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Bank Boards and the Financial Crisis

A corporate governance study of the 25 largest European banks

David Ladipo Stilpon Nestor

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ISBN: 978-0-9562481-0-7

Contents

Introduction and synthesis			
Executive s	umma	ıry	8
Chapter 1:	The p	profile of the board	. 18
	1.1	Board size	. 19
	1.2	Board independence	. 21
	1.3	Board tenure	. 23
	1.4	Directors' age	. 26
	1.5	Directors' gender	. 27
	1.6	Directors' financial expertise	. 29
Chapter 2:	Board	d structure, workload and evaluation	. 34
	2.1	Board committee structures	. 35
	2.2	The contentious introduction of board level risk committees	. 39
	2.3	Delegation of authorities to the executive management	. 42
	2.4	Directors' workload	. 45
	2.5	Directors' evaluation	. 46
Chapter 3:	Risk (oversight – The proximate failings	
	3.1	The focus on risk measurement rather than risk identification	. 50
	3.2	The failure to check excessive leverage	
	3.3	The underestimation of liquidity risks	. 58
Chapter 4:		oversight – Silos and low profile chief risk officers	
	4.1	The independence and authority of the risk management function	
	4.2	Factors that aid or impede the cross-functional flow of risk information	
	4.3	Factors that aid or impede the upward flow of risk information	. 64
Chapter 5:		oversight – Blinded by false precision	
	5.1	Market VaR – when the traded assets are liquid	
	5.2	Market VaR – when the traded assets are illiquid	
	5.3	The migration of VaR from the trading book to the banking book	
	5.4	The use of VaR may have increased the magnitude of tail risks	
	5.5	The use of VaR may have bred a false sense of comfort and security	
	5.6	Failed approaches to stress testing	. 81
Chapter 6:	Risk (oversight – Dazzled by fools' gold	. 88
Chapter 7:	Direc	tor compensation	
	7.1	The balance of fixed to variable compensation for executive directors	
	7.2	The deferral and potential clawback of annual bonuses	
	7.3	Executive shareholdings (or "skin in the game")	
	7.4	The need for appropriate risk-adjusted performance measures	
	7.5	Non-executive director fees	106
Appendix: I	Backgr	ound information on the 25 peer banks	113
References			125

Exhibits

Exhibit 1.1:	Number of directors on the main board at the start of 2009	20
Exhibit 1.2:	Number of directors on the main board between 2006 and 2008	20
Exhibit 1.3:	Independent members as a percentage of the board	
	between 2006 and 2008	21
Exhibit 1.4:	Board composition at the start of 2009	22
Exhibit 1.5:	Average tenure of NEDs in 2007	24
Exhibit 1.6:	Average tenure of NEDs between 2006 and 2008	25
Exhibit 1.7:	Peak-to-trough share price declines for banks whose non-executive	
	directors had tenure rates of plus or minus 5 years as of 2007	25
Exhibit 1.8:	Average (mean) age of NEDs at 2007 year-end	
Exhibit 1.9:	Average age of NEDs between 2006 and 2008	27
Exhibit 1.10:	Peak-to-trough share price declines for banks whose	
	non-executive directors were plus or minus 60 years old	27
Exhibit 1.11:	Female members as a percentage of the board at the start of 2009	28
	Female members as a percentage of the board between 2006 and 2008	
Exhibit 1.13:	The percentage of NEDs with financial industry expertise 2007 year-end	32
Exhibit 1.14:	The percentage of NEDs with financial industry expertise	
	between 2006 and 2008	32
Exhibit 2.1:	The prevalence of board committees	35
Exhibit 2.2:	Number of audit committee members in 2008	
Exhibit 2.3:	Number of remuneration committee members in 2008	
Exhibit 2.4:	Number of nomination committee members in 2008	
Exhibit 2.5:	Number of risk committee members in 2008	
Exhibit 2.6:	'Financial Industry Experts' as a % of the risk committee in 2008	
Exhibit 2.7:	'Financial Industry Experts' as a % of the risk committee in 2007	
Exhibit 2.8:	Number of members of the "senior management board/	
	executive committee"	43
Exhibit 2.9:	Number of board meetings between 2006 and 2008	
Exhibit 2.10:	Number of audit committee meetings between 2006 and 2008	
Exhibit 2.11:	Percentage of banks whose annual reports disclose that their	
	board evaluations were independently facilitated in 2007	46
Exhibit 3.1:	Leverage rates at Barclays, Deutsche Bank and UBS	51
Exhibit 3.1:	Leverage rates at BNP Paribas, Credit Suisse and Société Générale	JI 51
Exhibit 3.3:	Economic leverage vs. trough-peak share price	
Exhibit 3.4:	Average peak-to-trough share price declines for banks with	၁၁
EXHIBIC 5.4.	leverage rates above and below 25:1	53
Exhibit 3.5:	Return on equity (%) at Barclays, Deutsche Bank and UBS	
Exhibit 3.6:	UBS – Gross leverage rate vs. regulatory rates	
Exhibit 3.7:	Deutsche Bank – Gross leverage rate vs. regulatory rates	
Exhibit 3.7:	Barclays – Gross leverage rate vs. regulatory rates	
Exhibit 3.9:	HSBC – Gross leverage rate vs. regulatory rates	
Exhibit 3.10:	Cash and equivalents as a % of total liabilities at RBS and HBOS	
	Total denosits as a % of other liabilities at RBS and HBOS	59 59

Exhibit 5.1: Exhibit 5.2: Exhibit 5.3: Exhibit 5.4: Exhibit 5.5:	Frequency distribution of observed daily trading profits/losses	8 9 9
Exhibit 6.1:	ROE decomposition	9
Exhibit 6.2:	The impact of leverage on Barclays' ROE9	1
Exhibit 6.3:	The impact of leverage on UBS' ROE9	1
Exhibit 6.4:	The impact of leverage on HSBC's ROE9	
Exhibit 6.5:	The impact of leverage on Banco Santander's ROE9	
Exhibit 6.6:	Economic profit decomposition9	2
Exhibit 6.7:	The imputed cost of equity capital disclosed in the annual reports	
	of Barclays compared to its "simple" leverage rate9	
Exhibit 6.8:	The growth in economic profit disclosed in Barclay's annual reports9	3
Exhibit 7.1:	The actual or estimated relative weighting of chief executive	
	compensation in 20079	8
Exhibit 7.2:	Total chief executive compensation in 2007 excluding	_
- - 0	pensions and other benefits	
Exhibit 7.3:	Chief executive's maximum annual bonus opportunity in 2007	9
Exhibit 7.4:	Chief executive's stock ownership as a percentage of 2006 and 2007	2
Exhibit 7.5:	average annual total compensation	
Exhibit 7.5:	Additional fees for audit committee membership in 2007	
Exhibit 7.7:	Additional fees for remuneration committee membership in 2007	
Exhibit 7.8:	Total annual compensation of non-executive Board chairmen in 2007 11	
Tabl	es	
Table 1.1:	Banks whose chairs were former chief executives (of the same bank) 2	3
Table 1.2:	Banks whose chairs are financial industry experts3	
Table 2.1:	Number of risk committee meetings in 2006 and 20074	
Table 2.2:	Additional fees for risk committee membership4	
Table 3.1:	Leverage rates and share price performance	2
Table 4.1:	Banks in our sample whose chief risk officer was a not a	_
T-51- F 4.	member of the Executive Committee	
Table 5.1:	Market VaR confidence intervals employed by the banks in 2007	
Table 5.2:	Approaches to calculating the capital charge for credit risks	
Table 5.3: Table 5.4:	VaR historical simulation periods for general market risk	1
Table J.4.	surveyed by the BIS in 2004	2
Table 6.1:	The 20 banks whose ROE increased between 2003 and 2006	ر
	and the role of leverage9	0
Table 7.1:	CEO remuneration structure and share price performance	
Table 7.2:	Performance conditions for annual variable remuneration	
Table 7.3:	Performance conditions for long-term variable remuneration10	6





Introduction and synthesis

Three years ago, one of the largest European banks, at the initiative of its chair, retained Nestor Advisors Ltd (NeAd) to produce an in-depth comparative analysis of the corporate governance practices undertaken by ten of its European peers. Last year, in view of the interest garnered, Nestor Advisors decided to further develop the study for circulation amongst a wider group of financial institutions: the 25 largest European banks by market capitalisation. This year, in the midst of the most serious financial crisis since the Second World War, our analysis concentrates heavily, though not exclusively, on the subject of risk oversight by boards. More particularly, we seek to examine the various factors organisational, methodological and heuristic-which made it difficult for bank boards to comprehend the rapidly evolving and expanding risks to which their institutions were exposed in the years preceding the current crisis.

As in our 2008 study, the peer group chosen for our analysis consists of the 25 European banks with the largest capitalisation at the start of 2008; namely, Barclays plc; Banco Bilbao Vizcaya Argentaria, S.A.; BNP Paribas; Commerzbank AG; Crédit Agricole S.A.; Credit Suisse Group; Danske Bank A/S; Deutsche Bank AG; Dexia NV/SA; Erste Bank der oesterreichischen Sparkassen AG; Fortis SA/NV; HBOS plc; HSBC Holdings plc; Intesa Sanpaolo S.p.A.; KBC Group NV; Lloyds Banking Group; National Bank of Greece S.A.; Nordea Bank AB; Raiffeisen International Bank-Holding AG; The Royal Bank of Scotland Group plc; Banco Santander, S.A.; Société Générale; Standard Chartered plc; UBS AG; and, UniCredit S.p.A. Given changes to market capitalisation and ownership, two members of the 2008 study, Natixis S.A. and ABN Amro, were replaced by Commerzbank and Raiffeisen International Bank in the current report.

The analysis itself drew upon information contained in the banks' public disclosures (i.e. their websites, their annual reports; their articles of association and bylaws; the terms of reference of their board committees; and their board and management regulations). In addition to our analysis of this publicly available information, we held in-depth interviews with senior corporate governance officers (typically the general counsel or corporate secretary) and board members of banks in the sample. Most of the interviews took place in the first quarter of 2009 and we were careful to anonymise contributions by our interviewees and ensure that information attributed to individual banks had already been publicly disclosed.

The study is composed of seven chapters and one appendix. In Chapter 1, we explore the profile of European bank boards, specifically the size and makeup of the board in terms of competence, experience, age, gender and tenure. Chapter 2 considers how these boards structure their activities; how they delegate authority for major banking decisions to executive management; and how they evaluate their own performance. In Chapter 3, we provide a brief résumé of the three most visible failures of risk oversight exhibited across the banking industry. But these failures are merely the proximate causes of the current crisis. In turn, they beg the question as to why so many banks fell victim to them. Chapter

4 suggests that keys to understanding the genesis of the current crisis include the way in which risk management functions were organised and in the profile and cultural standing of the risk function in individual banks.

In Chapter 5, we continue our focus on risk oversight and examine methodological and heuristic factors which may also have contributed to failures in board level risk oversight. In Chapter 6, we argue that the judgement of senior managers and board members may have been clouded, not just by the spurious precision of risk measurement methodologies, but by an excessive focus on return on equity and a concomitant failure to disaggregate the factors responsible for shifts in profitability. We then conclude our report, in Chapter 7, with a brief review of the current discussion on executive compensation, incentive structures and their alleged role in the risk failure that led to the financial crisis. The appendix contains short business summaries of the 25 banks in our peer group.

Throughout the report we make comparisons between our 25 peers on the basis of their performance in the face of the crisis. For this purpose and to keep things fairly simple, we use what we consider to be a moderately synthetic performance indicator, namely peakto-trough share price performance from January 1st 2007 through to February 19th 2009.

	Bank	Share price trough as a % of share price peak
1	HSBC	48.0
2	Standard Chartered	36.1
3	Nordea	34.6
4	Banco Santander	34.1
5	Intesa Sanpaolo	34.1
6	BBVA	30.3
7	Credit Suisse	24.3
8	NBG	23.0
9	BNP Paribas	22.8
10	Crédit Agricole	19.3
11	Danske Bank	14.5
12	Société Générale	14.5
13	Deutsche Bank	14.3
14	Erste Bank	14.2
15	UBS	14.2
16	UniCredit	12.9
17	Raiffeisen	10.7
18	Dexia	9.7
19	Commerzbank	7.6
20	Lloyds TSB	7.4
21	КВС	7.2
22	Barclays	6.5
23	HBOS	5.2
24	Fortis	1.6
25	RBS	1.4

The primary responsibility of a bank board is to ensure that the franchise can survive outside shocks and prosper in good times. The board's role is to rise above the technicalities of risk management and ask the big questions going forward. In this role, many seem to have failed. There were three key failings of franchise risk oversight at board level: the failure to check excessive leverage, the underestimation of liquidity risks and the focus on risk measurement rather than risk identification.

Some of these failings were due to the fact that boards were lulled into a false sense of security. Non-executive directors were content to follow management in focusing almost exclusively on regulatory capital ratios rather than more obvious measures, such as economic leverage. They lost sight of the franchise risk lurking in "fat tail" events in the easy but dubious comfort of the 99% probability of value-at-risk models. Stress testing, the main method used by banks to identify fat tail risks, became the victim of framing and availability biases which in turn made it difficult for boards to be in a position to question received wisdom. One of the most significant future challenges for boards is to actually take a more active role in defining the parameters and objectives of stress testing.

Most of the boards we reviewed were content to measure performance by return on equity, earnings per share and other measures that indirectly encouraged increased leverage. In future, the way bank boards measure their firms' performance should change to reflect the true cost of capital and discourage leverage-related risk-taking.

We also believe that a switch to a longer-term compensation horizon for past performance via bonus deferral schemes or claw-backs will have a positive effect on the risk-taking behaviour of senior and middle management.

However, we found little evidence to support the current opinion that top bank executives had insufficient "skin in the game". Moreover, we feel that many of the commentators are putting the cart before the horse in calling for direct regulation of remuneration: the greater imperative is the need for rigour in setting risk appetite and for more robust risk governance. Once this is achieved many of the issues related to incentives are likely to be resolved. For example, banks should aim at absolute limits on committed capital to treasury operations in specific types of securities, making sure that these limits are translated and properly policed at individual trader level, and combining them with tighter counterparty risk management. Such an approach will be much more effective in limiting excessive risk taking in the trading book than limiting bonuses as a percentage of trading profits in some arbitrary way.

We also believe that boards were probably not paying enough attention to the internal standing, authority and organisational gravitas of the risk function. As late as 2007, the chief risk officer was on the board of only one bank in our sample. And although the chief risk officer was a member of the executive committee (or its equivalent) in the majority of the peers, there were still a handful of banks where this was not the case. We believe that the current crisis will, almost certainly, change this state of affairs and that the profile and status of the chief risk officer will be significantly enhanced and become a central preoccupation of the board over the coming years.

We found no silver bullets related to the composition and structure of boards related to recent failures. If however, the reform of risk governance is to be spearheaded by boards, there are a number of steps that can be taken that are likely to facilitate this imperative.

To begin with, we found that bank boards led by financial industry experts are likely to do a better job than boards that are led by independent non-expert chairs. It also seems that bank boards require, at any given moment, a significant amount of experience which might be difficult to source if the non-executive director tenure is too low or the board is too young. On the bright side, we found that European boards are overall much less stale and old than some of their failed US counterparts.

What is likely to be required in order to achieve the level of honest and critical thinking needed for better risk governance is a professionalisation of bank non-executive directors. Bank boards will probably need to enlist more financial industry expertise, ask their nonexecutive directors to work significantly more (indeed, last year has been phenomenal in terms of the increase in the amount of time put in by non-executive directors); and require them to limit their other commitments. Of course, such an approach translates into a formidable gene pool challenge. Regulators might therefore need to develop rules (including comply-or-explain provisions) that are different for bank boards on issues such as structural independence requirements for non-executive directors and the profile of the board chair. Additionally, shareholders might actually need to raise bank non-executive director's remuneration; a very difficult proposition given current popular sentiment over pay.

As noted above, boards will also need to develop their collective capacity to focus on franchise risk and think out of the bank's risk manager's box. There is no readily available recipe on how to achieve this, but it should still be considered the key developmental challenge for all bank boards.

Finally, the augmented role that boards adopt will need to be reflected in the way they evaluate their own performance. Boiler-plate, annual self-evaluation templates will need to be replaced by a more in-depth evaluation process with longer than annual cycles driven by external facilitators with substantive expertise.

In last year's study, we ended our synthesis with an exhortation to avoid overloading boards with operational and compliance responsibilities. After an annus horribilis in global banking, we are more convinced than ever of this view. If anything, boards should be given more freedom to stand back from these day-to-day pressures and to concentrate on the larger franchise issues. For operational controls, regulators should engage more directly with executive management. In a strange twist of fate, the demise of light-touch regulation might actually facilitate board liberation.

London, May 2009





Executive summary

The profile of the board Α.

Over the past year, there has been plenty of discussion about the profile of bank boards and the compositional changes that will or should take place in the wake of the global banking crisis. Amongst other things, it has been suggested that bank boards were too big; that bank boards were not sufficiently independent; that some boards were too stale and "entrenched" in view of long non-executive and executive tenures; that others were too old and too far from today's rapidly changing financial markets; and that the proportion of non-executive directors (NEDs) with "financial industry expertise" was worryingly low.

We believe that each of these factors may have played an aggravating role in the genesis of the current crisis. For example, in our recent (April 2009) examination of the governance crisis in the US banking industry¹, we found that some of the more spectacular "blow-ups" of the last two years took place at banks where the average age and tenure of non-executive directors were far in excess of those displayed by their counterparts in the European banks which are the focus of this study.

Nevertheless, the fact remains that inter-bank comparisons amongst the 25 firms in our peer group reveal a limited relationship between our peers' peak-to-trough share price performance and factors such as board size, director independence, tenure, age, and expertise.

We found no relationship between the relatively high proportion of independent directors and bank performance. Among the better than average performing banks, three had not split the roles of the chair and chief executive until late 2007 and others had retained the former chief executive as chair. This seems to fly in the face of perceived corporate governance wisdom that the chair should be independent². Indeed, we believe that in highly complex and risk-sensitive organisations such as banks, there might be special value in continuity and, particularly in the case of a former chief executive becoming chair, a more enhanced balance of power may result from the presence of a knowledgeable chair at the helm of the board.

When it comes to NED tenure and age, our European peers—whether over or underperformers—have significantly lower averages than the US "departed" group, the three US investment banks that disappeared in 2008. Within these lower European averages, it seems that the best performers were the ones that followed a via media—boards that were not too young and had non-executive directors with mildly longer than average tenures.

There has been a slight increase in the number of female directors on bank boards, but the numbers are still low and in many cases attributable to employee representatives on the board.

Finally, while we find no correlation between the financial industry expertise ("FIE") of non-executive directors and bank performance within the peer group, we find a clear, positive relationship between the FIE of board chairs and bank performance, a point that underscores the importance of experience in the leadership of the board.

Nestor Advisors (2009) Governance in Crisis: A comparative case study of six US investment banks.

A chair who has just ended a tour of duty as a chief executive would normally not be considered independent.

Of course, the absence of a strong correlation between a board's crisis avoidance/survival and its complement of NED financial industry expertise (or any of the other features cited above) does not contradict the claims of those who argue in favour of radical changes in board composition. It merely reminds us that even the most impartial, experienced and hard-working boards can exercise poor judgement under flawed decision frames.

B. Board structure, workload and evaluation

In large, complex, multinational corporations, it is generally accepted that the "job" of the non-executive directors is to not take executive decisions. Rather, their role is to set the overarching policies within which such decisions should be taken and to hold managers accountable for the use of the decision making powers that have been delegated to them.

In last year's report, we noted that there were interesting differences in the extent to which decision making power is delegated by the board to the senior management. For example, the typical threshold above which the chief executive had to seek board approval for an acquisition ranged between 100 and 300 million Euros and a few banks set thresholds at much lower levels (in both absolute and relative-to-size terms).

None of the interviewees in this year's report indicated that there had, as yet, been any material change in these delegated authorities. However, several of our interlocutors suggested that their boards were in the process of revising these authorities. They are not planning to effect any major changes to the quantitative threshold limits on capital expenditures, operating expenditures, acquisitions, investments or divestments. But they will be requiring much closer board scrutiny of "product development" and "new business activity" irrespective of the size of the capital commitments entailed.

This shift in focus reflects the bitter experience of some of the banks in our peer group whose senior management teams were able to expand into increasingly complex and risky product lines and/or grow their balance sheets without ever having to secure formal and specific board approval for such activity.

The board's committee structure is another area in which we have seen an interesting shift in the nature of board decision making. For example, by the end of 2008, 52% of the banks in our peer group possessed a standalone risk committee (i.e. not just a combined "audit and risk" committee). Our study notes, however, that the establishment of standalone risk committees is still a contentious issue for many banks and the net value of this practice has yet to be conclusively established. Moreover, our inter-bank comparisons show no correlation between crisis avoidance/survival and the presence of a standalone risk committee. As regards the composition of the risk committee, the positive experience of the two Spanish banks in our sample and the negative experience of UBS's chairman's office suggest that a healthy balance between executives and non-executive directors is required, as well as a healthy appetite for work, which should be adequately remunerated.

As for the workload of board members, the history of the past 12 months was foreseeable: bank boards have worked harder than ever before, with regular board meetings stretched out long into the evenings and extraordinary "crisis" meetings held at short notice and often on weekends.

Even more interesting is the conviction expressed by several of our interviewees that a historical watershed had been breached such that although the time commitment required of their directors will eventually drop below the levels exhibited during the peak of the crisis, it is likely to stick at a level that is well above the pre-crisis norm.

In turn, this begs the question as to whether some of the banks will be forced to move away from the model of the non-executive directorship as a part-time responsibility which a busy executive can be reasonably expected to undertake in addition to their "day job". In several of the banks in our peer group, the number of days expected of a typical non-executive director is now in excess of 30 days per annum—a time commitment which even the most hyperactive of individuals (with another busy full time job) must find hard to undertake.

The process by which boards evaluate their own performance is also likely to evolve over the coming years. More specifically, the consensus amongst our interlocutors was that the current crisis would transform the way in which bank boards test for flaws and biases in their perceptual and decision making frames. In the first instance, these changes will almost certainly entail a shift from internal self-evaluation to external, independent, evaluation. Over time, they are also likely to generate a demand for facilitators with a broad knowledge and understanding of the information processing and decision-making challenges which are particular to non-executive directors in the financial services sector.

C. Risk oversight – the proximate failings

The main responsibility of a bank board is to ensure that the "franchise" can survive outside shocks and prosper in good times. That is why the oversight of the way in which credit, market, operational and liquidity risks are managed by executives should lie at the heart of the board's mandate. In last year's report, we suggested that the exercise of risk oversight by bank boards, being part of their high-level, "franchise" risk management, "involves much more judgement than computation". However, the events of the last two years have further underscored that the exercise of good judgement—when faced with a mass of complex risk computations—is no easy task.

In this year's report, we provide a brief résumé of the three key failings exhibited (to a greater or lesser extent) by most bank boards in the years leading up to the current crisis, namely: the focus on risk measurement at the expense of risk identification; the failure to check excessive leverage; and the gross underestimation of liquidity risks.

During the recent crisis, several of the banks in our sample experienced losses in their activities related to securitization and complex structured products that were well in excess of what their models would have predicted. The explanation for these unanticipated losses stems, in part, from the failure to "look through" the apparent attractiveness of the derivative (e.g. the CDO) and assess the worth and market sensitivity of the underlying exposure (e.g. the mortgages packaged into fixed income assets underlying the CDO). But these losses were also related to the failure to "look beyond" the sum of the individual risks and identify areas of risk concentration and interconnection.

Another striking feature of the recent crisis was the growth in leverage within the banking (and shadow banking) system. In the short to medium-term, banks which aggressively increased their leverage rates enjoyed the benefits of a temporary boost in profitability. Of course, the risks attendant upon high leverage should have been as obvious as its profitability. Nevertheless, the retrospective "obviousness" of these risks seems to have been lost on many bank boards. In part, this reflects the mismatch between "regulatory" measures of leverage and "gross" (or "economic") leverage. In turn, this mismatch reflects the fact that the risk weights used to calculate regulatory capital adequacy were often grossly inaccurate. As importantly, even when the risk weights were appropriately calibrated, simple leverage rates were a better predictor of the capacity to survive a plunging market than risk-weighted measures.

Forthcoming changes in banking regulation are likely to increase the minimum capital for trading activities by a large multiple. In addition, the financial authorities in a range of European countries are considering proposals to introduce a gross leverage "backstop" and are examining the benefits to be derived from the introduction of a "dynamic provisioning" system akin to that maintained by the Bank of Spain.

Regardless of how long it takes for the new capital requirements to come into effect, a key lesson from the recent crisis is that directors of bank boards should not take false comfort from their regulatory capital ratios. When they see their simple leverage rates increasing at a rate of knots they should not blithely assume that all is well merely because their Tier 1 (or even their Core Tier 1) capital ratios appear relatively stable.

Alongside the failure to check excessive growth in leverage, many of the boards in our peer group also placed an excessive reliance on liquidity through "marketability" (i.e. through cash flows generated by selling or pledging assets) rather than liquidity through cash and reserves or through government-insured deposits. In fact, half of the banks we studied actually shrunk their cash and equivalents (as a proportion of their total liabilities) in the years preceding the current crisis; and several of them did so whilst simultaneously growing their credit market share more rapidly than their deposit base. To make matters worse, this increased reliance on liquidity through marketability was taking place at precisely the same time as many banks were loading up on assets (and credit derivatives in particular) which were not transparently priced and required complex models and unobservable parameters which rendered them highly illiquid in a bear market³.

Risk oversight – silos and low profile chief risk officers D.

The focus on risk measurement at the expense of risk identification, the failure to check excessive leverage, and the underestimation of liquidity risks were merely the proximate causes of the breakdown of risk oversight prior to the recent crisis. In turn, they beg the question as to why so many bank boards seem to have exhibited these failings.

In Chapter 2, we discussed the potential impact of board structure and NED engagement on the quality of risk oversight by the board. But that is only one side of the coin. Over the past year, much of the ex-post analysis conducted by financial authorities and by individual banks has pointed to certain organisational and hierarchical factors which appear to have impeded the ability of bank board members to recognise the evolving (and rapidly expanding) risks to which their institutions were exposed.

For example, most of the banks in our peer group were models of "best practice" in so far as they had established a central risk management function—responsible for all the bank's principal risks—headed by a chief risk officer whose direct reports were "embedded" within, but independent of, individual lines of business. Many of these banks subsequently discovered that the independence of the risk management function was not the critical issue. What ultimately proved more important was the degree of authority and cultural standing possessed by the risk functions within their organisations and the extent to which information on risks was shared across different business areas.

Furthermore, for many banks the bulk of assets on their balance sheets were illiquid irrespective of market conditions e.g. real estate investments.

With respect to the authority of the person who heads the risk function, we note that as late as 2007, the chief risk officer⁴ was on the board of only one bank in our sample; and although the chief risk officer was a member of the executive committee (or its equivalent) in the majority of the banks in our sample, there were still a handful of banks where this was not the case. However, we believe that the current crisis will, almost certainly, change this state of affairs and that the profile and status of the chief risk officer will be significantly enhanced over the coming years.

As for the authority of the risk function itself and the degree of integration amongst its constituent parts (Credit Risk, Market Risk, Operational Risk etc), the changes may not be quite so easy to identify or implement. The board (or its risk committee) should focus on a thorough assessment of risk governance, comprising reporting lines and accountability within the function and of the chief risk officer himself, the authority granted to the function at different levels of decision making, the organisational gravitas and the culture of the function. To this effect, the board should mandate periodic reviews and should ensure that the findings from these reviews are vigorously examined and debated at committee and/or board level. More importantly, the non-executive directors involved in these assessments may have to get out of the boardroom and spend some time visiting risk managers in situ. To bridge the gap between the principles "on paper" and the "on the ground" reality may require board members to spend more time obtaining first-hand, visceral, impressions of the health of the risk function.

Risk oversight – blinded by false precision E.

In addition to the organisational and hierarchical impediments to the exercise of judicious risk oversight, our study points to certain methodological and heuristic factors which may also have contributed to failures in board level risk oversight. More particularly, we point to the judgement clouding and hypnotising effect on boards and their non-executive directors of the "false precision" attached to the principal techniques used to quantify risk on both the trading and banking books.

These techniques include the canonical value-at-risk methodology. Over the past 15 years, most large financial institutions have used detailed calculations of value at risk (principally on the trading book but increasingly on the banking book as well) to assess the performance of their senior executives, to place limits on trading and lending decisions, and to make capital allocation decisions.

Our study does not propose to address the defects of value-at-risk models in respect to these day-to-day management decisions. On the contrary, we are persuaded by the opinion held by most of our interlocutors, namely that value-at-risk models "if handled correctly" can: a) play a valuable role in enabling senior management to assess their banks' capital requirements and b) provide useful "early warning signals" of fundamental changes in levels of risk exposure.

But over the past six years the work we have done with some of Europe's largest banks and financial institutions has led us to the belief that, irrespective of their managerial usefulness, estimates of value at risk are of little value to non-executive directors because they reveal very little (of useful import) about the likelihood or magnitude of the "abnormal" (or "tail") events which are of most concern to board members who have a fiduciary duty to monitor their banks' "franchise" risk (i.e. their long-term exposure to catastrophic losses).

This person does not carry the title chief risk officer, but senior vice president and head of the group's risk division. Divisional chief risk officers report to this executive director.

In addition, our study argues that value-at-risk and similar techniques for quantifying risks were not just inadequate or irrelevant from the perspective of board level governance but were actually positively harmful, in so far as they generated a false and misleading sense of comfort and security. More particularly, this sense of false comfort was driven by the "framing effects" of the way in which value-at-risk numbers were typically presented to bank boards. These effects include a variety of anchoring, formulation, and trompe l'oeil effects, susceptibility to which proves remarkably insensitive to variations in individuals' knowledge or "expertise".

To make matters worse, stress tests conducted by the banks in our peer group often served to compound rather than counteract the deceptive sense of security enjoyed by their board members in managing "franchise" risk. In part, this is because most stress tests failed to incorporate historical data over a sufficiently long time period. It is also a reflection of the impact of what behavioural economists refer to as "availability bias": the human tendency to assess the relative likelihood of risks in relation to their availability to our imagination. Hence, the extraordinary prominence of "terrorist attacks" in the stress tests run by the banks in our peer group between 2001 and 2007 and the paucity of tests predicated on sharp falls in house prices.

Another major flaw in the stress testing conducted by banks was an overemphasis on historical approaches to stress tests rather than hypothetical approaches. Historical approaches, because they reflect an actual stressed market environment, usually involve fewer judgements by risk managers. This is one of their attractions. By contrast, hypothetical scenarios, which are potentially more relevant to the risk profile of the firm and to the management of its "franchise" risk, involve considerably more judgement.

It is no surprise, therefore, to find that the financial authorities in many EU jurisdictions are now encouraging a rebalancing in favour of hypothetical stress tests (and "reverse stress tests" in particular). From a governance perspective, the shift towards exercises which require more judgement than computation is one that most shareholders should welcome. After all, the capacity for good judgement is not only something which non-executive directors should themselves exercise but it is also a quality (the presence or absence of which) they should be able to recognise in the senior management teams that appear before them at board meetings.

F. Risk oversight – dazzled by fool's gold

In Chapter 6 of our study we argue that the judgement of senior managers and board members may have been clouded not only by spurious risk measurement methodologies but also by an excessive focus on return on equity ("ROE") and a concomitant failure to disaggregate the factors responsible for shifts in profitability.

Given the sensitivity of ROE to leverage (and given that leverage in the financial services industry is, necessarily, far higher than in the non-financial sector), it would have been only natural to expect the banks in our sample to have set their sights on something other than ROE growth or other measures, such as EPS, which have a sensitivity to leverage and risk similar to that of ROE. More particularly, we would have expected them to focus on some measure of "economic profit" or "economic value added" which explicitly takes into account the associated impact on the cost of equity capital of increased leverage and/or the shift into assets which are higher yielding because they present greater risk.

But when we look at the principal performance goals and targets disclosed in the annual reports of the 25 banks in our peer group, what we see is a predominance of ROE, EPS and similar targets. In fact, only a handful of banks made it clear that they were also targeting measures of economic profit or some other measure of underlying value added. Those that did target such a measure typically used an imputed cost of equity capital which remained unchanged even as their leverage rates and/or the riskiness of their asset base increased.

G. Executive and non-executive compensation

Over the last few years, a great deal of public attention has focused on the salaries, bonuses and other incentives paid to top executives in banks and other financial institutions. Recently, this discussion has taken on a very angry tone that verges on populism. Notwithstanding public anger at the perceived failure of well paid bankers in anticipating the crisis, many informed commentators are convinced that ill-designed incentive structures played a significant role in the genesis of the current financial crisis.

Thus, in the final chapter of our report, we undertake a brief review of some of the suggested remedies which are now the subject of intense media and regulatory scrutiny such as the re-balancing of the ratio of fixed to variable pay, the deferral and potential clawback of annual bonuses, and the need for risk-adjusted performance measures.

Looking at the 25 banks in our peer group, we find no prima facie evidence that rebalancing executive pay (so that the variable component is less dominant) will encourage bank executives to take less extreme risks. This does not mean we are opposed to the suggestion. We simply believe that the case needs to be examined in light of more detailed empirical evidence than we have been able to gather and analyse.

We have also found no evidence that under-performance was in any way linked to a lack of alignment with shareholder interests. Mirroring our findings in the US, we found that top executives in many of the banks that were worst hit by the crisis had more than adequate "skin in the game" in terms of exposure of their personal wealth to the fate of their bank's share price.

As for the suggestion that bonuses be subject to deferral periods and clawback provisions we note that prior to the current financial nadir, only five of these banks had required their senior executives to defer a portion of their annual bonuses. While it is logical that the introduction of bonus deferrals and clawbacks will have a positive long-term impact on the risk taking behaviour of senior and middle management, we have found little evidence to support this view. In any event, it is likely that all the banks will be under considerable media pressure to demonstrate their intolerance of "rewards for failure". And some of the largest ones, such as UBS, have already come out with innovative new deferral schemes that include a "malus" for bad years.

What the current crisis has also revealed is the extent to which remuneration schemes which reward management for increases in ROE; earnings per share and the like can often be gamed to the detriment of the underlying health of the bank. It is a salutary lesson which argues strongly in favour of a greater focus on risk-adjusted performance indicators. But what the crisis has also taught us is that even the best of such measures (e.g. "economic profit" or other equivalents thereof) are unlikely to capture adverse changes in the underlying health of a bank if the imputed cost of capital upon which they depend is insensitive to large changes in leverage and/or increases in the risk profile of the bank's assets.

Moreover, our own consulting experience suggests that any attempt to control risk taking through policies on remuneration (however well targeted) is likely to have less of an impact than (a) a proper focus on the setting of risk appetite by the board and its proper implementation by the risk management function at all levels, and (b) regulatory changes which would impede banks' ability to engage in excessive leverage or expose themselves to reckless levels of liquidity risk.

As a final coda to our report, we point to one of the more ironic consequences of the public anger which is now being directed at banks: in the foreseeable future, most banks will find it extremely hard to raise the compensation of their non-executive directors to levels which might enable non-executive directors to put in the time and devote the expertise which seems to be required in order to upgrade their capacity to oversee franchise risk.