.035]
*MGTCONTROL*SMALLDIV*	9.107	0.121	-3.954	3.330	12.581	6.528	-0.393	4.801	6.146**	55.292**
	[5.905]	[0.700]	[8.463]	[2.183]	[14.965]	[6.298]	[0.911]	[5.061]	[2.656]	[25.438]
*MGTCONTROL*LARGEDIV*	13.963**	0.453	-7.284	-0.503	-15.840	12.070*	0.353	-2.571	-0.858	3.970
	[5.959]	[0.423]	[8.544]	[2.084]	[18.809]	[6.440]	[0.625]	[4.662]	[2.036]	[21.357]
*MGTCONTROL*NONTRAD*	-9.456*	-0.757	-11.516	-1.465	-10.472	-13.856***	-0.970	-1.042	2.815	47.817**
	[5.176]	[0.508]	[8.035]	[2.469]	[18.839]	[5.060]	[0.722]	[4.223]	[1.976]	[19.581]
Impact of *MGTCONTROL* when *SMALLDIV=1; F* -test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	-3.407	-0.373	2.007*	2.083*	11.468	-5.009*	-0.809(10.45%)	3.415***	3.739**	31.97**
F -value	[1.160]	[0.740]	[3.120]	[2.970]	[1.290]	[3.330]	[2.780]	[5.330]	[6.290]	[5.120]
Impact of *MGTCONTROL* when *LARGEDIV=1; F* -test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	1.449	-0.041	-1.323*	-1.750*	-16.953(10.21%)	0.533	-0.063	-3.957**	-3.265**	-19.352*
F -value	[0.490]	[0.110]	[3.180]	[3.180]	[2.860]	[0.080]	[0210]	[6.240]	[5.480]	[3.240]
Impact of *MGTCONTROL* when *NONTRAD=1; F* -test $\beta_1 + \beta_4 = 0$										
Sum of coefficients	-21.970***	-1.251***	-5.555***	-2.712**	-11.585	-25.393***	-1.386***	-2.428	0.408	24.495*
F -value	[58.880]	[29.780]	[7.810]	[5.190]	[1.370]	[88.400]	[16.400]	[0.770]	[0.060]	[4.090]

This table shows results of the regressions for the impact of management control (*MGTCONTROL*), defined as a dummy variable taking the value 1 if the largest owner has an onwership stake of less than 10 %, on the crisis performance of banks in the early crisis period (from 2007 to 2009) (Panel A and C) and in the latter crisis period (from 2010 to 2012 or 2013) (Panel B and D). Whether the impact of managment control vary with the strategy of the bank as defined in section 3.2.2 is accounted for in Panels C and D. The results of the *F*-tests of the impact of management ownership in small diversified banks, large diversified banks and non-traditional banks, respectively, are presented at the bottom of the table. Bank specific control variables are as defined in section 3.2.4 and country fixed effects are included in the model specification. Robust standard errors or *F*-values are stated in brackets. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.

Table 12. Robustness check excl. banks that changed strategy

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Observations	179	179	149	149	149	179	179	149	149	149
Panel A. Impact of management ownership on performance in early period of crisis										
	ROECrisis1	*ROACrisis1*	*ROERACrisis1*	*ROARACrisis1*	*ZSCORECrisis1*	*ΔROECrisis1*	*ΔROACrisis1*	*ΔROERACrisis1*	*ΔROARACrisis1*	*ΔZSCORECrisis1*
MGT	3.070	0.225	4.366**	1.213	-1.134	0.357	-0.060	1.361	0.028	-5.961
	[3.395]	[0.422]	[1.768]	[1.493]	[10.848]	[2.880]	[0.378]	[3.841]	[1.553]	[15.238]
Panel B. Impact of management ownership on performance in latter period of crisis										
	ROECrisis2	*ROACrisis2*	*ROERACrisis2*	*ROARACrisis2*	*ZSCORECrisis2*	*ΔROECrisis2*	*ΔROACrisis2*	*ΔROERACrisis2*	*ΔROARACrisis2*	*ΔZSCORECrisis2*
MGT	3.549**	0.312	-1.616	0.783	3.472	1.476	0.049	-4.315	-0.941	-1.748
	[1.432]	[0.294]	[1.201]	[0.809]	[10.292]	[1.573]	[0.324]	[3.397]	[1.498]	[11.591]
Panel C. Impact of management ownership on performance in early period of crisis while accounting for bank strategy										
	ROECrisis1	*ROACrisis1*	*ROERACrisis1*	*ROARACrisis1*	*ZSCORECrisis1*	*ΔROECrisis1*	*ΔROACrisis1*	*ΔROERACrisis1*	*ΔROARACrisis1*	*ΔZSCORECrisis1*
MGT	-1.870	-0.528	-3.714*	-1.809	-53.103***	-3.217	-0.576	-8.604	-2.735	-56.124***
	[7.311]	[0.652]	[1.838]	[2.180]	[16.952]	[5.842]	[0.558]	[7.134]	[1.917]	[19.636]
*MGT*SMALLDIV*	5.467	0.590	15.871**	2.605	62.178***	2.703	0.106	19.587*	1.706	53.419*
	[6.521]	[0.747]	[5.830]	[2.308]	[19.927]	[7.605]	[1.008]	[9.789]	[2.136]	[27.921]
*MGT*LARGEDIV*	-0.380	0.392	1.987	2.244	60.683	2.003	0.387	0.940	2.344	63.572**
	[10.457]	[0.816]	[4.906]	[4.702]	[40.124]	[11.129]	[0.913]	[6.364]	[3.509]	[29.589]
*MGT*NONTRAD*	11.328	1.619**	10.850***	5.790**	72.955***	7.525	1.273**	14.983**	5.606**	72.148**
	[8.084]	[0.661]	[3.625]	[2.725]	[18.074]	[6.118]	[0.582]	[7.298]	[2.571]	[27.146]
Impact of *MGT* when *SMALLDIV=1; F*-test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	3.597	0.062	12.157**	0.796	9.075	9.075	9.075	9.075**	9.075	9.075
F-value	[0.410]	[0.010]	[5.030]	[0.200]	[0.470]	[0.010]	[0.330]	[4.220]	[0.420]	[0.020]
Impact of *MGT* when *LARGEDIV=1; F*-test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	-2.250	-0.136	-1.727	0.435	7.580	-51.100	-52.716	-52.163***	-50.759	10.469
F-value	[0.130]	[0.090]	[0.230]	[0.010]	[0.070]	[0.030]	[0.140]	[9.630]	[0.040]	[0.180]
Impact of *MGT* when *NONTRAD=1; F*-test $\beta_1 + \beta_4 = 0$										
Sum of coefficients	9.458***	1.091***	7.136**	3.981	19.852	19.852	19.852	19.852$^{(10.17\%)}$	19.852	19.852
F-value	[8.500]	[8.380]	[4.730]	[2.020]	[0.710]	[1.190]	[1.700]	[2.860]	[0.910]	[0.310]
Panel D. Impact of management ownership on performance in latter period of crisis while accounting for bank strategy										
	ROECrisis2	*ROACrisis2*	*ROERACrisis2*	*ROARACrisis2*	*ZSCORECrisis2*	*ΔROECrisis2*	*ΔROACrisis2*	*ΔROERACrisis2*	*ΔROARACrisis2*	*ΔZSCORECrisis2*
MGT	1.823	-0.432	-3.171	-0.720	-17.224**	0.865	-0.477	-7.759	-2.073	-20.497
	[8.443]	[1.663]	[4.214]	[1.245]	[7.925]	[10.223]	[1.988]	[7.917]	[2.914]	[22.435]
*MGT*SMALLDIV*	0.648	0.530	2.244	4.230	47.110	-1.316	0.083	5.731	2.918	37.620
	[11.396]	[1.980]	[4.474]	[3.942]	[33.033]	[14.107]	[2.432]	[8.247]	[4.246]	[36.822]
*MGT*LARGEDIV*	5.077	0.452	-0.568	0.966	26.905*	6.771	0.447	-1.550	1.111	30.035
	[9.754]	[1.760]	[3.347]	[1.407]	[15.775]	[11.114]	[2.091]	[7.060]	[3.222]	[26.208]
*MGT*NONTRAD*	1.522	1.605	3.231	0.836	10.923	-1.181	1.286	7.110	0.568	10.048
	[8.603]	[1.642]	[4.532]	[1.348]	[10.356]	[10.077]	[1.963]	[7.743]	[3.004]	[21.324]
Impact of *MGT* when *SMALLDIV=1; F*-test $\beta_1 + \beta_2 = 0$										
Sum of coefficients	2.471	0.098	-0.927	3.510	29.886	-18.540	-17.141	-11.493	-14.306	20.396
F-value	[0.540]	[0.080]	[0.700]	[1.130]	[0.990]	[0.010]	[0.690]	[0.640]	[0.140]	[0.620]
Impact of *MGT* when *LARGEDIV=1; F*-test $\beta_1 + \beta_3 = 0$										
Sum of coefficients	6.900	0.020	-3.739***	0.246	9.681	9.681*	9.681	9.681*	9.681	9.681
F-value	[1.930]	[0.010]	[11.170]	[0.070]	[0.390]	[3.340]	[0.030]	[3.030]	[0.120]	[0.120]
Impact of *MGT* when *NONTRAD=1; F*-test $\beta_1 + \beta_4 = 0$										
Sum of coefficients	3.345	1.173***	0.060	0.116	-6.301	-18.405	-15.938*	-10.114	-16.656	-7.176
F-value	[1.040]	[9.880]	[0.000]	[0.010]	[0.360]	[0.010]	[3.490]	[0.060]	[0.440]	[0.400]

This table shows results of the regressions for the impact of management ownership on the crisis performance of banks in the early crisis period (from 2007 to 2009) (Panel A and C) and in the latter crisis period (from 2010 to 2012 or 2013) (Panel B and D), while excluding banks that changed strategy during the crisis. Whether the impact of managment control vary with the strategy of the bank as defined in section 3.2.2 is accounted for in Panels C and D. The results of the *F* tests of the impact of management ownership in small diversified banks, large diversified banks and non-traditional banks, respectively, are presented at the bottom of the table. Bank specific control variables are as defined in section 3.2.4 and country fixed effects are included in the model specification. Robust standard errors or *F*-values are stated in brackets. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.

Table 13. Robustness check with continuous strategy variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Observations	200	200	162	162	162	200	200	162	162	162
Panel A. Impact of management control on performance in early period of crisis while accounting for bank strategy										
	ROECrisis1	*ROACrisis1*	*ROERACrisis1*	*ROARACrisis1*	*ZSCORECrisis1*	*ΔROECrisis1*	*ΔROACrisis1*	*ΔROERACrisis1*	*ΔROARACrisis1*	*ΔZSCORECrisis1*
MGT	11.225	-1.315	-10.451*	-10.431	-146.844*	3.078	-1.932	-10.593	-9.601	-121.328
	[24.239]	[1.632]	[5.935]	[7.300]	[75.252]	[26.421]	[1.304]	[11.823]	[7.023]	[84.667]
*MGT*NONTRADITIONAL*	0.365**	0.029***	0.186***	0.100**	1.223**	0.321**	0.026***	0.261**	0.096**	1.282***
	[0.139]	[0.009]	[0.064]	[0.046]	[0.497]	[0.151]	[0.010]	[0.106]	[0.036]	[0.449]
*MGT*SIZE*	-2.393**	-0.016	0.226	0.387	4.795	-1.877	0.020	-0.239	0.262	2.299
	[1.175]	[0.077]	[0.454]	[0.537]	[6.034]	[1.246]	[0.070]	[0.325]	[0.475]	[6.077]
Panel B. Impact of management control on performance in latter period of crisis while accounting for bank strategy										
	ROECrisis2	*ROACrisis2*	*ROERACrisis2*	*ROARACrisis2*	*ZSCORECrisis2*	*ΔROECrisis2*	*ΔROACrisis2*	*ΔROERACrisis2*	*ΔROARACrisis2*	*ΔZSCORECrisis2*
MGT	-16.436	-2.487	-4.310	-0.566	-15.108	-21.282	-3.014	-4.437	0.558	11.367
	[18.520]	[3.519]	[5.435]	[2.764]	[23.539]	[22.416]	[4.217]	[10.821]	[5.367]	[46.199]
*MGT*NONTRADITIONAL*	0.069	0.029*	0.074	0.027	0.145	0.043	0.027	0.141	0.022	0.206
	[0.081]	[0.016]	[0.070]	[0.018]	[0.144]	[0.099]	[0.020]	[0.113]	[0.045]	[0.364]
*MGT*SIZE*	1.061	0.077	-0.086	-0.005	0.713	1.368	0.107	-0.505	-0.174	-1.878
	[0.983]	[0.166]	[0.124]	[0.165]	[1.533]	[1.123]	[0.195]	[0.381]	[0.265]	[2.436]

This table shows results of the regressions for the impact of management ownership as defined in section 3.2.1 on the performannce variables as defined in sections 3.2.3, while accounting for the strategy of the bank by means of continuous variables. *NONTRADITIONAL* is the average of the two ratios non-interest income to total operating income and other earning assets than loans plus off-balance sheet items to total earnings assets plus off-balance sheet items. *SIZE* is the control variable as defined in section 3.2.4. In Panel A the dependent variable is pre-crisis performance (from 2004 or 2005 to 2006) and in Panel B the dependent variable is performance in the early crisis period (from 2007 to 2009). Bank specific control variables are as defined in section 3.2.4 and country fixed effects are included in the model specification. Robust standard errors are stated in brackets. The results of the *F*-tests of the impact of management ownership in small diversified banks, large diversified banks and non-traditional banks, respectively, are presented at the bottom of the table. ***, ** and * denote the significance at 1%, 5% and 10%, respectively.