

# Why Bank Governance is Different

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## Abstract

This paper reviews the pattern of bank failures during the financial crisis and asks whether there was a link with corporate governance. It revisits the theory of bank governance and suggests a multi-constituency approach that emphasizes the role of weak creditors. The empirical evidence suggests that on average banks with stronger risk officers, less independent boards and executives with less variable remuneration incurred fewer losses. There is no evidence that institutional shareholders opposed aggressive risk taking. The Financial Stability Board published Principles for Sound Compensation Practices in 2009; the Basel Committee on Banking Supervision issued Principles for enhancing corporate governance in 1999, 2006 and 2010. Shareholders retain residual control and executive pay continues to be aligned with shareholder interests. Bank governance is different and requires more radical departures from the traditional corporate form.

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## 1. Introduction

The international corporate governance discussion is mostly concerned with weak shareholders and dominant executives in the United States, insufficiently engaged shareholders in the United Kingdom and powerful but conflicted blockholders in most other countries. The traditional conflict between shareholders, managers and boards is also present in banks. Many banks, and most of the largest banks, are limited liability stock corporations. Like any other type of corporation they can be afflicted by board failure on strategy and oversight, misaligned or perverse incentives, empire building, conflicts of interest, weaknesses in internal controls, incompetence and fraud.

Banks also have specific governance issues. The very nature of the banking business weakens the traditional corporate governance institutions of board and shareholder oversight. Banks have the ability to take on risk very quickly, without being immediately visible to directors or outside investors. A multitude of quickly evolving and technically complex activities need to be monitored by specialists who are in short supply. In widely held banks, shareholder oversight is exercised by conflicted financial institutions, expensive, and/or carried out by insufficiently qualified personnel. Regulation and valuation difficulties weaken the potential role of the market for corporate control. In blockholder controlled banks, including state controlled institutions, lending is easily steered to favourite blockholder projects. Banks are heavily regulated, but they also have strong political influence, fostered by revolving-door appointments and substantial donations to political parties.

Banks are multi-constituency organisations. Depositors and bondholders contribute almost all of a bank's capital, yet most decisions are taken by managers, boards and shareholders. Bank executives do not have to seek permission from depositors before changing a bank's risk profile. Depositors can "run", but in most countries they are indifferent to the bank's financial prospects because they are protected by deposit insurance or a state guarantee. During the financial crisis this guarantee was extended to bondholders and other creditors, who had refused to roll over their loans. The largest, most complex and most difficult to govern institutions are covered by an implicit "too big to fail" guarantee. What should be the role of unprotected creditors, deposit insurers and the state - as the ultimate provider of guarantees for protected creditors - in bank governance? Is bank regulation a complement or a substitute for corporate governance?

Empirically it has been difficult to establish a link between bank failures and corporate governance: partly because government rescues have masked the true extent of the problems, and partly because so many factors have contributed. Even so, recent empirical research on corporate governance and the crisis confirms that bank governance is different. There is powerful evidence of executive remuneration induced risk-shifting at U.S. investment banks, commercial banks and insurance companies. Risk-taking at these institutions is highly correlated with short-term cash payouts in the form of base pay, bonuses, share and option sales. The relationship is robust to variations in the degree of executive-shareholder interest alignment, as measured by insider ownership. It is also robust to a series of corporate governance measures, like board independence or how well the bank was shielded from the market for corporate control. The latest evidence also suggests that losses at banks with "tougher boards", boards that were more independent of the senior executives, were larger. There is, so far, no direct evidence that shareholders insisted on more risk taking, but there is no evidence that they opposed it either.

The latest Basel Principles for enhancing corporate governance recognize that boards and executives have a responsibility to creditors and not just to shareholders but do not change the fundamental power structure in banks; shareholders continue to appoint and remove directors. To make the new accountability effective it might be necessary to experiment with deeper reforms, for example the idea of having creditors represented on the boards, either directly or through a representative agent, like the deposit insurance fund. This type of representation would also facilitate the operation of bail-ins and other types of resolution requiring debt to equity swaps at very short notice. The board member would not have to be an employee of the deposit insurer, but could be nominated by the fund.

The current proposals on remuneration reform have similar shortcomings. Remuneration reform at banks was a G20 decision and Financial Stability Board (FSB) has published implementation standards. The emphasis is on aligning remuneration more closely with risk taking. Again, these reforms move in the right direction, but there are substantial implementation problems. Banks are allowed to develop their own policies and will make their own risk adjustments. It is doubtful that supervisors will have the competence or resources to monitor these developments. Simple rules might be preferable to idiosyncratic complexity.

Section 2 looks back at financial institutions that failed during the crisis and explores if there is any obvious correlation with organizational form or specific corporate governance characteristics of these firms. Section 3 reviews why bank governance differs from the governance of non-financial institutions. Section 4 reviews the existing empirical evidence, particularly on executive compensation and boards. Section 5 reviews the main reform proposals. Section 6 concludes.

## **2. Bank Failures During the Financial Crisis**

The financial crisis first manifested itself in early 2007. The Federal Reserve Bank of St. Louis marks the beginning of the crisis with the filing for Chapter 11 bankruptcy protection by the New Century Financial Corporation and an announcement by the Federal Home Loan Mortgage Corporation (Freddie Mac) that it would no longer buy the most risky subprime mortgages (27 February 2007). CNN sets the initial marker to 7 February 2007, when HSBC announced substantial losses linked to the U.S. subprime market. A string of failures in the United States and Europe followed, including the nationalisation of Northern Rock in the United Kingdom, the bailout of Bear Stearns by the U.S. Federal Reserve, the bankruptcy of Countrywide Financial in California and the government rescues of IKB in Germany and Roskilde Bank in Denmark. Events accelerated in September 2008 with the U.S. government taking Freddie Mac and its sister government-sponsored enterprise, the Federal National Mortgage Association (Fannie Mae), into “conservatorship” and Lehman Brothers filing for bankruptcy. Banks started failing on a daily basis and there was widespread panic in equity and credit markets.

The authorities on both sides of the Atlantic reacted by launching unprecedented assistance programmes. In the U.S. the Troubled Asset Relief Programme (TARP) made direct investments totalling \$204.7 billion in 739 banks. These investments went to the largest troubled banks to prevent them from failing and to the strongest smaller banks to prop up their capital and stimulate lending. The Federal government also assisted credit unions (\$57bn), Fannie Mae and Freddie Mac (\$110.6bn). The largest single recipients of aid were the American International Group (AIG, \$127.4bn), Citibank (\$50bn) and Bank of America (\$35bn). Despite these efforts the total number of failures among FDIC insured banks from 2007 to October 2010 was 295, at a cost to the deposit insurance fund of \$45.4bn (Table 1).

In Europe most Member States provided general guarantees for the whole banking system as well as support for the weakest banks, through capital injections, guarantees on bank liabilities, impaired asset relief and funding support. State aid to the banking system in each Member State had to be notified to and approved by the European Commission's Directorate General for Competition. Most schemes were approved but often tied to corporate restructuring requirements or other conditions. In contrast to TARP, most of the aid did not take the form of capital injections (capital purchases), but guarantees. The general view was that banks were not insolvent but merely suffering from a liquidity crisis. The hope was that the guarantees and other liquidity supporting measures would ensure that the guarantees would never result in actual losses for the state.

In the case of Belgium, the Netherlands and the United Kingdom the total effective aid granted by July 2009 exceeded 20% of GDP and in the case of Ireland 229% (Table 2). In 2010 it became evident that the largest Irish banks were not suffering a liquidity crisis but were actually insolvent. Their recapitalisation and guarantee related losses caused a sovereign debt crisis, resulting in a bailout from the European Union and the IMF. The Irish banks had previously passed European Union wide stress tests, casting serious doubts on the methodology employed, as well as the resolution procedures employed.

According to the European Commission's data, relatively few banks had received specific assistance between the beginning of the crisis and the end of October 2010, with the largest number of aid cases reported from Germany, followed by the U.K., Belgium, Ireland and the Netherlands (Table 3).<sup>1</sup> Bulgaria, the Czech Republic, Romania and Slovakia did not implement any assistance programmes.

The crisis resolution mechanisms in the United States and the European Union proved to be inadequate. In the United States the FDIC handled smaller bank failures, including the sale of the Washington Mutual to JP Morgan efficiently and effectively. However, the FDIC was unable (or not allowed) to deal with the largest cases, like Citibank. The insurance giant AIG was outside the FDIC's competence, as well as the shadow banking sector. In Europe many Member States found themselves incapable of implementing swift resolution. Shareholders in the otherwise bankrupt Fortis Holding and Hypo Real Estate took the Belgian and the German governments to court, arguing that their rights had been violated during the rescues. The Icelandic case revealed the subtle difference between subsidiaries and branches. The Lehman Brothers creditors and staff in London were surprised to learn that all cash balances in London had been transferred to New York the night before the Chapter 11 filing. The U.K. was fortunate to have updated its legal toolbox after the run on Northern Rock. Regulation and bank governance had not kept up with the growing integration of the European and the transatlantic financial system.

The attitude of governments towards the banks the state invested in was similar across countries. The equity holdings were administered by a variety of vehicles that were either in existence for other purposes (in Belgium) or specially created (in Denmark, Germany, the U.K. and the U.S.). The equity investments were regarded as passive and the governments refused to get involved in the governance of the individual banks as a majority shareholder, with the exception of general restrictions on

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<sup>1</sup> The table does not report state aid to the financial sector of EEA members Iceland, Norway and Liechtenstein since this is monitored by EFTA and not the European Commission. An investigation into the aid granted for the transformation of the failed Icelandic banks Glitnir, Kaupthing and Landsbanki into successor banks Islandsbanki, Arion and NBI (Landsbankinn) was only launched in December 2010.

remuneration and payout policies imposed during the recapitalisation. The role of the government, or bondholders after a bail-in, as an equity holder in a rescued bank is an important issue but beyond the scope of this paper.

Is there a link between bank governance, leverage, risk taking and bank failure? The empirical answer is not self-evident. The list of institutions that failed, or only survived because they received assistance from the state, is heterogeneous. It involves real estate investment trusts, insurance companies, savings banks, commercial banks, investment banks and banking conglomerates. Most failed institutions were organised as stock corporations, but some were mutual banks or credit unions. Most stock corporations were widely held, but some had large outside shareholders. In the European case, many of the failed institutions were owned and/or controlled by the state. In some countries almost the entire banking sector collapsed, in other countries (Canada is a notable example) no banks failed at all.

The sources of loss and the reasons for failure also vary across countries and institutions. Among the worst affected were those that participated directly in the origination and/or distribution of asset backed securities and derivative products, but were unable or unwilling to offload their positions on time. Banks that invested heavily in these securities also suffered; these included the U.S. credit unions and many of the European (“sucker”) banks. Several banks had made or were in the process of making corporate acquisitions, at what turned out to be disastrously high prices. Northern Rock in the U.K. had expanded aggressively by reducing staff in branches and taking deposits through the internet. In an uncertain environment a computer problem on the weekend and the photo of a queue outside an understaffed branch caused a bank run. Regular mortgage lenders in Denmark, Ireland, Spain, the United Kingdom and the United States were badly affected by the local fall in house prices. Many institutions were simply caught in the general liquidity squeeze and the oncoming recession. Most failures were due to a combination of factors.

### **3. What is Different about Bank Governance**

The nature of banks’ activities present unique challenges that need to be addressed by their governance mechanisms. This section explores some of the specificities of financial intermediation and their implications for corporate governance.

A crucial function performed by commercial banks – and, increasingly in recent years, by the shadow banking sector as well – is *maturity transformation*: using the very liquid demand deposits desired by investors to invest in risky, illiquid projects with a distant payoff horizon by providing long term loans or equity investments. The role played by the banks in this process involves (i) reducing risk by putting together a diversified loan and investment portfolio, and (ii) bearing the cost of generating the information needed to select and monitor the projects in which money is invested. As formalized in the seminal analysis of Diamond and Dybvig (1983), the maturity mismatch leaves banks open to *liquidity risk* in the form of bank runs: even when the bank’s underlying business is fundamentally sound, mass withdrawal of short-term funding may necessitate premature liquidation of long term investment projects. Deposit insurance is a means to discourage such concerted withdrawals of deposits and short-term funding from banks that would otherwise be solvent.

This begs the question of why financial intermediaries do not use more long-term funding to mitigate the maturity mismatch problem. The root cause of the problem lies in the very nature of the business,

which is fast moving, *risky and opaque*, so that it is very difficult to ensure through bond covenants or other means of monitoring that creditors' money is not put at undue risk. Banks are in the business of taking risks; they can take on risk quickly and easily; they can mask, to some extent, how much risk they take. Their portfolios are often illiquid and hard-to-value, their positions shift rapidly and their assets and liabilities can be extremely complex. This compromises the availability of long-term funding, be it debt or equity.

Long-run debt is much less commonly used to fund operations than short-run debt, due to the opacity and riskiness of the business. Shareholder-creditor conflicts are potentially important and *risk shifting* in particular is a major concern, especially in bad times when the going-concern value of the bank is low and its management is tempted to “gamble for resurrection” by investing in heads-I-win-tails-you-lose bets that provide upside potential for the owners while exposing creditors to the downside. Normally short-term funding curtails risk shifting because funding quickly dries up when a financial institution reaches this point. But with government deposit insurance, this disciplinary effect is absent and needs to be replaced by regulatory monitoring and intervention; a hard-won lesson from the savings and loan crisis of the late 1980s, when troubled S&Ls (due to maturity mismatch: interest rates required to attract depositors rose dramatically in the 1980s, while the interest on their outstanding loan book did not rise in step) gambled heavily by investing in junk bonds, which hugely increased the ultimate cost to taxpayers. Capital requirements for FDIC-insured institutions were tightened considerably in the wake of that crisis but attention to the problem waned over time (Morgenson and Rosner, 2011).

Outside equity financing is also vulnerable to agency problems because of the opaque nature of the business which makes it difficult to distinguish profitable business from that which generates short-term gains at the expense of an unacceptable long-term downside. Thus, in particular in investment banking, inside equity has traditionally been the norm, with the equity supplied by the partners who make the main decisions. In recent years, however, a growing number of investment banks have sought equity from outside investors and converted to publicly listed firms. Even so, banks tend to minimize the amount of equity capital tied up in their business. The tax advantages of debt finance and the effective government subsidy to the use of debt - both via explicit deposit insurance and in the form of less clearly delineated implicit guarantees - are added reasons for firms to economize on equity capital even in normal times. In bad times, shareholder-bondholder conflicts mean that firms will not or cannot obtain equity capital altogether – a problem known as *debt overhang*. For example, at the helm at Lehman Bros., Dick Fuld had ample opportunity to raise additional equity in the year before its demise, but “dithered”, effectively choosing not to. In Appendix 2 we provide an example of debt overhang that illustrates how a firm that approaches insolvency will be unwilling to shore up its capital, and, if the situation worsens any further, unable to do so.

### *Compensation in Banks*

There are important theoretical caveats to the standard model when applied to the financial services industry. The first caveat is the absence of leverage. The standard theory refers to an all-equity firm with no debtholders, a feature it shares with most other compensation theories that are normally discussed in corporate governance. Banks are highly leveraged organisations. When managers are rewarded with stock grants they have a conflict of interest with debtholders, just like any other bank shareholders. The fear of loss of human capital or reputation might make managers less inclined to take risks than ordinary shareholders. The combination of leverage with the other caveats discussed

below make it more likely though that bank executives have an incentive to take more risks than desired by shareholder or debtholders.

The second caveat is the absence of endogenous choice of risk or volatility of earnings. There is no link between incentives and risk-taking, a central feature of a reward model for banks. The third caveat the discrepancy between the stock grants in the model and bank remuneration practice. In the run-up to the crisis the bulk of variable compensation was made composed of stock-options and/or cash bonuses.

The fourth caveat is the assumption of market completeness. Investors are assumed to be risk neutral so there is no scope for asset bubbles. House price bubbles have been a major feature of the crisis in the United States, the United Kingdom, Ireland, Spain, Denmark and some parts of Eastern Europe. A policy relevant theory of pay in banks should therefore allow for bubbles. Bolton, Scheinkman and Xiong (2006) introduced a model of financial markets that relies on the idea that investors have fundamentally different sets of opinion making them disagree about the fundamental value of a company, or another type of asset. Bubbles can develop because optimists will buy stocks and the short sales constraint will prevent the pessimists from betting against that stock. The stock (or house, or mortgage backed security) is held most often by optimists. The bubble is generated by the idea that an optimist hopes to be able to sell to someone who is even more optimistic than him- or herself. Investors do not look at fundamental value but at how opinions evolve over time taking into account what other investors will think in the future. The bubble bursts when the most optimistic optimists are unable to find a buyer.

Allowing for the endogenous choice of volatility or risk and putting together bubbles with volatility choice easily generates incentives towards excess risk-taking, even for an all equity firm. Investors try to maximise the fundamental value of the firm, but they also want to maximise the speculative option value, the option to be able to sell to a more optimistic investor. Since option value is strictly increasing with volatility shareholders and managers owning shares have an incentive to increase volatility.

### *Rewarding Beta*

The problem of rewarding bankers is similar to rewarding mutual fund managers. In the mutual fund literature, there has been a long time quest for rewarding alpha, not beta, the sensitivity of fund returns with respect to a relevant market. Mutual fund managers should not be awarded for market movements, but for their “contribution to alpha”, the intrinsic performance of the fund. It is also understood that fund managers have career concerns.

In practice, bank CEOs are awarded with at the money options. These options are not indexed to any measure of a market portfolio, or some other benchmark. Without correcting for beta, very large and positive stock price returns might be purely driven by very high loading on beta. In a boom phase a high beta bank will, by definition, outperform the market. The CEO will have an incentive to increase the sensitivity of the bank’s performance to the market, which is not very difficult. The CEO will be managing the bank for a relatively short period of time and will retire or vest his or her options, or stock, before the boom is over.

The situation is even worse with bonuses tied to absolute performance. Bonuses are pure cash-payoffs. Restricted stock, or options that are convert to restricted stock, are a contribution to the

bank's capital, at least during the time they cannot be sold. We now have solid empirical evidence that there was a strong link between total cash payouts for senior executives and risk taking at U.S. banks in the run-up to the crisis.

Are there alternative remuneration schemes that align executive incentives more effectively with creditors and deposit insurers? Bolton, Mehran and Shapiro (2010) develop a model that proposes to link executive compensation to leverage. In the model, the shareholders of a leveraged institution will provide CEOs with monetary incentives to take excessive risk. To avoid this problem, the authors propose to link executive pay to stock price performance, but a measure of default risk. In particular they propose to link to the CDS spread of the bank relative to the average CDS spread for a basket of banks. To the extent that the CDS spread deviates, being larger or smaller than the average, the CEO is rewarded or penalised.

#### **4. Bank Governance is Different : The Evidence**

Bank governance is different in theory. Is it also different in practice? We review the latest empirical studies that explore the link between corporate governance characteristics of financial institutions and how they fared during the financial crisis. We look at the “usual suspects” in corporate governance: boards and ownership. We then turn of executive pay and internal control.

##### *4.1 Boards*

Post-Enron reforms in the United States imposed substantial changes on corporate boards. In 2003 the New York Stock Exchange and Nasdaq altered their listing rules requiring domestic U.S. issuers to appoint a majority of independent directors to the board and to establish audit, nominating and compensation committees composed entirely of independent directors. Companies had to put the new requirements in place no later than the end of October 2004. Outside the United States similar recommendations were made through corporate governance codes, but they were not binding. There were also recommendations to reduce board size and appoint directors with enough free time. The Basel recommendations on bank governance issued in 2006 endorsed these measures but also emphasised qualifications: “Board members should be qualified for their positions, have a clear understanding of their role in corporate governance and be able to exercise sound judgement about the affairs of the bank (Principle 1)”. Basel also extended the concept of independence to mean independent from management and from large shareholders, including the state.

How did banks respond? A recent study of international bank boards (Ferreira, Kirchmaier, Metzger 2010) confirms that the average U.S. bank holding company board became smaller, had more independent, less busy and somewhat less competent directors (Table 5). The U.S. banks always exceeded the NYSE independence requirement: The percentage of independent directors was already 51% in 2000 but increased further to 67% in 2007. The average board size decreased from 15 to 11.6 members. The average bank board outside the United States did not adopt the U.S. reforms. The number of independent directors was consistently smaller than 50%, boards were larger than in the U.S. and populated by directors with more outside appointments. However a larger percentage of directors had previous banking experience (36% compared to 18% in the United States in 2006).

Looking across countries board independence did not prevent failure in the U.S., the U.K. and Ireland, but did not prevent stability in Canada and India (Ferreira et. al. 2010, Table III). Independence does correlate with losses at the bank level. Erkens, Hung and Matos (2010) regress stock performance and

write-downs during the crisis on the percentage of independent directors across a heterogeneous sample of 296 banks.<sup>2</sup>Independence has a positive effect on losses, even when controlling for other factors, like institutional ownership.<sup>3</sup>Beltratti and Stulz (2011) only look at deposit taking banks. They find that banks with more shareholder-friendly boards, measured by aggregated scores for meeting minimum standards for “good-governance” attributes relating to board independence, composition of committees, size, transparency and conduct, as defined by Institutional Shareholder Services, fared distinctly worse during the crisis. The sample is more comparable across banks but small (98 large deposit takers), so country effects outside the U.S. are poorly identified.

Cross-country studies control imperfectly for interactions between board independence and local institutions potentially biasing the results. Minton, Taillard and Williamson (2011) avoid this problem by studying a large sample of U.S. commercial banks (75%), savings and loans associations (~23%) and investment banks (2%) from 2003 to 2008. They confirm that board independence correlates positively with poor stock performance and decreases in market-to-book ratios during the crisis. However, for the pre-crisis period (2003-2006) board independence has an insignificant impact on risk-taking in large commercial banks. However, there is a strong positive relation with the percentage of independent financial experts on the board: “this result is [...] more generally consistent with a more financially knowledgeable board having a better understanding of more complex investments and potentially encouraging bank management to increase their risk taking” (pg. 24).<sup>4</sup>The reverse interpretation is equally plausible: banks that wanted to take more risk appointed independent directors with more financial expertise (Mehran, Morrison and Shapiro 2011).

Evidence from Europe suggests that the boards of failed institutions did not understand what some employees of the bank were doing. In Germany and Spain board incompetence correlates very strongly with losses incurred during the crisis at state controlled *Landesbanken* (Hau and Thum 2009) and state or church dominated *Cajas* (Cuñat and Garicano 2010). They seemingly contradict the U.S. findings.

The contradiction illustrates the limitation of regression analysis in the formulation of policy recommendations, particularly across countries. The regression analysis from Germany is consistent with the latest interview “evidence”: the underpaid and insufficiently qualified bankers at IKB and the *Landesbanken* were no match for highly motivated bond salesmen from London and New York (Lewis 2011). However, forensic analysis by Ernst & Young into the demise of Sachsen LB on behalf of its owner, the *Land*, squarely blamed the management: the board had not been informed about the deteriorating situation of the bank’s Irish conduits. Board members never had a chance to show their (in)competence.<sup>5</sup> In contrast, the board and the management New Century Financial appear to have acted quite deliberately. A number of directors and executives told the bankruptcy examiner that they did not focus “on whether borrowers could meet their obligations under the term of the mortgage”, but “whether the loans New Century originated could be initially sold or securitized in the secondary market” (Missal 2008, pg. 4). Board competence appears to be a requisite for avoiding *Landesbanken*

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<sup>2</sup>The sample is biased to the U.S. (125 banks); larger countries include Germany (19 banks), Italy (19), the U.K. (17) and Switzerland (15).

<sup>3</sup>The study reports more independence for non-U.S. boards than Ferreira Kirchmaier and Metzger (2010).

<sup>4</sup>Fernandes and Fich (2009) present contradictory evidence; they find that the likelihood of failure and/or of receiving bailout funds was smaller when banks had boards with more financial expertise. Minton, Taillard and Williamson (2011, pg. 6) conjecture that differences in variable definition and/or sample composition might explain the inconsistency.

<sup>5</sup>Geinitz, Christian, “Gutachter kritisieren Vorstand scharf”, FAZ.net, 11 March 2008

and *Cajas* type problems. Financially experienced boards must be given the right incentives to dissuade them from taking excessive risks.

#### *4.2 Ownership and Control*

Did concentrated shareholders encourage non-executive bank directors and managers to take on more risk and/or more leverage? We review the available evidence on institutional ownership, blockholders (including state ownership) and ownerless banks. There is one piece of convincing evidence that institutional shareholders did not oppose risk taking, but no direct evidence that they encouraged risk taking. Previous results suggesting that blockholder ownership outside the United States was associated with bank instability has been called into question by the crisis.

The available evidence is indirect and comes from studies that correlate the percentage of institutional ownership with risk-taking and/or shareholder returns, while controlling for other governance variables. They find a positive relationship on (Beltratti and Stulz 2011, Erkens, Hung and Matos 2010). The findings are consistent with theory, but not conclusive.

In the case of the United States there is an active debate how much influence institutional shareholders have on corporate policy. Institutional activism through shareholder proposals is ineffective (Karpof 2001). Hedge fund activism is more effective (Brav, Jiang and Kim 2009) but in 2000-2008 was rarely targeted at banks (Becht, Franks and Grant 2011). In the United Kingdom, institutional shareholder can have substantial influence on directors and boards, but such influence is often exercised in private (Becht, Franks, Mayer and Rossi 2009). There is evidence from Parliamentary hearings on the absence of formal shareholder dissent at UK banks. This includes advisory votes on executive pay that were phased in during the pre-crisis years and non-existent in the United States (Table 7). If there had been private dissent it is likely that institutional shareholders, given their embarrassment over the losses incurred, would have made these records public. We therefore conclude that institutional shareholders did not oppose risk taking at banks, but there is no direct evidence that they lobbied for it. What would have happened if bank boards had proposed pay packages linked to debt and not to equity remains a counterfactual.

Outside the United States banks are frequently controlled by blockholders. The blockholder is typically a family or the state and often appoints representatives to the board. Institutional ownership is not relevant unless the blockholder also favours more risk taking. The attitude to risk taking by blockholders is ambiguous (Section 3). A widely cited pre-crisis study found that the presence of a 10%+ blockholder correlates with more risk taking, as measured by Z-scores (Laeven and Levine 2009). The finding would suggest that countries with blockholder dominated banks fared worse in the crisis. This was not the case. Countries with particularly stable banks (high Z-scores) during the 1996-2001 sample period were Ireland, the United Kingdom and Switzerland, three countries with widely held banks that collapsed during the crisis (LL 2009 Table A1). In contrast, many countries dominated by blockholder banks had low Z-scores and withstood the crisis very well, like Brazil, India and Korea.

There is a more recent cross-country study that includes the crisis period. Gropp and Köhler (2010) regress bank risk measured by the deviation of return on equity 2008 from its average 2003-2006 for a large number of listed and non-listed banks in OECD countries on various bank and country characteristics. They find a small positive effect of ownership concentration that is dominated by an

“anti-director-rights index” country dummy that correlates very strongly with ownership dispersion; the net-effect suggests that losses were greater for widely held banks. The largest losses were incurred at (widely held) bank holding companies, but the losses at investment banks are reported as not significant. The latter result casts serious doubt on the accuracy of this dummy variable.

Government ownership of banks is controversial and a number of pre-crisis studies have argued that such ownership is associated with underdeveloped financial systems, instability and low growth.<sup>6</sup> Again, the crisis has contradicted this evidence, but not completely. In the OECD as a whole losses at state controlled bank were insignificant (Gropp and Köhler 2010). As we discussed in the board section, losses did occur in Belgium, Germany and Spain.

Theory predicts that “ownerless banks” like mutual or cooperative banks that are “owned” by depositors take fewer risks than corporate banks. This proposition found some support in the U.S. savings and loans crisis. Corporate savings banks took greater risks than savings banks that were organized as mutual companies. Casual inspection of the list of failed institutions (Tables 1-3) indicates that with the exception of the *Cajas* in Spain, one U.K. and one Irish case most other failures occurred at corporate banks. Gropp and Köhler (2010) report that cooperative and mutual banks suffered small, but savings banks much larger losses.

The empirical evidence on the role of institutional shareholders and blockholders is suggestive but not conclusive. In some cases, the results appear dubious. Like for boards, crude cross-country regressions are unlikely to provide reliable answers.

#### *4.3 Pay for Performance*

The leading theory of executive compensation was formalised most completely by Holmström and Tirole (1993). The setting is a widely held corporations with weak shareholders who want to align the CEO’s long-run objectives with their own. The model shows that this can be achieved by rewarding CEOs with stock. Jensen and Murphy (1990) had already shown empirically that the sensitivity of CEO pay to share price performance in the United States was low had been declining since the 1950s. On average, CEOs only participated with \$3.25 in a \$1000 change in shareholder value.

The idea of aligning CEO pay more closely with the stock price of a listed corporation is the one essential foundation behind executive compensation practice today. In this view it makes sense to focus on the stock price because under the efficient markets hypothesis it is an unbiased estimate of the fundamental value of the firm. Hence by making CEO compensation sensitive to the stock price shareholders induces managers to focus on long-term value. The stock price itself becomes a measure of CEO performance.

Fahlenbrach and Stulz (2009) look at the performance of biggest sample of about 95 bank holding companies and investment banks, from 2006 going forward through the crisis. In particular, they measure performance by buy-and-hold returns from July 1st, 2007, to December 31st, 2008. This performance measure is regressed on five different measures for CEO incentives: cash bonus and salary, dollar ownership, dollar equity risk sensitivity, percentage ownership and percentage risk sensitivity. If we think that compensation is one of the causes of the crisis, then we would expect to

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<sup>6</sup> A related pre-crisis literature links bank ownership to lending, for example Sapienza (2004). We do not review these findings here.

see that those bank CEOs whose incentives were less well-aligned with shareholders, would have bigger losses. So one would expect to see that the lower, say, the CEO's dollar ownership in a bank, the worse its performance.

In a key regression of the paper, however, Fahlenbrach and Stulz find the opposite: just focusing on dollar ownership, the coefficient obtained is significantly negative. This means that the more a bank CEO held in stock, the worse the performance of the bank going forward. They repeat the regression adding some controls, such as stock return level for 2006, book to market, log market value, and so on, but the coefficient remains negative. This leads Fahlenbrach and Stulz to conclude that based on their analysis, there is no evidence that CEO incentive misalignment caused worse performance. If anything, it is the opposite: it is greater alignment that caused worse performance.

Adding the controls to the regression does reveal a striking additional relationship, namely that book to market comes in with a negative coefficient. There is a suggestion in the paper that proposes a possible explanation for this finding: The better incentivised CEOs had stronger incentives to take risks.

The second aspect of short-term risk incentives that Fahlenbrach and Stulz focus on is that if managers were mismanaging the bank, they would have obviously known. They would have seen trouble coming and they would have, at the very least, tried to sell their stock, so as not to incur any losses. Their conclusions are, in that context, rather surprising. When they look at insider trading, reported trading of stock by bank CEOs, in their sample three-quarters of the CEOs did not sell any shares at all. So we might conclude they did not see any trouble coming, or at least they thought they were running their bank appropriately and they did not need to sell their stock. They compute how much the CEOs actually lost on this buy-and-hold strategy, that is on average close to \$30 million, which is a substantial number.

Regarding the losses of the CEOs in the crisis, a somewhat different perspective is taken by Bebchuck, Cohen and Spamann (2009). What they do is they look at Bear Stearns and Lehman Brothers and they just look at how much the top executives made at Lehman and Bear Stearns. They come up with some really striking numbers: the top five executives at Bear Stearns and Lehman Brothers made between \$1.4 billion and \$1 billion cumulatively in cash bonuses and equity sales before the firm's collapse.

What is really striking about these numbers, in our view, is that Bear Stearns is a firm that is about ten times smaller than Lehman, and yet its management walked away with much more in terms of compensation. Bebchuck, Cohen and Spamann conclude that a performance-based compensation at Bear Stearns and Lehman did not result in an alignment of executive interest with long-term shareholder value. When the stock options vest there is an opportunity to sell the stock and this is what gives rise to short-term incentives. The executives are induced to pay attention to assuring that they can sell at a good price when the options vest, rather than to preserving the stock's value in the long term.

The most compelling study of the link between compensation structures in the financial services industry and risk taking is Cheng, Hong and Scheinkman (2010). Did compensation structures in the financial industry create incentives towards excess risk taking? To address this question the authors study how residual executive compensation in the U.S. financial industry (that is, the compensation that cannot be explained by firm size and by industry factors) is related to measures of risk taken by

the firm (as perceived by the market) and to performance. The authors find striking evidence of a positive correlation between the level of residual pay with the firm's beta and other measures of risk. This finding is consistent with the hypothesis that executives were rewarded or encouraged to take excessive risks. The authors also find evidence of the fact that the executives who received the highest remuneration in the years leading up to the crisis were those in firms that performed the worst in the crisis. Chesney, Stromberg and Wagner (2010) confirm these findings by documenting a link between risk-taking incentives, independent boards and write-downs during the crisis. Tang and Wang (2011) show that high ratios of deferred compensation and pension payments to equity correlate with less risk taking.

#### *4.4 Internal Control*

Financial institutions are in the business of managing risk and one should imagine that risk control function is central to the corporate governance of such organisations. As we learnt during the financial crisis and the hearings that were conducted in its aftermath, risk control was inadequate in many cases.

Ellul and Yerramilli (2010) formally investigate the potential link between risk control, risk taking and losses incurred at the largest listed U.S. bank holding companies (BHC). To measure the strength of risk management inside a BHC they construct three "Risk Management Indices" (RMI) that capture various combinations of ten observable characteristics of the risk management function: Does the bank have a Chief Risk Officer (CRO)? Is the CRO a senior executive? Is the CRO among the highest paid five executives? What is the ratio of CRO to CEO pay? Do the outside directors on the risk committee have banking experience? How often does the risk committee meet? Is the meeting frequency above average? What is the percentage of outside directors with banking experience? Is the proportion above average? Does the relevant risk committee report directly to the board, and not just to the CEO?

There is a surprising degree of variation among the 70 largest listed bank holding companies in the United States. In only just over half the cases did the risk committee report directly to the board or was the CRO a senior executive. Only one out of five CROs was among the highest paid executives. Three quarters of CROs were paid less than 36% of the CEO. Ellul and Yerramilli (2010) find that the last measure, labelled "CRO centrality" is the dominant component when they related the RMI index to risk taking.

Banks with more risk controls before in 2006 took fewer risks and suffered fewer losses during the crisis. The results also hold from year-to-year over the whole period 2000-2008. They are robust to a number of control variables, like bank holding company size, CEO pay to performance sensitivity, institutional ownership and the absence of takeover defences. The carefully conducted empirical study confirms the anecdotal evidence that emerged from reports and hearings on individual cases.

Case study evidence points in the same direction. The Valukas (2010) report on the Lehman bankruptcy power states that senior management "disregarded its risk managers, its risk policies, and its risk limits" (Vol. 1, pg. 46). In 2007 the press reported that Lehman removed its Chief Risk Officer and the head of its fixed incomes division "because of their opposition to management's growing accumulation of risky and illiquid investments". In the U.K. a parliamentary investigation into the failure of HBOS alleged that its risk officer was made redundant for raising questions about the level and types of risk the bank was taking on. The former Chairman under examination declined to

comment (BBC News 2009). The case study evidence leaves little doubt that failures in internal risk management were a major contributor to bank failures.

## 5. Reform Proposals

The OECD Principles of Corporate Governance (1999) are the standard reference for policy makers in developed economies. The publication of the Principles was triggered by the 1996 Russia/Asia/Brazil crisis and they are one of the twelve key standards for sound financial systems adopted by the Financial Stability Board. A revised version was published in 2004 to take into account the lessons from the 2001/2002 Enron/Worldcom bankruptcies in the United States and the 2003 Parmalat scandal in Europe. These failures also gave rise to the Sarbanes-Oxley Act of 2002 and a European Commission corporate governance action plan.

In parallel the Basel Committee on Banking Supervisors formulated specific recommendations for bank governance. The first Basel Principles were published in 1999 and significantly updated in 2006. In both cases the Committee sought to complement the OECD Principles with what were believed to be specific governance requirements of banks. The Basel Committee also published a separate framework for internal control. In the previous section we discussed why these principles, frameworks and recommendations fell short: The 1999 version put too much emphasis on shareholders; the 2006 revision recognized the need to protect depositors and other creditors but came too late; well established principles, like those on internal control, were not sufficiently applied. The Basel Committee incorporated lessons from the crisis in a further update of the Principles (Basel Committee 2010).<sup>7</sup>

Reforming remuneration in banks is such a political priority that the G20 governments and the Financial Stability Board treat the subject separately. The FSB published *Principles for Sound Compensation Practices and Implementation Standards* in 2009. The FSB also conducted a peer-review of the implementation of the standards. The Basel Committee has been charged with developing an assessment methodology for prudential supervisors and to analyze the remuneration practices banks have put in place. The overarching theme is “risk-adjusted remuneration”.

In parallel the United States, the European Commission and individual states conducted their own reviews of local bank failures and put forward laws and/or recommendations. These include the Dodd-Frank bill in the United States, the Walker Recommendations (2010) in the United Kingdom and the European Commission’s Green Paper on the Corporate Governance of Financial Institutions (2010). Separate rules have been put in place for banks that received direct investment or aid from the relevant governments. We concentrate our discussion on the Basel Principles (2010) and the FSB (2009) remuneration standards, the main international reference documents.

The Basel Principles (2010) now state that bank governance is different: “from a banking perspective, corporate governance involves the allocation of authority and responsibilities [] including how they [...] protect the interests of depositors, meet shareholder obligations, and take into account the interests of other recognized stakeholders [supervisors, governments, bond holders]” (pg. 5). The Principles seek to protect these interests by broadening the duty of the board (“the board should take into

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<sup>7</sup>The OECD (2010) has put out an implementation note for its own principles based on the experience of the financial crisis.

account the legitimate interests of shareholders, depositors and other relevant stakeholders”; pg. 8) and assigning supervisors the role of monitors with the power to seek remedial action. The board is strengthened through the appointment of more competent directors and by reinforcing the risk management function, including an upgrade of the chief risk officer. The Principles are consistent with theory and the empirical evidence but they do not break with pre-crisis tradition: “the primary responsibility for good corporate governance rests with boards (supported by the control functions) and with senior management of banks” (pg. 33). Shareholders continue to appoint and remove the management or supervisory boards.<sup>8</sup> Will these boards really serve the interests of non-shareholder constituencies?

Remuneration policy reform is also in line with theory and the empirical evidence. The standards insist that remuneration in banks must be adjusted for risk.<sup>9</sup> The main difficulty is implementation. The Basel (2011) analysis of remuneration methodologies applied by banks post-crisis illustrates the challenge. What is the appropriate performance benchmark? Banks are considering a range of internal and external, relative and absolute, quantitative and qualitative measures. What is the appropriate risk-adjustment method? Many banks distinguish between quantitative and qualitative ex-ante and ex-post risk adjustment. Ex-ante adjustments take into account the risk of future adverse outcomes. Ex-post adjustments refer to observed outcomes. This can include “malus clauses” withhold all or part of deferred remuneration or “clawbacks” that claim back awards. How is the remuneration policy governed? Risk management and remuneration must be closely integrated and anchored appropriately at board level.

Numerous issues remain unsolved, in particular the incentives of senior management continue to be aligned more closely with shareholders than with other constituencies, in particular depositors and other creditors. The Basel Committee (2010) analysis indicates that shareholder returns remain a widely used performance benchmark. Vesting periods remain short (typically three years) and “long term” risk adjusted incentives continue to be awarded as equity. The administration of deferral and adjustment schemes is time consuming and costly. There are tax and legal issues.

Complexity, opacity and subjectivity in risk-adjustment is a major concern. Banks are being allowed to experiment with remuneration methodologies they believe are most suitable for their particular circumstances. This is appropriate in theory but puts a substantial assessment burden on supervisors. In the absence of full public disclosure the heterogeneity of methods makes it almost impossible for interested outside parties, like creditors, analysts, credit rating agencies or academic researchers to assess the validity of the methodologies employed. The increasing range of remuneration practices will also provide opportunities for abuse. The tradeoff between simplicity and verifiability versus flexibility and complexity requires additional thought and study.<sup>10</sup>

## 6. Conclusion

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<sup>8</sup> Board members appointed by controlling shareholders “should have responsibilities to the bank itself, regardless who appoints them” (pg. 15).

<sup>9</sup> The standards also recommend taking into account a broad range of risk, in particular credit, market, liquidity, operational, business legal and reputational risk. Liquidity risk had been vastly underestimated before the crisis.

<sup>10</sup> There are worrying parallels with capital adequacy regulation. Basel I was simple rigid and imposed additional cost on some banks but difficult to game. Basel II was superior in theory but banks and supervisors failed in developing, applying and assessing the appropriate risk-weighting models; in some cases deliberately.

Financial regulation and policy has started to recognize that bank governance is different. Boards are supposed to have responsibilities to creditors as well as shareholders. Remuneration will be adjusted for risk. Internal control will be strengthened. These are positive developments supported by theory and the available evidence. The reforms do not go far enough. Creditors need a formal role in the corporate governance of banks, for example a seat on the board. The remuneration of executives must be aligned more simply and directly with debtholders, for example through convertible bonds. Investment banks might have to be forced back to the partnership model, with the decision makers putting up most of the equity capital.

The corporate governance of banks is interconnected with other areas of banking reform, such as deposit insurance and the authority of the deposit insurers, the power of regulators to intervene in internal control, the debate about complexity and scope, capital adequacy and capital structure. In each case due attention must be given to the impact reforms will have on the incentives of managers and boards. The crisis has shown that incentives matter. Without the right incentives for those running banks all other reform will fail.

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**Table 1. FDIC Insured Bank Failures in the United States during the Financial Crisis and the Savings and Loans Crisis**

Dollar Amounts in Billions	2010 YTD	2009	2008	2007	2006	2005	1995	1994	1993	1992	1991	1990
<b>Commercial Banks</b>	6.622	6.839	7.086	7.283	7.401	7.526	9.941	10.452	10.959	11.463	11.921	12.343
<b>Savings Institutions</b>	1.138	1.173	1.219	1.251	1.279	1.307	2.030	2.152	2.262	2.390	2.561	2.815
Total Insured	7.760	8.012	8.305	8.534	8.680	8.833	11.971	12.604	13.221	13.853	14.482	15.158
<b>Combined Dep. Ins. Fund</b>												
Fund Balance	\$ -8,0	-20,9	17,3	52,4	50,2	48,6	28,8	23,8	14,3	0,2	-6,9	4,1
Insured Deposits	\$ 5.423	5.407	4.751	4.292	4.154	3.891	2.664	2.589	2.602	2.675	2.734	2.760
Reserve Ratio	% -0,15	-0,39	0,36	1,22	1,21	1,25	1,08	0,92	0,55	0,01	-0,25	0,15
<b>Problem Institutions</b>												
Number	860	702	252	76	50	52	193	318	575	1.066	1.430	1.496
Assets	\$ 379	403	159	22	8	7	31	73	348	601	837	647
Number Failed Institutions	127	140	25	3	0	0	8	15	50	179	268	381
Failed Assets*	\$ 83,282	169,709	371,945	2,615	0,000	0,000	1,226	1,601	9,977	89,554	143,455	146,586
Number Assisted Institutions	0	8	5	0	0	0	0	0	0	2	3	1
Assisted Assets*	\$ 0,000	1.917,482	1.306,042	0,000	0,000	0,000	0,000	0,000	0,000	0,034	0,079	0,014
Estimated Losses(DIF)	\$ 19,422	35,615	17,982	0,120	0,000	0,000	0,113	0,194	0,698	7,447	15,120	22,030
Resolution Receivables**	\$ 49,684	38,409	15,766	0,808	0,482	0,533	4,143	8,197	13,396	27,824	18,675	12,935

YTD refers to January – September 2010

\* Prior years have been revised to reflect failed/assisted assets as reported on the Call Report for the quarter prior to failure/assistance.

\*\* Includes remaining receivership assets from prior years

Source : FDIC

**Table 2. Investments under the TARP Capital Purchase Programme in Excess of \$1bn**

Name of Institution	State	Investment Amount	Repayment by Jan 2011
Citigroup Inc.	NY	\$25.000.000.000	Full
JPMorgan Chase & Co.	NY	\$25.000.000.000	Full
Wells Fargo & Company	CA	\$25.000.000.000	Full
Bank of America Corporation	NC	\$15.000.000.000	Full
The Goldman Sachs Group, Inc.	NY	\$10.000.000.000	Full
Morgan Stanley	NY	\$10.000.000.000	Full
Bank of America Corporation	NC	\$10.000.000.000	Full
The PNC Financial Services Group Inc.	PA	\$7.579.200.000	Full
U.S. Bancorp	MN	\$6.599.000.000	Full
Capital One Financial Corporation	VA	\$3.555.199.000	Full
SunTrust Banks, Inc.	GA	\$3.500.000.000	No
Regions Financial Corporation	AL	\$3.500.000.000	No
Fifth Third Bancorp	OH	\$3.408.000.000	No
Hartford Financial Services Group, Inc.	CT	\$3.400.000.000	Full
American Express Company	NY	\$3.388.890.000	Full
BB&T Corp.	NC	\$3.133.640.000	Full
The Bank of New York Mellon Corporation	NY	\$3.000.000.000	Full
KeyCorp	OH	\$2.500.000.000	No
CIT Group Inc.	NY	\$2.330.000.000	No
Comerica Inc.	TX	\$2.250.000.000	Full
State Street Corporation	MA	\$2.000.000.000	Full
Marshall & Ilsley Corporation	WI	\$1.715.000.000	No
Northern Trust Corporation	IL	\$1.576.000.000	Full
Zions Bancorporation	UT	\$1.400.000.000	No
Huntington Bancshares	OH	\$1.398.071.000	Full
SunTrust Banks, Inc.	GA	\$1.350.000.000	No
Discover Financial Services	IL	\$1.224.558.000	Full

Note : In total there were 739 investment recipients.

Source : TARP Transactions Report for the Period Ending January 19, 2011

**Table 3. State Aid to European Banks during the Crisis as a Percentage of GDP**

Country	Capital Injections	Guarantees on Bank Liabilities	Relief of Impaired Assets	Liquidity and Bank Funding Support	Total Effective for All Measures	Deposit Guarantee Scheme (in Euro, unless otherwise indicated)
Austria	1,7	5,1	0,4	1,5	8,7	100%
Belgium	6,1	16,3	4,2	NR	26,7	100 000
Bulgaria	0	0	0	0	0	50 000
Cyprus	0	0	0	0	0	100 000
Czech Republic	0	0	0	0	0	50 000
Denmark	0,3	0	0	0,3	0,5	100%
Estonia	0	0	0	0	0	50 000
Finland	0	0	0	0	0	50 000
France	0,8	4,5	0,2	0	5,6	70 000
Germany	1,6	7,1	0,4	0	9,1	100%
Greece	1,5	1,2	0	1,8	4,6	100 000
Hungary	0,1	0	0	2,6	2,7	100%
Ireland	4,2	225,2	0	0	229,4	100%
Italy	0	0	0	0	0	~103 000
Latvia	1,4	2,8	0	4,7	8,9	50 000
Lithuania	0	0	0	0	0	100 000
Luxembourg	7,9	NR	0	0,9	8,8	10000
Malta	0	0	0	0	0	100 000
The Netherlands	6,4	7,7	3,9	7,5	25,4	100 000
Poland	0	0	0	0	0	50 000
Portugal	0	3,3	0	0	3,3	100 000
Romania	0	0	0	0	0	50 000
Slovakia	0	0	0	0	0	100%
Slovenia	0,4	0	0	0	0,4	100%
Spain	0	3,2	0	1,8	5	100 000
Sweden	0,2	8,8	0	0	8,9	50 000
United-Kingdom	2,6	9,5	0	14,7	26,8	50 000 (**)

Notes:

NA - Not Available indicates that the information is not available in the public domain

NR - Not Reported indicates that the amount was not reported by the Member State in its reply to the EFC questionnaire

(\*) Member States shall ensure that the coverage for the aggregate deposits of each depositor shall be at least EUR 50 000 in the event of deposits being unavailable. The same coverage level should apply to all depositors regardless of whether a Member State's currency is the euro or not.

Member States outside the euro area should have the possibility to round off the amounts resulting from the conversion without compromising the equivalent protection of depositors.

(\*\*) The minimum level is £50 000 and in no event less than €50 000.

Data from Commission Services. Effective figures are provisional and subject to cross-checking with Member States, cut-off date: Mid May.

Approved measures, cut-off date: 17 July 2009.

Source : European Commission DG Competition, DG Competition's review of guarantee and recapitalisation schemes in the financial sector in the current crisis, 7 August 2009

**Table 4. European Banks Receiving Specific State Aid 2008-2010**

Country	Institution receiving aid 2008-2010	Note
Austria	Bank für Arbeit und Wirtschaft (BAWAG AG)	Bailed out first in 2005 when bank was Union owned; bought by private equity fund in 2006
Austria	Hypo Group Alpe Adria (HGAA)	Acquired by Bayerische Landesbank from State of Kärnten
Austria	Hypo Tirol Bank	Bank owned by state of Tirol that guarantees capital issuance
Belgium	KBC Group	Controlled by private outside blockholders
Belgium	Fortis	Controlled by Belgian and French state
Belgium	Dexia	Widely held Franco-Belgian group with public sector clients; restructured
Belgium	Ethias	State controlled cooperative
Denmark	Fionia Bank	Taken over by the Danish Financial Stability Company (FSC) and sold on
Denmark	Roskilde Bank	Taken over by National Bank and Private Contingency Association; assets transferred to FSC
Denmark	EBH Bank	Taken over by FSC
Denmark	Løkken Sparekasse	Taken over by FSC and merged with EBH Bank
Denmark	Eik Bank	Taken over by FSC
Denmark	Gudme Raaschou Bank	Taken over by FSC
France	Caisse d'Épargne / Banque Populaire	Merger between the two banks
Germany	Westdeutsche Landesbank	<i>Landesbank</i>
Germany	Landesbank Baden Württemberg	<i>Landesbank</i>
Germany	Bayerische Landesbank	<i>Landesbank</i>
Germany	Hypo Real Estate	Had acquired state controlled Depfa mortgage lender
Germany	HSH Nordbank AG	<i>Landesbank</i>
Germany	Commerzbank	Widely held; acquired Dresdner Bank from Allianz with significant U.S. exposure
Germany	IKB	Subsidiary of state controlled KfW
Ireland	EBS Building Society	Mutual society without shareholders
Ireland	Anglo-Irish Bank	Widely held bank
Ireland	Allied Irish Bank	Widely held bank
Ireland	Bank of Ireland	Widely held bank
Ireland	Irish Nationwide Building Society	Mutual society without shareholders
Latvia	Parex Bank	Nationalisation
The Netherlands	ING	Widely held bank with significant U.S. exposure
The Netherlands	Aegon	Widely held insurance company with significant U.S. exposure
Spain	Caja Castilla La Mancha	Non-listed savings bank
Sweden	Carnegie Bank	Listed investment bank that was nationalised in 2009
United Kingdom	Northern Rock Plc	Mostly online bank that failed after a bank run
United Kingdom	Lloyds Banking Group	Widely held bank
United Kingdom	Bradford and Bingley	Widely held bank after demutualisation
United Kingdom	Dunfermline Building Society	Mutual society without shareholders
United Kingdom	Royal Bank of Scotland	Widely held bank

Source : European Commission DG Competition State Aid Database

**Table 5. Evolution of Bank Board Composition, 2000-2008**

Year	Mean Board Size	Independent Directors as % of all Directors	Mean % of Outside Directors with previous banking experience	Mean of average number of board appointments of outside directors
Panel 1 : All Banks (N=718)				
2000	15,0	41%	29%	3,6
2001	14,8	44%	28%	3,5
2002	14,4	49%	28%	3,6
2003	12,4	62%	23%	3,0
2004	11,9	66%	21%	2,9
2005	11,7	67%	21%	2,9
2006	11,6	67%	21%	2,9
2007	11,7	65%	23%	2,9
2008	11,7	63%	24%	2,9
Panel 2 : United States Banks (N=500)				
2000	13.7	51%	21%	2,8
2001	13.7	55%	22%	2,8
2002	13.1	62%	22%	2,8
2003	11.4	69%	20%	2,5
2004	11.2	72%	18%	2,5
2005	10.8	73%	17%	2,5
2006	10.7	74%	18%	2,5
2007	10.7	74%	18%	2,5
2008	10.6	73%	20%	2,5
Panel 3 : Non-U.S. Banks (N=218)				
2000	17.0	25%	41%	4,9
2001	16.6	27%	37%	4,6
2002	16.4	30%	37%	4,8
2003	16.1	34%	36%	4,8
2004	15.4	40%	35%	4,7
2005	15.5	39%	36%	4,6
2006	15.3	40%	36%	4,6
2007	15.2	36%	37%	4,4
2008	15.0	35%	38%	4,0

Source : Ferreira, Kirchmaier, Metzger (2010)

**Table 6. Total Executive Payout at Bear Sterns and Lehman Brothers**

	Bear Stearns			Lehman Brothers		
	CEO	Executives 2-5	Top 5 Executives	CEO	Executives 2-5	Top 5 Executives
Bonus	\$87,509,569	\$239,337,718	\$326,847,287	\$70,594,415	\$102,407,231	\$173,001,646
Sales of stock	\$289,088,081	\$817,237,620	\$1,106,325,701	\$470,695,782	\$389,315,896	\$860,011,678
Stock remaining	\$11,656,420	\$17,494,360	\$29,150,780	\$0	\$0	\$0
<i>Sub-Total</i>	<i>\$388,254,070</i>	<i>\$1,074,069,698</i>	<i>\$1,462,323,768</i>	<i>\$541,290,197</i>	<i>\$491,723,127</i>	<i>\$1,033,013,324</i>
Initial Stock	\$360,277,489	\$437,934,567	\$798,212,056	\$194,570,847	\$194,778,981	\$389,349,828
Initial Options				\$106,197,280	\$105,654,222	\$211,851,502
<i>Sub-Total</i>	<i>\$360,277,489</i>	<i>\$437,934,567</i>	<i>\$798,212,056</i>	<i>\$300,768,127</i>	<i>\$300,433,203</i>	<i>\$601,201,330</i>
Net Payoff	\$27,976,581	\$636,135,131	\$664,111,712	\$240,522,070	\$191,289,924	\$431,811,994

Source : Bebchuk, Cohen and Spamann (2010), Tables 4 and 5

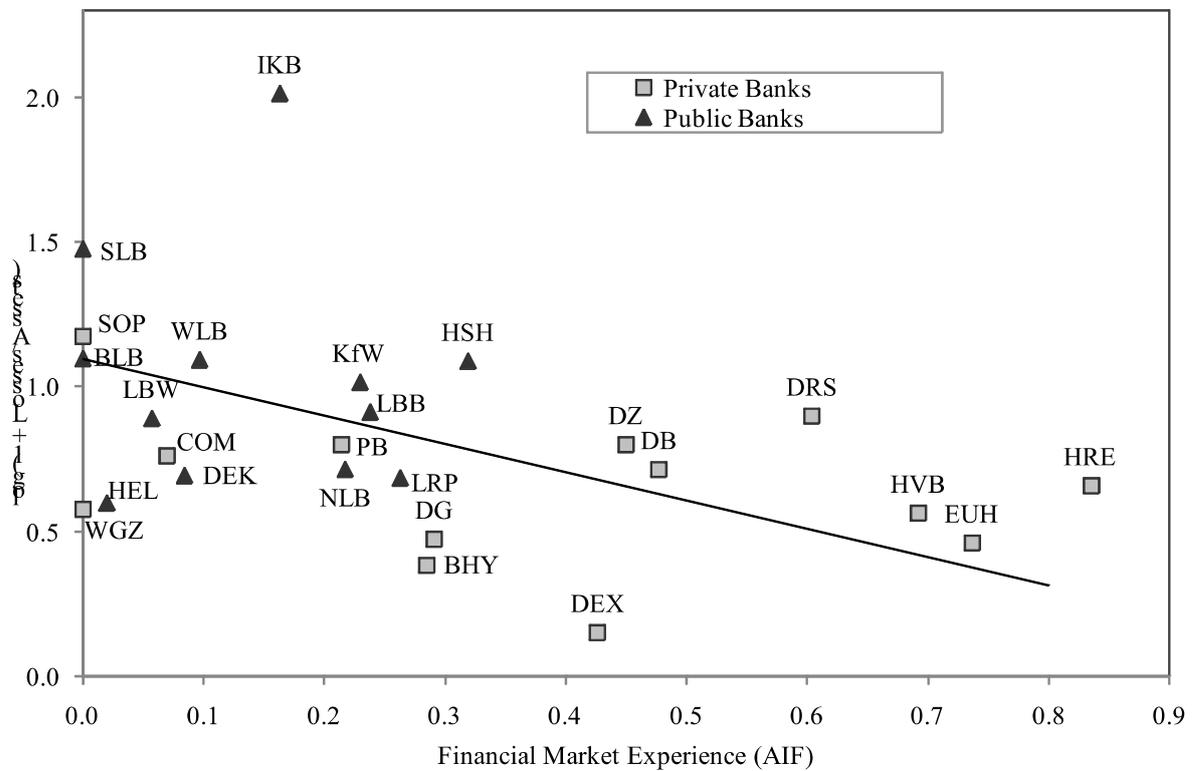
**Table 7. Formal Shareholder Dissent in the U.K.**

The table shows the percentage of dissenting votes in (binding) director elections and in (advisory) votes on share-based remuneration and on remuneration reports. In resolutions brought by the company board “dissent” is measured as the percentage of votes cast against or withheld; in shareholder resolutions “dissent” are the votes cast for the motion or withheld. The number of banks and voting decisions varies considerably by year and type of motion. For further details the full dataset is contained in the Manifest report.

Year	Director Election Dissent Votes (Average)			Long Term Incentive Arrangements Dissent Votes (Average)			Remuneration Report Dissent Votes (Average)		
	UK Banks	FTSE100	Difference	UK Banks	FTSE100	Difference	UK Banks	FTSE100	Difference
1998	1.3%	3.7%	-2.4%	2.6%	8.1%	-5.5%	N/A	N/A	N/A
1999	1.0%	3.6%	-2.5%	9.2%	7.3%	1.9%	N/A	8.5%	N/A
2000	1.2%	3.3%	-2.1%	4.4%	11.7%	-7.4%	N/A	12.7%	N/A
2001	2.7%	3.5%	-0.8%	14.5%	15.9%	-1.3%	N/A	8.5%	N/A
2002	3.3%	3.8%	-0.5%	27.4%	13.5%	13.9%	4.7%	8.8%	-4.1%
2003	3.6%	4.7%	-1.1%	4.5%	11.0%	-6.5%	12.8%	17.1%	-4.2%
2004	2.0%	1.9%	0.1%	10.1%	5.8%	4.4%	10.8%	9.6%	1.2%
2005	1.1%	1.5%	-0.4%	5.7%	5.6%	0.1%	6.0%	6.6%	-0.7%
2006	1.1%	1.6%	-0.5%	3.7%	6.6%	-2.9%	6.6%	6.1%	0.4%
2007	1.4%	1.6%	-0.2%	8.3%	8.0%	0.4%	7.8%	7.1%	0.6%
2008	1.5%	1.9%	-0.4%	16.3%	7.8%	8.5%	10.6%	7.3%	3.3%
Average Period	1.8%	2.8%	-1.0%	9.7%	9.2%	0.5%	8.5%	9.2%	-0.8%

Source : Manifest Proxy Voting Agency evidence submitted to U.K. Treasury Select Committee (2009)

**Figure 1. Directors' Financial Competence and Losses for German Banks**

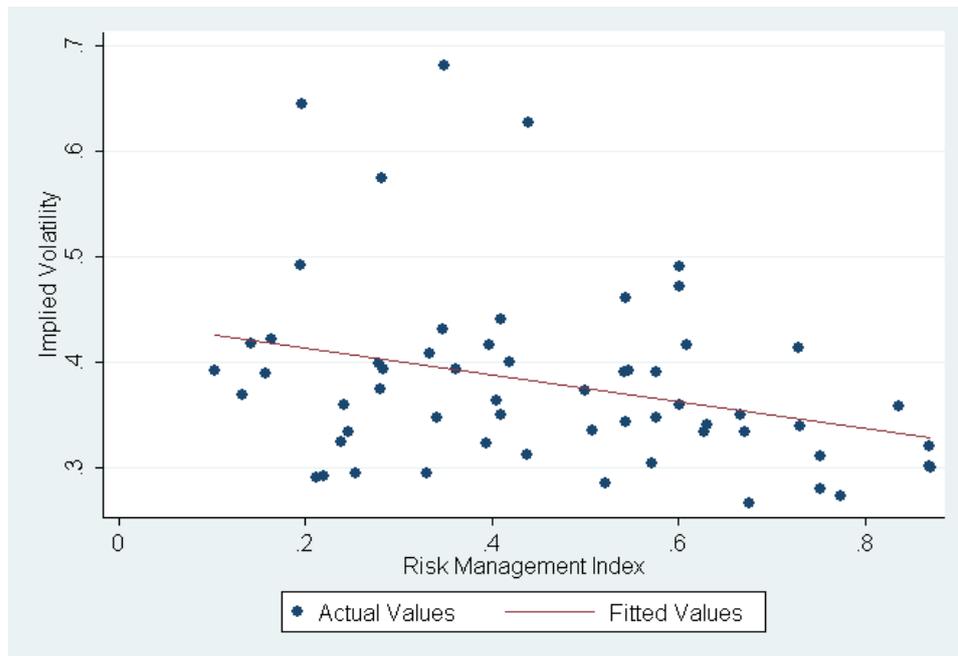


Note: BHY = Berlin-Hannoversche Hypothekenbank, BLB = Bayern LB, COM = Commerzbank, DB = Deutsche Bank, DEK = Dekabank, DEX = Dexia Kommunalbank Deutschland, DG = Deutsche Genossenschafts-Hypothekenbank, DRS = Dresdner Bank, DZ = DZ Bank, EUH = Eurohypo, HEL = Helaba, HRE = Hypo Real Estate, HSH = HSH Nordbank, HVB = HVB Group, IKB = IKB, KfW = KfW Bankengruppe, LBB = Landesbank Berlin, LBW = LBBW, LRP = LRP Landesbank Rheinland-Pfalz, NLB = Nord LB, PB = Postbank, SLB = Sachsen LB, SOP = Sal. Oppenheim jr. & Cie., WGZ = WGZ Bank AG Westdeutsche Genossenschafts- Zentralbank, WLB = WestLB  
 Source: Authors' calculation

Source : *Hau and Thum (2010)*

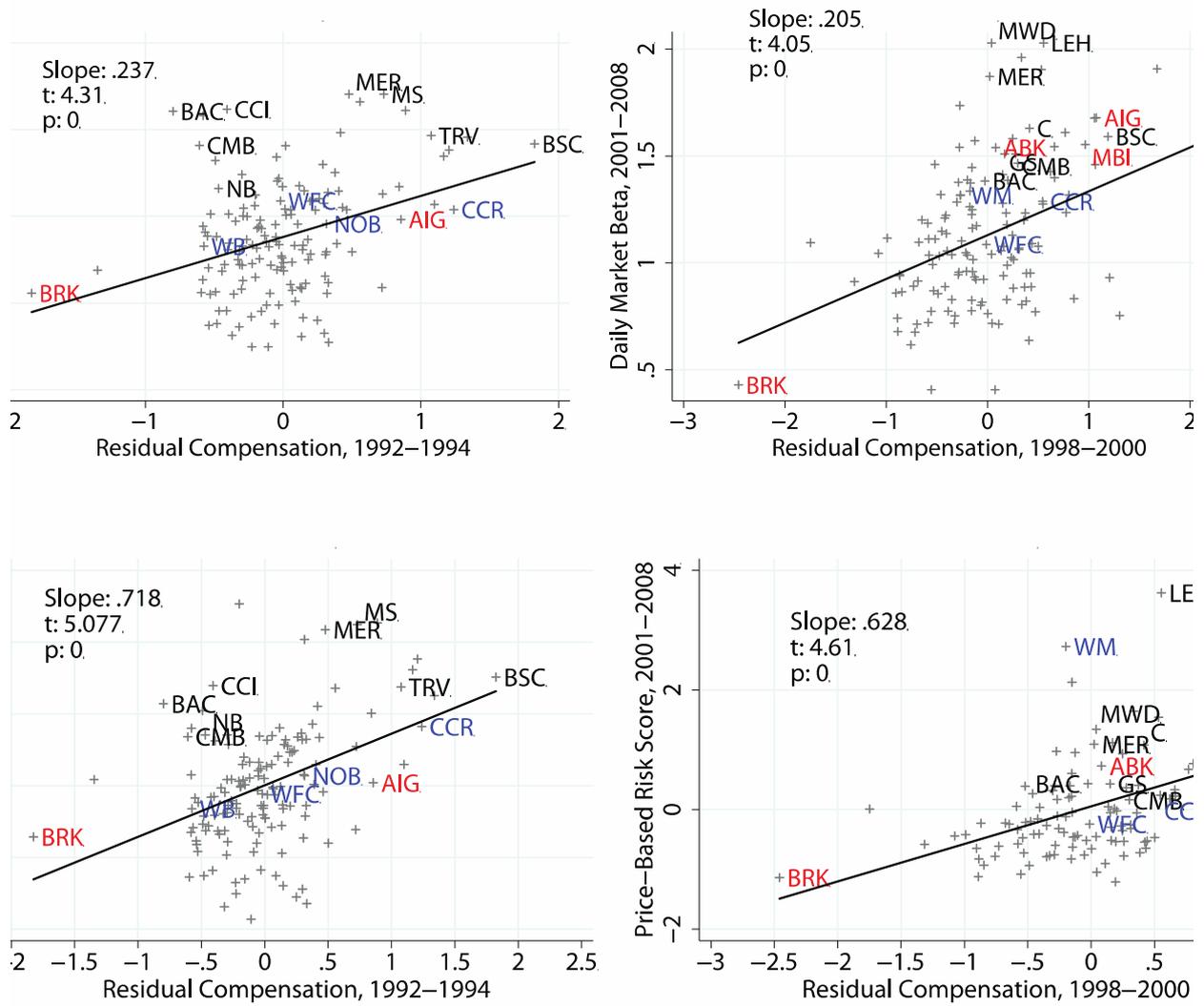
## Figure 2. Pre-Crisis Strength of Risk Management versus Downside Risk During the Crisis

This figure plots the average *Downside Risk* of each BHC over the crisis years (2007 and 2008) versus its corresponding *pre-crisis RMI*, which is defined as the average RMI of the BHC over the period 2003–2006. The solid straight line in the figure is a plot of predicted values obtained from a regression of Downside Risk versus a constant and the pre-crisis RMI.



Source : Ellul and Yerramilli (2010)

**Figure 3. Residual Compensation and Risk Taking**



Source : Cheng, Hong and Scheinkman (2010)

## Appendix 1 – Risk Shifting (“gambling for resurrection”)

A bank has \$30 of assets, of which at least \$10 is held as cash. The face value of its outstanding obligations to a variety of creditors (which can include deposits, bonds, and other forms of debt financing) is \$30. The equity is worthless, and the bank is on the brink of financial distress.

The bank has an investment opportunity. It can invest its \$10 of cash to obtain

\$80 with probability 1/10  
or \$0 with probability 9/10

The NPV of this investment opportunity is -\$2.

If the management acts on behalf of shareholders it will undertake the negative NPV project because

If the project fails (probability 9/10)

creditors get \$20  
shareholders get \$0

If the project succeeds (probability 1/10)

creditors get \$30  
shareholders get \$70 (residual claim)

If the project is undertaken, shareholders can expect to gain \$7 (\$70 with probability 0.1), at the expense of creditors, who are expected to lose \$9 (they will receive the remaining assets, \$20, instead of the full value of their claim \$30 with probability 0.9). Without the risky investment creditors receive \$30. With the investment creditors expect to receive

$$0.9 \times \$20 + 0.1 \times \$30 = \$21.$$

To the extent that the creditors are depositors, the deposit insurance company would have to cover the loss. It would want to step in to stop the risky investment project and prevent a claim on its resources.

## Appendix 2 – Stockholder-creditor conflicts: debt overhang

To illustrate the deterrents to raising new capital, consider a situation where a bank or firm is exposed to a simple two-state risk: with probability 4/5 its assets are worth €120, while with probability 1/5 its assets turn sour and are worth only €60. Suppose that it has an attractive risk-free opportunity: if it can raise a further €36 to invest in a project, its total value will increase by €40 regardless of the situation it finds itself in. The project's net present value is thus  $€40 - €36 = €4$ , so clearly the money ought to be raised and the investment made:

Overall Firm Value	Bad State (probability 1/5)	Good State (probability 4/5)	Expected Value
<i>Without New Capital</i>	€60	€120	€108
<i>With New Capital of €36</i>	€100	€160	€148

However, because the benefits flow disproportionately towards making the creditors whole, the bank may be unwilling or unable to raise the capital and invest in the project. Depending on how indebted the bank is, there are three possible regimes:

### A. Low debt: the investment is made

If the pre-existing senior debt is low enough (€80 or below in this example), the management, acting in the interests of the shareholders, will wish to raise the €36 of new capital and invest, because the NPV of the projects exceeds the associated transfer of value to creditors. For example, if the face value of the debt is €70, the expected value of the existing equity increases with new capital:<sup>11</sup>

	Bad State (probability 1/5)	Good State (probability 4/5)	Expected Value
<i>Without New Capital</i>			
Debt	€60	€70	€68
Equity	€0	€50	€40
<i>With New Capital</i>			
Debt	€70	€70	€70
New Investors	€30	€37.5	€36
Equity	€0	€52.5	€42

### B. High debt: the firm can invest but does not wish to

If the face value of the senior debt exceeds a threshold value (*in casu* €80), the gain to the existing creditors exceeds the NPV of the project and management will not want to raise capital because shareholders lose on average. For example, if the face value of the debt is €100:

	Bad State (probability 1/5)	Good State (probability 4/5)	Expected Value
<i>Without New Capital</i>			
Debt	€60	€100	€92
Equity	€0	€20	€6
<i>With New Capital</i>			
Debt	€100	€100	€100
New Investors	€0	€15	€6

<sup>11</sup> The tables are constructed as follows. First, a debt repayment equal to its face value or the total firm value, whichever is smaller, goes to the existing debtholders in each state. New investors receive the smaller of €36 or what is left of the firm's total value after paying existing debtholders in the bad state; in the good state they receive whatever amount is needed to induce them to put up money (*i.e.* to attain an expected value of €6). Any money remaining in each state goes to the equityholders, who wish to maximize the expected value of these payoffs.

Equity | € €10 €2

### C. Prohibitively high debt: the firm cannot raise the capital

If the face value of the existing senior debt exceeds a further threshold (€15 in the example), there is not enough value in the good state to reward new investors for their capital injection: they need to receive at least €45 so that their expected payoff compensates them for the €36 that they invest. The bank is neither willing nor able to raise new capital.

As a final comment, there are several remedies for debt overhang. One possibility is to declare bankruptcy, and undergo a judicial procedure that recapitalizes the firm by converting all or part of its debt into equity; this process can be time-consuming and wasteful. \*\*\*\* MENTION CHAPTER 11 \*\*\*\* A second option is to renegotiate the terms of the debt with the existing creditors: they will benefit from the potential investment if it goes through, and should be willing to reduce the required repayment on their claim down so as to ensure that it does; equivalently, they can be asked to supply the new money. Such renegotiation is not always possible if creditors are widely dispersed. If the creditors include the government deposit insurance fund, the government should force the firm to raise new capital in case B., and if necessary (case C.) take control and inject new capital.