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Management Insulation and Bank Failures

Finance Working Paper N° 345/2013
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1 Introduction

The 2007-09 financial crisis led regulators to consider the extent to which corporate governance arrangements can explain bank failures (Kirkpatrick (2009); Walker (2009)). The academic literature has responded by considering the relationship between bank failure and some governance characteristics, such as board independence (Adams (2012); Beltratti and Stulz (2012); Minton, Taillard, and Williamson (2014)). To date, the literature has given limited attention to the relationship between bank failure and legal provisions that insulate managers from shareholder pressure.

This article makes two main contributions. The first one is the development of a new measure of management insulation from shareholder pressure based on legal provisions. The second contribution is to use this measure to analyze the link between management insulation and bank performance in the 2007-09 financial crisis.

Scholars of corporate law and finance have long argued the case for and against arrangements that hinder shareholders' ability to remove directors and executives.[1] To date, the literature has approached the question of how to measure legal management insulation in two different ways. The first is to take the existence of a staggered board as a proxy for management entrenchment.[2] The second is to create a legal index by aggregating a set of corporate legal rules that affect management entrenchment.[3] Cremers and Ferrell (2014) provide an application of the two approaches.

The most popular legal insulation indices are the *G-index* (Gompers, Ishii, and Metrick (2003)) and its parsimonious variation, the *E-index* (Bebchuk, Cohen, and Ferrell (2009)). These indices are constructed by awarding scores based on the existence of a set of legal rules and provisions. This way of indexing, however, ignores the fact that certain governance arrangements can be rendered functionally irrelevant by the presence or absence of other rules. As the inclusion of an irrelevant provision has an impact on the

[1] Bebchuk, Coates, and Subramanian (2002), Bebchuk and Cohen (2005), and Cohen and Wang (2013) argue that management entrenchment destroys shareholder value, while Lipton and Rosenblum, (1991), Bainbridge (2006), Bratton and Wachter (2010), Cremers and Sepe (2016), and Cremers, Litov, and Sepe (2017) emphasize the potential benefits of management entrenchment.

[2] See, e.g., Bebchuk, Coates, and Subramanian (2002), Bebchuk and Cohen (2005), Falaye (2007), Masulis, Wang, and Xie (2007), Bates, Becher, and Lemmon (2008), Cohen and Wang (2013), Cremers, Litov, and Sepe (2017), and Karakas and Mohseni (2019).

[3] See Gompers, Ishii, and Metrick (2003) and Bebchuk, Cohen, and Ferrell (2009).

final score, it adds noise to the final index values. The inclusion of irrelevant provisions also means that similar index scores do not necessarily represent similar outcomes. [4]

Our measure, which we call the *Management Insulation Index* (*MI-index*), takes a different route. Instead of linear indexing, the MI-index is a contingent index; it considers the interaction between different legal rules. The index is interpretable and economically meaningful. It provides an answer to the question: *How long would it take for a majority group of shareholders to gain control of the board?* In answering this question, the MI-index codifies six combinations of governance arrangements that affect the time it takes for gaining control of the board.

To construct our index, for each year in the 2003-2007 period we hand-collected data on governance arrangements of 276 bank holding companies from the applicable corporation laws and the banks' charters and bylaws. We use these data to infer the predictive ability of different shareholder empowerment measures for bank performance during the 2007-09 financial crisis. Our goal is to assess the index's ability to predict bank performance; we do not claim that the legal provisions used to construct the index cause future performance.

We find that the MI-index in 2003 strongly predicts bank bailouts in 2008-09. Bailouts are a measure of ex-post performance, i.e., they proxy for bank weakness. Using the MI-index, we find that banks with less insulated managers were more likely to receive capital injections under the Capital Purchase Program (CPP), the main bank-recapitalization program under the US Troubled Assets Relief Program (TARP). This result is economically and statistically strong, despite the relatively small size of our sample. Our most conservative estimate suggests that banks with the highest management insulation scores were 18 percentage points less likely to be bailed out than banks with the lowest insulation scores.

To validate the interpretation of the MI-index as a measure of management insulation from shareholder pressure, we investigate whether the MI-index is related to variables associated with shareholder activism. To measure shareholder activism, we use Schedule 13D filings as a proxy for activism.[5] Our evidence shows that banks with low

[4] For a re-examination of these indices and their empirical performance, see Karpoff, Schonlau, and Wehrly (2017).

[5] Some papers that use Schedule 13D filings as a proxy for activism include Brav, Jiang, Partnoy, and Thomas (2008), Edmans, Fang, and Zur (2013), and Collin-Dufresne, and Fos (2015), among others.

MI-index scores in 2003 were significantly more likely to have at least one 13D filing between 2003 and 2007.

By contrast, neither the E-index nor the staggered board dummy reliably predicts bank failures or 13D filings. These results suggest that the MI-index is a more precise measure of management insulation than either the E-index or the staggered board dummy. The MI-index is less contaminated by measurement errors because of its contingent nature; instead of counting legal provisions, the index considers the interactions between the different provisions. Although the evidence does not invalidate the use of the E-index or the staggered board indicator as proxies for management insulation, it shows that more informative alternatives exist.

Our empirical strategy relies on the fact that legal provisions in charters, bylaws, and state corporate laws have significant forecasting power. We stress that our focus is on correlation (and not necessarily causation). To account for the possibility of omitted persistent factors, we saturate the empirical model with several bank characteristics. We find that, in models with more covariates, the predictive power of the MI-index on bailouts tend to be stronger. Such a pattern suggests that omitted variables are unlikely to explain our findings. We also find that changes in management insulation from 2003 to 2006 predict bailouts in 2008-09. By contrast, the relation between either the E-index or the staggered board indicator and bailouts remains weak across specifications.

Although our measure of management insulation predicts bailouts and investor activism, management insulation has no predictive ability for standard measures of performance, such as Tobin's q, ROA, and cumulative stock returns. This result holds regardless of how we measure management insulation (the MI-index, the E-index, or a staggered board indicator). These results suggest that either management insulation predicts bailouts for reasons other than firm performance or that bailouts are a better measure of bank performance than both ROA and Tobin's q.

We then turn to an investigation of the mechanism linking management insulation and bailouts. We find that banks with insulated managers were less likely to be bailed out partly because these banks rejected bailout funds. We find that those banks were in a stronger financial position during the crisis. One possible explanation for the findings is that management insulation reduces bank risk-taking and improves banks' resilience in crises.

Of course, the financial institutions in our sample are subject to extensive bank regulation, which in the United States operates at both the federal and the state level. One

of the principal policy goals of bank regulation and supervision in the U.S. (and elsewhere) is to curb excessive risk-taking by regulated entities. It is this regulatory and supervisory framework that primarily shapes the assets, activities, and capital structure of our sample banks. Naturally, however, the regulation and supervision of financial institutions does not directly determine the investment decisions of bank managers. Instead, it merely constrains the decisions of individual firms. Within these constraints, firms necessarily retain significant discretion regarding their business strategy, including their risk-taking preferences. The extent of managerial entrenchment is one plausible factor that may influence the nature of these preferences.

In the context of our empirical strategy, we do not directly account for bank regulation and supervision activities at the federal level, because our empirical setting means that there is no variation across our sample firms in relation to these factors. Variation does exist in relation to the applicable state-based bank regulation and supervision. We account for these and other systematic differences across states by including state controls in our main results.

Our paper is related to the literature on the role of bank governance during the crisis, which has uncovered some surprising results. Beltratti and Stulz (2012) find that banks with shareholder-friendly boards performed particularly poorly during the crisis. Similarly, Adams (2012) and Minton, Taillard, and Williamson (2014) find a positive relation between board independence and bank bailouts (as a proxy for poor performance); see also Erkens, Hung, and Matos (2012) and Chesney, Stromberg, and Wagner (2019) for similar evidence. We use our index to revisit these findings from a different angle, provide some new complementary evidence, and dig deeper into the mechanisms.

Our measure of management insulation appears to contain information that is not present in some of the alternatives, such as the E-index and the existence of a staggered board. But there is a trade-off. Although the MI-index is, at least in theory, superior to the E-index, its construction is more time-consuming. Our results suggest that the extra effort that goes into constructing the MI-index may pay off.

2 Measuring Management Insulation

A simple measure of management insulation from shareholder pressure is the presence of a classified (or staggered) board. In a classified board, directors typically serve three-year terms and only a third of board members stand for re-election at each annual general meeting. A body of empirical work finds that firms with classified boards perform worse

than firms without classified boards (Bebchuk and Cohen (2005); Falaye (2007); Cremers and Ferrell (2014)). By contrast, Larcker, Ormazabal, and Taylor (2011) and Cremers, Litov, and Sepe (2017) find that the adoption of classified boards has mostly a positive effect on firm value. Even with the help of natural experiments (Cohen and Wang (2013); Karakas and Mohseni (2019)), the value implications of classified boards are still controversial (Amihud and Stoyanov (2017)).

From a legal perspective, the main weakness of the classified board variable is that it does not take into account the myriad of other corporate legal rules that may impact on the board's responsiveness to shareholder interests. Broader corporate governance indices have then been developed to provide a more robust measure of insulation.

The pre-eminent example of such an index is the so-called G-index, developed by Gompers, Ishii, and Metrick (2003), which codes for 24 governance provisions, including classified boards, golden parachutes, director indemnification provisions, poison pills, and fair price charter provisions, among others. Gompers, Ishii, and Metrick (2003) find that a trading strategy associated with buying firms with strong G-index rights and selling companies with low G-index rights would have generated an 8.5% abnormal return. More recently, Cremers and Ferrell (2014) find a negative association between the G-index and Tobin's q.

Some commentators have expressed skepticism about the legal quality of this index. Klausner (2013) notes that the G-index includes provisions that either have no impact on management insulation or benefit from widespread shareholder support. Bebchuk, Cohen, and Ferrell (2009) observe that "some provisions might have little relevance and some provisions might be positively correlated with firm value" (p.784). A further problem is that this linear way of indexing ignores the fact that certain governance arrangements can be rendered functionally irrelevant by the presence or absence of other rules. Accordingly, similar index scores do not necessarily represent similar governance outcomes, and the panel of companies deemed to be insulated according to such linear indices will contain a number of false positives.

Bebchuk, Cohen, and Ferrell (2009) attempt to address some of the weaknesses of the G-index by reducing the number of provisions from 24 to 6. They identify these provisions as those that have received "substantial opposition" from institutional shareholders in shareholder meetings. Nevertheless, as a linear index, their "E-index" also suffers from the same theoretical weakness identified above in relation to the G-index: The E-index provisions do not take account of their possible interactions with other rules that

may render them functionally irrelevant, thereby enabling non-insulated companies to be categorized as insulated.

To construct an alternative to both measures, we begin by noting that there are two distinctive aspects of corporate law in the United States. First, corporate law in the United States is state based; each state is a separate corporate law jurisdiction. The consequences of having a classified board in Delaware are very different from the consequences in Florida, Georgia, or California. This factor will vary in importance depending on the prevalence of Delaware corporations in the sample. Delaware's dominance is less pronounced amongst certain industry sectors. For example, while 68% of the non-bank constituents of the Russell 3000 index are incorporated in Delaware as of February 2013, only 21% of our sample banks are governed by Delaware corporate law (compared to 22% of the banks in the Russell 3000 index).

The second distinctive aspect of corporate law in the United States is that many of the core corporate law rules, including shareholder rights to remove directors and call shareholder meetings, are optional. To determine how exposed managers are to activist shareholder pressure, we cannot simply consider the mandatory and default corporate law rules of the state of the bank's incorporation but need to look at those rules in combination with an analysis of the bank's constitutional documents, its charter and bylaws.

The MI-index aims to capture the cross-firm variation in legal rights that shareholders can use to oust management or credibly threaten to do so. It is not our aim to create a general corporate governance or shareholder rights index. We exclusively focus on answering the question of how core corporate law rules make it more or less time-consuming (and hence costly) to challenge incumbent management. A determined and coordinated shareholder body can, in all US jurisdictions, ultimately decide on the composition of the board. The differences we identify mainly focus on the speed and level of coordination necessary to achieve a change in management. The underlying assumption is that such a time-control variable plays an important de facto role in insulating managers, as the financial return of shareholder intervention required by activist investors will crucially depend on the time horizon of such a payoff.

We identify four main ways in which shareholders can gain control over the corporation's board. First, where all directors are elected annually, shareholders can simply exercise their voting rights to elect different directors. Second, shareholders sometimes have the right to simply remove directors "without cause." While this is more common in

corporations with unclassified boards, it is not uncommon in corporations with classified boards.

Third, where the board is classified and the removal right is a "with cause" removal right, shareholders can either wait for two years (two consecutive annual shareholder meetings) in order to gain board control, or they can try to "declassify" the board (i.e., changing the bank's governance arrangements to switch to annual election of all directors). The former option is time-consuming and costly. The availability of the latter option crucially depends on the firm's constitutional arrangements set forth in its charter and by-laws, as well as the rules determining how the constitution can be amended. A corporation's charter can only be amended with both board and shareholder approval. Accordingly, where board classification is set forth in the charter, de-classification is only possible with board approval. In the absence of a contrary provision in the firm's charter, shareholders can typically amend a corporation's bylaws by majority vote. If the board's classification is set forth in the bylaws, then it can be declassified by shareholders alone. In some corporations, however, the charter or state corporate law may impose additional restrictions on a bylaw amendment including board approval or a supermajority shareholder vote. This declassification strategy is only effective where declassification also results in the application of a "without cause" removal right, which can be exercised following the declassification, since the directors' tenure will be unaffected by the declassification.

Fourth, shareholders can elect additional directors to the board and thereby outnumber the incumbent directors (board packing). The availability of this option again depends on the provisions in the charter and bylaws of each corporation and the number of appointed directors: Shareholders must first have the right to increase the size of the current board, which differs from firm to firm. Moreover, if the charter provides for a maximum board size (as it often does), this maximum number must be large enough for the newly appointed directors to be able to outnumber the existing board members. In firms with classified boards, this means that the maximum board size has to be greater by at least a third than the current board size. This allows shareholders to increase board size to the maximum, fill the vacancies and, together with the third of directors elected annually, to gain control of the board.

Where the constellation of shareholder rights enables shareholders *in theory* to take control of the board, the next question for an insulation index is to determine how quickly the shareholders' rights can be exercised. This is a function of whether or not shareholders

can call an interim meeting in between annual shareholder meetings or whether they can act by written consent (a consent solicitation) outside of an annual general meeting. In most jurisdictions, whether or not this is possible depends on whether or not the corporation's constitutional documents grant shareholders the power to call, or requisition directors to call, a meeting. In some jurisdictions, for example, California, shareholders have a mandatory right to call a meeting.

Our index takes values from one to six. In accordance with the time-control theory which underpins the index, the MI-index provides for three governance groupings: First, where shareholders can gain control over the firm's board almost immediately (MI-index scores of 1 and 2); second, where they can gain control within – at most – a one year (one meeting) time frame (MI-index scores of 3 and 4); or where they will have to wait for approximately two years – a two-year (two-meeting) time frame (MI-index scores of 5 and 6).

Note also that within each of these three groups we code for director nomination provisions. Such provisions require advance notice given to the company, typically 90 days prior to a general meeting, in order to be able to nominate a director. Such provisions mean that unless the company is notified prior to the nomination cut-off date, shareholders will have to wait for the next general meeting to nominate a director. Their presence, therefore, adds an additional element of insulation by giving the board more time to plan their response to an activist shareholder and by reducing the period in each year during which the board is most "vulnerable."

For some corporations the determination of their MI-index values is straightforward. A company that: (i) does not have a classified board, (ii) has a without cause removal right, and (iii) has the right to call interim meeting is allocated an MI-index value of 1. Similarly, a corporation that has a classified board and both (ii) and (iii) also receives an MI-index value of 1. However, for some companies several paths may have to be explored to determine their MI-index values. For example, consider a corporation that has a classified board with a with-cause removal right. Although the board could be declassified, it does not affect the removal right. But suppose further that the board can be packed immediately. Such a corporation also ends up with an MI-index value 1.

Figure 1 shows the different "paths" leading to each of our six outcomes. In the Internet Appendix, we describe each index value in detail and the paths leading to these values.

- Insert Figure 1 here -

MI-index values do not have a natural interpretation. For example, MI-index values 5 and 6 represent a level of management insulation that is vastly stronger than all the other levels. To facilitate the economic interpretation of the results, we also create an indicator variable that takes the value of one if the management insulation index is equal to five or six, otherwise it is zero. We call this variable the *Management Insulation Dummy (MID)*. This variable has a straightforward interpretation: it indicates those banks for which it would take two consecutive shareholder meetings for a majority coalition of shareholders to gain control of the board.

3 Data and Summary Statistics

Our initial sample consists of 476 US commercial banks that were publicly listed in 2008 and for which data were available in the BoardEx database. We define banks as those companies that held a banking license at the end of 2008. Our unit of analysis is a bank holding company. We exclude all banks that were initially floated after 2003, which reduces our sample to 421 banks.

We obtain data on participation of each bank in the Capital Purchase Program (CPP), as well as information on repayment of CPP funds from the official reports published by the U.S. Treasury and by the Office of the Special Inspector General for the Troubled Asset Relief Program (SIGTARP).

In order to construct the MI-index, we obtain the articles of incorporation and bylaws applicable between 2003 and 2007 for all remaining banks in our sample. We excluded all banks that were not listed throughout the 2003–2007 period. For the remaining banks, the documents were hand-collected using the SEC EDGAR database as well as state-based document repositories. We were able to obtain at least partial information for 317 banks, and full sets of all constitutional documents for the 2003-2007 timeframe for 276 banks. The majority of banks in our sample are not constituents of the S&P 1500 Index, and E-index values are therefore not readily available. We thus hand-collected information on our sample banks and coded them following Bebchuk, Cohen, and Ferrell (2009).

We obtain data on all Schedule 13D filings with the SEC during the 2003-2007 period from the WRDS SEC Analytics database. We obtain bank financial data from Worldscope. We use book assets as a proxy for bank size, and we measure leverage as assets over common equity. We collect detailed investor level ownership data from Bankscope and compensation data for the highest paid director from Capital IQ. We also

construct a variable that counts the number of bank acquisitions between 2003 and 2006. We only include those transactions in which the acquirer achieved full control by acquiring at least 50% of the target. For this we use the entire M&A database from Thomson One Banker and match the acquirer's name against the bank names in our initial database per year. We match the acquisitions of subsidiaries to the parent company. We construct a banking experience indicator variable that equals one if the director had a prior management or top-executive position in any bank, and an independence variable based on whether a bank director is declared independent. We adjust the independence variable for a number of dimensions such as prior employment and material client relationship.

We assign a score of 1 to 6 to each bank-year from 2003 to 2007, according to the procedure described in Figure 1. Table IA.I (in the Internet Appendix) shows the number of observations in each group. Note that each group represents a unique combination of provisions, rather than the sum of individual provisions. Thus, unlike the G-index, we cannot decompose the MI-index into subsets of provisions.

We find that most banks are either in group 2 (about 28%) or in group 6 (about 32%). Groups 1 and 4 are also significant (about 15% each), but groups 3 and 5 are both fairly uncommon. The distribution of management insulation scores is very stable over the years. The reason for this stability is the fact that the governance provisions that are used in the construction of the index are rarely modified (see also Figure IA.1, in the Internet Appendix).

Table IA.II (in the Internet Appendix) shows the cross-sectional annual averages of the MI-index (Management Insulation Index), the MID (Management Insulation Dummy), and the Classified Board Dummy (CBD). While 73% to 77% of the boards in our sample are classified in years 2003 to 2007, in only about 37-38% of the cases managers are substantially insulated from shareholder pressure. It is possible for banks with classified boards to achieve very low scores of management insulation. For example, in 2007, 16% of the classified-board banks had a management insulation index of 1 and 19.5% of such banks had a management insulation index of 2 (results not tabulated).

Table IA.III (in the Internet Appendix) shows the number of observations in each of the seven groups that form the E-index, for two selected years, 2003 and 2006. For our baseline year of 2003, we also show the proportion of observations with MID=1 for each E-index score. As expected, the larger E-index scores are associated with a higher probability if MID=1; this relation is monotonic. Table IA.IV (in the Internet Appendix) shows pairwise correlations for all insulation variables, including the *Entrenchment*

Dummy (ED), which is an indicator function of values of E-index greater or equal to 4. The MI-index and the E-index are positively correlated, but the correlation is not very high.

Table I presents the summary statistics of the main variables used in our empirical analysis. The unit of observation is a bank-year, thus the maximum sample size is 1,267. Some variables are, however, only available for some years. We see from Table I that about 56% of the banks in the sample received funds from the Federal Government's Capital Repurchase Program (CPP funds) during the financial crisis.

-- Insert Table I here --

4 Management Insulation and Bank Bailouts

To investigate the predictive ability of bank characteristics for bailouts, we estimate the following model:

$$\Pr(Y_i = 1|x_i) = \Phi(x_i'\beta), \quad (1)$$

where Y_i is an indicator variable that takes the value of 1 if bank i has received CPP funds in 2008/09, x_i is a vector of lagged bank characteristics (as of 2006 or earlier), β is a vector of parameters to be estimated, and Φ is the standardized normal cumulative distribution function (i.e., a Probit model). We report estimated marginal effects evaluated at the means of the data. Our results are not sensitive to the Probit specification.

Our main right-hand side variable of interest is the Management Insulation Dummy (MID), which is an indicator variable that takes the value of one if the MI-index equals 5 or 6 and zero otherwise. Using different partitions of the MI-index variable yields similar results.

We use the Entrenchment Dummy (ED) as an alternative measure of management insulation. The Entrenchment Dummy is an indicator function of values of E-index greater or equal to 4. We use this indicator variable to facilitate the comparison with the MID; we obtain similar results using the E-index instead of the ED (these results are omitted for brevity). We also use the Classified Board Dummy variable as a simpler alternative to both the MID and the ED.

Because of the small size of the sample, we choose a parsimonious set of covariates to be included in x_i. We use (the natural logarithm of) the book value of assets as a proxy for size. In order to give more functional-form flexibility to the effect of size on bailouts, we run spline regressions in which the effect of size on bailouts is allowed to differ

according to whether the value of the assets is in one of the following three groups: the bottom sextile (the 6-quantile) of the sample, the top sextile, or between these two. This particular specification has no important effect on the results.

Alongside size, in our baseline specification we also include leverage. We also include indicators for the bank's state of incorporation in some of the regressions (there are banks from 38 states in our sample).

In Table II, we report our main results. The table shows the marginal effects of the independent variables (evaluated at the means of the data) on the probability of bailouts. We use the term "marginal effect" for ease of exposition; our analysis is about predictive power, not causal effects. We report z-statistics within brackets. The main variable of interest is the MID variable, which is measured as of 2003 (the earliest date for which we have data). In Column (a) of Panel A we present the result of a univariate Probit regression. We find that banks with insulated managers are 19 percentage points less likely to be bailed out. The economic significance of this effect is substantial, as the percentage of banks that were bailed out in our sample is 56%. This effect is statistically precise, being 3.085 standard errors away from zero.

-- Insert Table II here –

In Column (b) we add the first set of controls: size variables and leverage. The effect of the MID is unchanged. We find that larger banks are more likely to be bailed out. The estimated slopes are roughly similar across the three size groups. Indeed, the results are similar in (unreported) regressions in which size is broken down into a different number of groups (either more or fewer groups). Leverage is positively related to bailouts. In Column (c) we add state dummies. The number of observations is reduced because there are ten states with just one bank in the sample. All estimated effects remain roughly unchanged. The statistical precision of the estimates falls due to a dramatic reduction in degrees of freedom, but still remains at adequate levels.

In Column (d) we include an additional set of control variables: board independence (as a proportion of board size), the proportion of independent directors with previous banking experience, a 20% block ownership dummy, the ownership stake of the insider with the largest interest in the bank, the number of acquisitions from 2003 to 2006, the fraction of variable pay over the total compensation for the highest paid director (which is typically the CEO), and (the natural logarithm of) the total compensation for the highest

paid director. The effect of management insulation on the probability of bailouts is virtually unchanged in this specification: banks with insulated managers are 22 percentage points less likely to be bailed out. Regarding the other control variables, we note that the effect of leverage is now larger and statistically stronger. The number of acquisitions is positively related to bailouts (not shown in the table). The number of acquisitions is strongly correlated with bank size and we cannot rule out the possibility that its positive effect on bailouts is simply a consequence of the too big to fail effect.

We next investigate the relation between bailouts and the ratio of non-interest income over net interest income. Non-interest income is a (possibly noisy) measure of a commercial bank's focus on nontraditional activities, such as investment banking and trading. Brunnermeier, Dong, and Palia (2020) argue that banks with higher non-interest income ratios contribute more to systemic risk than banks that focus more on deposit taking and lending. They also show that banks have increased their non-interest income ratios in the years prior to the crisis; the largest increases happened between 2000 and 2003. In Column (e), we add the ratio of non-interest income over net interest income in 2003 as another control variable. Non-interest income predicts bailouts (with a negative sign); the effect is borderline significant. In this specification, banks with insulated managers are 38 percentage point less likely to be bailed out. We note that because of a much-reduced sample size, this column is not fully comparable with the previous ones.

We conclude that the Management Insulation Dummy is a robust predictor of bank bailouts. Saturating the model with covariates and state dummies has virtually no effect on the predictive power of management insulation.

Our findings do not imply that shareholder interference "caused" the bailouts. First, in general we cannot ascertain causality from predictive regressions, as we cannot rule out the possibility that charters and bylaws are endogenously determined. Second, in a literal sense, laws, charters, and bylaws (or any other governance variable) cannot directly cause bank bailouts; bailouts are ultimately determined by some ex ante actions by bank executives and some other variables outside their control (i.e., luck, politics, etc.). That is, if we could directly observe those ex ante actions and include them in our predictive regressions, we would expect the coefficient on the MID variable to be zero. Thus, the best one could hope for is to find out whether our management insulation index correlates with some of these actions that led to bank bailouts. The fact that the MID variable is a robust predictor of bailouts suggests that shareholder empowerment correlates with a set of ex ante decisions that eventually led to bailouts.

The pattern of estimated marginal effects as more controls are added is reassuring. In virtually all cases in Table II, Panel A, the inclusion of additional controls tends to make the results stronger (in an economic sense). Because controls do not appear to make the estimated effects weaker, it seems unlikely that by simply adding more controls one could eventually find the key missing variable. For omitted variables to explain away the effect of the MID variable, we would need to find additional variables that are weakly correlated with the controls included in the specifications in Table II.

In Table IA.V (in the Internet Appendix), we report results using a finer measures of management insulation. We define low, medium, and high levels of insulation as MII scores of 1 and 2, 3 and 4, and 5 and 6, respectively. The results show that the ability of MII to predict bailouts comes mainly from the differences between medium and high levels of insulation in 2003.

Panel B of Table II reports results from regression in which we replace the MID variable with the Classified Board Dummy in 2003. We find that the marginal effects of CBD are both economically and statistically insignificant in all specifications. In Panel B we also replicate the previous regressions with the ED (the Entrenchment Dummy) replacing the MID. The sample size is reduced because of missing data. We find that management insulation (measured by the ED) is negatively related to the probability of bailout. However, the marginal effects are economically small and statistically weak.

To alleviate concerns about time-invariant omitted variables, in Table III we regress 2008-09 bailouts on changes in management insulation and other control variables.[6] Changes in the Management Insulation Index happen infrequently and are typically a consequence of modifications to the bank's charter or bylaws. In our data, a change in the MI-index occurs in less than 5% of the bank-years between 2003 and 2006. This variable is a proxy for recent shareholder interference. From 2003 to 2006, we find 23 annual decreases in MI-index, and 21 annual increases in MI-index (results not tabulated).

-- Insert Table III here –

Column (a) shows that a change of one unit of the MI-index from 2003 to 2006 predicts a reduction of 13 percentage points in the probability of a later bailout. Column

[6] Bank fixed effects regressions are not feasible because the outcome variable, the bailout indicator, is defined only for 2008/09 and thus exhibits no time variation.

(b) shows that a similar change in E-index does not reliably predict bailouts. Column (c) includes both indices; we find that a change of one unit of the MI-index from 2003 to 2006 predicts a reduction of 20 percentage points in the probability of a later bailout. The E-index again has no reliable predictive power for bailouts.[7]

Finally, we also estimate a specification similar to that in Column (d) of Table II in which we add both MID and the ED to the right-hand side, as well as 2003-2006 changes in the MI-index and the E-index (results not tabulated). We find that the MID remains a robust predictor of bailouts, with a marginal effect (-0.278, z-statistic -2.43) similar to those reported in Panel A of Table II. The previously small and insignificant negative effect of ED on bailouts vanishes (0.025, z-statistic 0.28) as the MID is included. Such a comparison suggests that, despite the positive correlation between the MID and the ED, the ability of the MID to predict bailouts comes exactly from those components of MID that are uncorrelated with the ED.[8]

Our preliminary conclusion is that the Management Insulation Dummy is a more precise measure of management insulation than either the E-dummy (or the E-index) or the Classified Board Dummy. It thereby avoids falsely categorizing "seemingly insulated" companies as insulated. Moreover, it is plausible that this measurement error skews empirical findings based upon the E-index or the classified board dummy. Where companies are seemingly insulated but the legal steps have not been taken to effectively ring fence that insulation, this indicates a lack of care and attentiveness by directors and managers to corporate governance as well as to the disciplining of advisors; a lack of care that offers a proxy for managerial incompetence and a plausible expectation that such seemingly insulated companies would perform poorly. Note in relation to the power of this incompetence-inference that such seemingly insulated companies are in the worst of all governance worlds: they are perceived negatively by many investors and commentators for being (seemingly) poorly governed and yet to the extent that insulation generates positive economic effects, they are not able to benefit from them. However, if this measurement error does not skew the empirical findings, it may be that in large samples, both the ED and the Classified Board Dummy may work well, as they are indeed correlated

[7] Because there are very few changes in the classified board dummy between 2003 and 2006, this variable is dropped in similar regressions as in Table III.

[8] Replacing the ED with the E-index yields very similar results.

with management insulation, however, in small samples, such as ours, a less noisy measure, such as the MII, is required for obtaining statistically significant results.

Are banks with high management insulation scores really more insulated from shareholder pressure? It is possible to identify shareholder activism events in some cases when changes in ownership stakes require filing with the SEC. Section 13d and Regulation 13D of the Securities Exchange Act of 1934 require that an investor who crosses a 5% beneficial ownership threshold in a publicly traded company must file a Schedule 13D form, unless that investor does not intend to change or influence the control of the corporation. If less insulated banks are subject to shareholder pressure, we would expect to see more 13D filings in relation to banks with low MI scores, and fewer such filings in relation to banks with higher MI scores.

In Table IV, Columns (a) and (b), we explore the relationship between the MID and the likelihood of activist investors taking a substantial equity position in the bank (as proxied by filings of Schedule 13D). We find that banks with the highest level of insulation in 2003 were between 16-19 percentage points less likely to experience a Schedule 13D filing in 2003-2007. This evidence suggests that banks with higher management insulation scores in 2003 were more likely to experience episodes of shareholder activism between 2003 and 2007.

-- Insert Table IV here –

By contrast, Columns (c) and (d) reveal that the ED variable is not robustly correlated with Schedule 13D filings. Column (e) shows that the MID robustly predicts bailouts even when the ED variable is included in the regression. Overall, the evidence in Table IV again suggests that the MID contains information that is not available in the ED.

5 Investigating the mechanism

In this section, we consider several explanations for the negative relation between management insulation and the probability of bailouts.

Banks with serious liquidity needs had no option but to apply for CPP funds. Participation in the CPP is, however, a less reliable indicator of bank performance during the crisis where reasons other than financial necessity played a role in banks' decisions to accept a bailout. A particular concern is that large banks that were considered systemically

important by government regulators may have had little choice but to accept CPP funds, regardless of whether managers felt that their institutions needed a bailout (see Calomiris and Khan (2015)). In addition, executives of such banks were incentivized to repay as early as possible in order to avoid the restrictions on executive compensation linked to CPP participation (Bayazitova and Shivdasani (2012)). To address these concerns, Table IA.VI (in the Internet Appendix) reports the output of regressions in which we exclude large banks and banks that took and repaid CPP funds within a year. Following the exclusion of both these groups, the MID remains a robust predictor of bailouts.

Some banks did not qualify for CPP capital injections or had their applications rejected because they were too weak (Bayazitova and Shivdasani, (2012); Duchin and Sosyura, (2014)). It is thus possible that our bailout dummy is a poor proxy for bank weakness. To consider this possibility, we first identify those banks that did not receive funds because they were too weak. These are banks that were closed by the FDIC shortly after the CPP was announced, banks that stated that they could not issue preferred shares because they had already defaulted/delayed payment on subordinated debt, or banks with other clear reasons for not receiving funds due to weakness. There are 14 banks in this category. We also identify eight banks that did not receive funds and subsequently failed (as of 2010). We then create two new indicator variables. The first one, which we call "bailout + weak bank dummy," is equal to 1 if a bank either is bailed out or is weak but is not bailed out. The second variable, which we call "bailout + weak + failed banks," is equal to the first one except that it also includes the failed banks in the group of bailed out and weak banks. These two new variables are arguably less noisy proxies for poor performance.

In Table V, Columns (a) and (b), we report the output of regressions using the same specification as in Column (d) of Table II (plus the change in insulation variable from 2003 to 2006) but replacing the bailout variable with these two different indicator variables. We find that the results become stronger. Now, those banks with MID=1 are about 33 to 35 percentage points less likely to be poor performers.

-- Insert Table V here –

The negative relation between management insulation and the acceptance of CPP funds could also be explained by badly-governed banks choosing not to apply for these funds. For example, Cadman, Carter and Lynch (2012) show evidence that compensation restrictions affected TARP participation. In that case, we expect the negative relation

between management insulation and the decision to apply for CPP funds to be even stronger than that between management insulation and bailouts. To test this hypothesis, we create an indicator variable that takes the value of 1 if a bank applied for CPP funds. We assume that all banks that received CPP funds applied for them. Of the remaining banks, we identify 34 banks that did apply for the funds but did not get them.

From Table V, Column (c), we see that the MID variable has a negative effect on the probability of applying for funds. This effect is, however, economically smaller than that of the bailout variable and is statistically imprecise. This result is explained by the fact that a large number of banks that applied for CPP funds, but did not get them, had the highest insulation scores. This evidence is difficult to reconcile with an interpretation in which badly-governed banks choose not to apply for bailout funds.

Some banks that received CPP funds exited from the program very early. An early exit could also be a symptom of bad governance. Bayazitova and Shivdasani (2012) show evidence that banks with high levels of CEO compensation were more likely to exit CPP early. Wilson and Wu (2012) argue that there was no compelling economic reason to repay CPP investments early, leaving open the possibility that badly-governed banks chose to exit the program against the interests of their shareholders. To address this possibility, we identify 23 banks that received CPP funds but repaid these funds at or before October 2009. We use this information to refine our CPP application dummy, which now classifies those banks that exited early in the same group as those that did not apply. We report the results in Table V, column (d). The estimated effect of the MID variable on the probability of applying for funds and not repaying them early is economically weaker than that reported in column (c), and its statistical precision is weak.

In Column (e) of Table V we estimate the probability of rejecting CPP funds, conditional on approval. The sample is restricted to those banks that had their applications approved. We find that banks with MID=1 are 27.6 percentage points more likely to reject CPP funds after approval. This result again casts doubt on the hypothesis that banks with insulated managers did not receive funds because they were weak. We conclude that insulated banks were less likely to be bailed out partly because some of these banks rejected pre-approved CPP funds.

Our evidence suggests that legal management insulation provisions predict 2007-08 bailouts because more insulated banks were in a stronger position during the crisis. This interpretation raises the question of whether measures of management insulation in 2003

can predict bank performance during the crisis, as measured by traditional variables such as return on assets or Tobin's q.

Table VI shows results of regression of ROA and Tobin's q, in both 2007 and 2008, on the 2003 values of the MID, the ED, and the CBD. We find no evidence that these insulation values in 2003 have any predictive power for ROA and Tobin's q.[9] The issue with these performance variables is that they are very noisy and only weakly correlated with bank bailouts. Thus, MID's predictive ability for bailouts does not translate into predictive ability for ROA and Tobin's q.

-- Insert Table VI here –

If management insulation predicts bailouts, it should also predict performance. Thus, the lack of predictive power of the MID for traditional measures of performance is a puzzle. Given the robust and strong ability of management insulation of predicting both bailouts and shareholder activism, there are two possible explanations for this puzzle. The first possibility is that insulation predicts bailouts for reasons other than firm performance. The second one is that bailouts may be a less noisy measure of performance than both ROA and Tobin's q, in the context of banks in a financial crisis. Bailouts have a direct effect on both variables. Newly injected funds allow banks to continue their operations, mitigating the negative impact of the crisis on profitability. Similarly, forward-looking stock prices should incorporate the positive effects of bailouts.

6 Final Remarks

The main contribution of this paper is to illustrate the usefulness of interpretable corporate governance indices. We develop an index of management insulation from shareholder pressure, which we call the Management Insulation Index (MI-index). The MI-index is an attempt to answer the question of how core corporate law rules make it more or less time-consuming to replace an incumbent board. We show that this index contains information that is useful for predicting bank bailouts during the crisis. We find that this metric is more informative that the existing leading index and other governance variables.

[9] We find similar results for cumulative stock returns over the periods 2003-06 and 2007-08.

Management insulation in 2003 predicts bank bailouts in 2008-9 in large part because high-insulation banks rejected bailout funds after these funds had been approved. The evidence strongly suggests that high-insulation banks were financially stronger. Why were insulated banks stronger? One possibility is that management insulation influence bank risk taking. Implicit or explicit state guarantees reduce bank creditors' incentives to discipline equity's risk shifting incentives (Jensen and Meckling (1976)). These guarantees may also make equity safer. Kelly, Lustig and Van Nieuwerburgh (2016) provide evidence that government guarantees to the financial sector have positive spillover effects on equity holders, and also that the implicit bailout promises are priced in the market. It may be that, in banks in which shareholders are less empowered, executives may have more scope to give effect to their own risk preferences, which, due to the less diversified nature of their human capital investments, are less risk-friendly than those of shareholders.

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Table I – Bank Characteristics: Summary Statistics

This table shows the summary of some bank characteristics. The *bailout dummy* equals 1 if the bank received CPP funds in 2008-09. The *change in management insulation* variable is the change in the MII variable from 2003 to 2006. *Bailed out or weak banks* corrects the bailout dummy by adding those banks that were too weak to receive CPP funds. *Bailed out or weak banks or failed banks* further corrects that dummy by adding banks that subsequent failed. *Applied for CPP* is a dummy for banks that applied to the CPP program and *Applied for CPP and no early repayment* adjusts that variable by correcting for banks that repaid early. *Approved, but rejected CPP* is a dummy variable indicating those banks that rejected CPP after having been approved. The *number of acquisitions 2003-2006* is the count of control stakes (>50%) acquired in other banks from 2003 to 2006 inclusive. All the other variables are for bank-years between 2003 and 2007. The *classified board dummy* equals 1 if the bank has a classified board. *Book value of assets* is measured in millions of US dollars. *Leverage* is the book value of assets divided by the book value of total equity. *ROE* is net income over equity. *Board independence* is the proportion of independent directors on the board. *Board directors' banking experience* is the proportion of independent directors with previous managerial experience in the banking industry. The *block ownership dummy (20%)* indicates the presence of at least one shareholder with an ownership stake of 20% or more. *Inside owner* (in %) denotes the ownership stake of the insider with the largest interest in the bank. HPD denotes the highest paid director in a bank, typically the CEO. *Change in Non-Interest Income* is the change of a banks' log-ratio of non-interest income to net interest income between 2003 and 2006.

	Summary Statistics				
Variable	*mean*	*st. dev.*	*min*	*max*	*n*
Bailout dummy	0.560	0.497	0	1	1267
Change in management insulation (2003-06)	0.024	0.748	-4	5	1267
Bailed out or weak banks	0.610	0.488	0	1	1267
Bailed out or weak banks or failed banks	0.637	0.481	0	1	1267
Applied for CPP	0.679	0.467	0	1	1267
Applied for CPP and no early repayment	0.592	0.492	0	1	1267
Approved, but rejected CPP	0.090	0.286	0	1	1267
Classified board dummy	0.757	0.429	0	1	1267
Book assets	23,184	135,195	76	1,715,746	1267
Leverage	11.384	3.290	2.512	38.307	1267
ROE	0.106	0.065	-0.622	0.391	1267
Number of acquisitions (2003-06)	2.114	5.273	0	52	1267
Board independence	0.735	0.134	0	0.944	1267
Board directors' banking experience	0.181	0.159	0	0.800	1267
Block ownership dummy (20%)	0.088	0.284	0	1	1267
Inside owner	2.547	6.075	0	50.030	636
HPD variable pay (over total pay)	0.241	0.224	0	1	1231
Total HPD pay (in thousands)	1,632	4,414	18	54,000	1230
Change in Non-Interest Income (2003-06)	-0.232	0.429	-1.977	1.177	919

Table II – Management Insulation and Bailouts

This table shows results of Probit regressions of bank bailouts on bank characteristics. The sample consists of all US banks for which data are available. The dependent variable – the bailout dummy – is equal to one if the bank received CPP money in 2008-09. The *Management Insulation Dummy* (MID), the Classified Board Dummy (CBD), and the Entrenchment Dummy (ED) are from 2003. The small size dummy indicates banks in the lowest sextile (6-quantile) of the sample size distribution, as measure by book assets, the large size dummy indicates banks in the top sextile, and the medium size dummy indicates banks in between the bottom and the top sextiles. See Table I for the definition of variables. All control variables are from 2006, unless otherwise stated. Additional controls include board independence, director banking experience, block ownership, inside ownership, number of acquisitions (2003-2006), and HPD compensation variables. Robust standard errors are clustered at state level. The reported coefficients represent marginal effects evaluated at the means of the data. Robust z-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

Panel A - Management Insulation

Independent Variable	*Dependent Variable: Bailout dummy*				
	(a)	(b)	(c)	(d)	(e)
Management Insulation Dummy-MID (2003)	-0.191***	-0.182**	-0.201**	-0.221**	-0.376***
	[-3.085]	[-2.215]	[-2.036]	[-2.004]	[-2.721]
Log assets times small size dummy		0.078	0.130	0.105	0.159
		[1.410]	[1.550]	[0.809]	[1.103]
Log assets times medium size dummy		0.093**	0.149**	0.127	0.163
		[2.196]	[2.153]	[1.097]	[1.436]
Log assets times large size dummy		0.094***	0.135**	0.107	0.163
		[2.883]	[2.482]	[1.062]	[1.617]
Leverage		0.019**	0.023**	0.040***	0.055*
		[2.034]	[2.074]	[3.857]	1.875]
Non-interest income/Net interest income					-0.560*
					[-1.688]
State dummies	No	No	Yes	Yes	Yes
Additional controls	No	No	No	Yes	Yes
Observations	276	276	266	248	151

Panel B – Board Classification and Entrenchment Index

	(a)	(b)	(c)	(d)	(e)
		Dependent Variable: Bailout dummy			
Classified Board Dummy (2003)	-0.020	-0.003	0.049	0.001	-0.107
	[-0.294]	[-0.055]	[0.578]	[0.015]	[-0.868]
Observations	276	276	266	248	151
		Dependent Variable: Bailout dummy			
E-index dummy (ED) (2003)	-0.058	-0.090	-0.067	-0.082	-0.053
	[-0.832]	[-1.323]	[-0.759]	[-0.807]	[-0.547]
Observations	258	258	248	236	143
Size and leverage controls	No	Yes	Yes	Yes	Yes
State dummies	No	No	Yes	Yes	Yes
Additional controls	No	No	No	Yes	Yes
Non-interest income/net interest income	No	No	No	No	Yes

Table III – Changes in Management Insulation and Bailouts

This table shows results of Probit regressions of bank bailouts (2008/09) on changes bank characteristics (from 2003 to 2006). The sample consists of all US banks for which data are available. The dependent variable – the bailout dummy – is equal to one if the bank received CPP money in 2008-09. The change in management insulation variable is the change in the MII variable from 2003 to 2006. The change in E-index is the change in this variable from 2003 to 2006. See Table I for the definition of variables. Robust standard errors are clustered at state level. The reported coefficients represent marginal effects evaluated at the means of the data. Robust z-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

Independent Variable	*Dependent Variable: Bailout dummy*		
	(a)	(b)	(c)
Change in Management insulation index (2003-06)	-0.132***		-0.204***
	[-2.675]		[-2.617]
Change in E-index (2003-06)		0.089	0.114
		[1.271]	[1.500]
Δ Log Assets	0.078	0.058	-0.009
	[0.567]	[0.428]	[-0.067]
Δ Leverage	-0.010	-0.005	-0.008
	[-0.732]	[-0.436]	[-0.576]
Δ Board directors' banking experience	0.009	0.223	0.113
	[0.016]	[0.455]	[0.226]
Δ Bank Experience	-0.067	-0.001	-0.103
	[-0.280]	[-0.003]	[-0.407]
Δ Block ownership dummy (20%)	0.168*	0.156*	0.171*
	[1.734]	[1.792]	[1.747]
Δ HPD variable pay	0.278	0.187	0.260
	[1.530]	[1.438]	[1.620]
Δ Total HPD pay	0.113	0.136	0.122
	[1.047]	[1.321]	[1.066]
State dummies	Yes	Yes	Yes
Observations	159	150	150

Table IV –Management Insulation and Shareholder Activism

This table shows results of Probit regressions of Schedule 13D filings during the period 2003 – 2007 on bank characteristics. The sample consists of all US banks for which data are available. The dependent variable – the "Schedule 13D Filing Dummy" – is equal to one if at least one Schedule 13D was filed between 2003 and 2007 and is zero otherwise. All control variables are from 2006, unless otherwise stated. "All controls" include log assets times small, medium, and large dummies, leverage, board independence, director banking experience, block ownership, inside ownership, number of acquisitions (2003-2006), and HPD compensation variables. See Tables I and II for the definition of these variables. Robust standard errors are clustered on state level. The reported coefficients represent marginal effects evaluated at the means of the data. Robust z-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

Independent Variable	*Dependent Variable: Schedule 13D Filing Dummy*				
	(a)	(b)	(c)	(d)	(e)
Management Insulation Dummy-MID (2003)	-0.156**	-0.187***			-0.244***
	[-2.335]	[-2.773]			[-2.662]
Change in management insulation (2003-06)		-0.093			-0.096*
		[-1.614]			[-1.806]
E-index dummy (ED) (2003)			-0.056	-0.048	0.014
			[-0.694]	[-0.630]	[0.159]
Change in E-index (2003-06)				-0.003	0.035
				[-0.034]	[0.394]
State dummies	Yes	Yes	Yes	Yes	Yes
All controls	Yes	Yes	Yes	Yes	Yes
Observations	234	234	224	220	220

Table V – Bailouts, Bank Strength, and the Decision to Participate

This table shows results of Probit regressions of five different indicator variables on bank characteristics. The dependent variables are: (a) banks that received CPP funds in 2008-09 or did not receive funds because they were too weak, (b) the same as in (a) plus all banks that failed up to 2010, (c) banks that applied for CPP funds, (d) the same as in (c) but without those banks that repaid funds before October 2009, and (e) banks that rejected CPP for a subsample of banks that did apply and were approved for CPP. All the other variables are as in Table II. Robust standard errors are clustered on state level. The reported coefficients represent marginal effects evaluated at the means of the data. The fraction of banks meeting the criteria is for: (a) 0.598, (b) 0.627, (c) 0.670, (d) 0.587 and (e) 0.141. Robust z-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

Independent Variable	*Dependent Variable*				
	(a)	(b)	(c)	(d)	(e)
	Bailed out or weak banks	*Bailed out or weak banks or failed banks*	*Applied for CPP*	*Applied for CPP and no early repayment*	*Approved, but rejected*
Management Insulation	-0.353***	-0.329***	-0.116	-0.067	0.276***
Dummy -MID (2003)	[-3.611]	[-3.438]	[-1.553]	[-0.811]	[3.121]
Change in management	-0.102**	-0.093**	-0.097*	-0.062	0.106**
insulation (2003-06)	[-2.113]	[-1.982]	[-1.757]	[-1.058]	[2.197]
Log assets times small size	0.061	0.048	0.114	0.046	0.006
dummy	[0.491]	[0.395]	[1.076]	[0.373]	[0.081]
Log assets times medium	0.091	0.076	0.128	0.060	-0.020
size dummy	[0.839]	[0.732]	[1.377]	[0.562]	[-0.301]
Log assets times large size	0.076	0.061	0.103	0.033	-0.018
dummy	[0.801]	[0.687]	[1.319]	[0.382]	[-0.298]
Leverage	0.059***	0.059***	0.035***	0.003	-0.022
	[4.572]	[4.619]	[3.222]	[0.282]	[-1.492]
State dummies	Yes	Yes	Yes	Yes	Yes
All other controls	Yes	Yes	Yes	Yes	yes
Observations	248	246	236	239	126

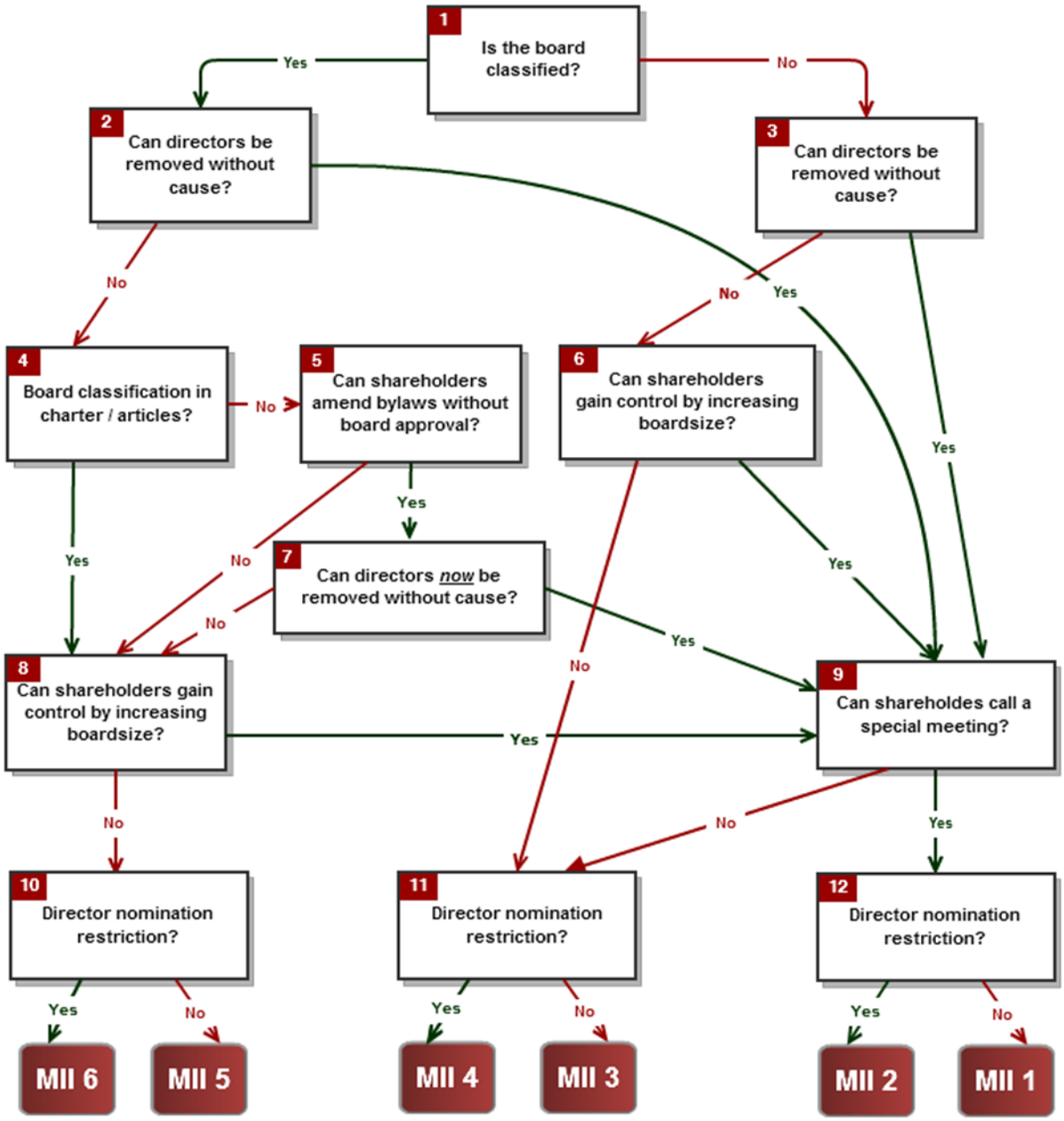
Table VI – Management Insulation, Return on Assets, and Tobin's q

This table shows results of OLS regressions of return on assets (ROA) and Tobin's q on bank characteristics. The sample consists of all US banks for which data are available. The Management Insulation Dummy, the Entrenchment Dummy, and the Board Classification Dummy are from 2003. The change in management insulation measure is the change in the MII, the E-index, or the board classification variable from 2003 to 2006. See Table I for the definition of control variables. All control variables are from 2006. Additional controls include firm size, board independence, director banking experience, block ownership, inside ownership, number of acquisitions (2003-2006), and HPD compensation variables. Robust standard errors are clustered at state level; t-statistics are in brackets. Asterisks indicate significance at 0.01 (***), 0.05 (**), and 0.10 (*) levels.

Panel A	*ROA*					
	2007			2008		
	(a)	(b)	(c)	(d)	(e)	(f)
Management Insulation Dummy-MID (2003)	-0.065			-0.241		
	[-0.842]			[-1.123]		
Entrenchment Dummy (2003)		-0.036			-0.187	
		[-0.457]			[-0.730]	
Classified board Dummy (2003)			0.053			-0.302
			[0.436]			[-0.963]
Change in Insulation Measure (2003-06)	0.096	0.010	0.265**	0.137	-0.230*	-0.839
	[1.354]	[0.121]	[2.503]	[1.073]	[-1.698]	[-0.937]
Leverage	-0.018**	-0.020***	-0.018**	-0.088*	-0.100*	-0.103**
	[-2.319]	[-2.833]	[-2.275]	[-1.871]	[-1.992]	[-2.423]
State Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Additional controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	249	238	249	246	235	246
R-squared	0.266	0.250	0.254	0.200	0.197	0.204

Panel B	*Tobin's q*					
	2007			2008		
	(a)	(b)	(c)	(d)	(e)	(f)
Management Insulation Dummy (2003)	0.004			0.011		
	[0.606]			[1.281]		
Entrenchment Dummy (2003)		0.002			0.009	
		[0.286]			[1.158]	
Classified board Dummy (2003)			0.000			0.005
			[0.066]			[0.431]
Change in Insulation Measure (2003-06)	0.011	0.004	0.021	0.009	0.004	0.026*
	[1.401]	[0.794]	[1.650]	[1.099]	[0.420]	[1.884]
Leverage	0.000	-0.000	-0.000	-0.001	-0.001	-0.001
	[0.072]	[-0.203]	[-0.083]	[-1.330]	[-1.493]	[-1.314]
State Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Additional controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	258	246	258	255	243	255
R-squared	0.338	0.313	0.319	0.341	0.347	0.327

Figure 1 – The Management Insulation Index



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