

The Elephant in the Room: The Need to Deal with What Banks Do

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Contagion risk and counterparty failure have been the main hallmarks of the current crisis. While some large diversified banks that focused mainly on commercial banking survived very well, others suffered crippling losses. Sound corporate governance and strong risk-management culture should enable banks to avoid excessive leverage and risk taking. The question is whether there is a better way, via leverage rules or rules on the structures of large conglomerates, to ensure volatile investment banking functions do not dominate the future stability of the commercial banking and financial intermediation environment that is so critical for economic activity. While there is a main consensus on the need for reform of capital rules, dynamic provisioning, better co-operation for future crises, centralised trading of derivatives etc., the question is whether such reforms will be sufficient if they do not address contagion and counterparty risk directly. The world outside of policy making is waiting for a fundamental reassessment of banks' business models: what banks are supposed to do and how they compete with each other. It is the "elephant in the room" on which some policy makers have not yet had the time or inclination to focus. This article emphasises not only the need for transparent and comparable accounting rules and for improvements in corporate governance, but also supports the imposition of a group leverage ratio to provide a binding capital constraint (that Basel risk-weighted rules have been unable to achieve) and proposes a Non-Operating Holding Company Structure (NOHC) – reforms that are essential to deal with contagion and counterparty risk that are so integral to the 'too big to fail' issue.

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I. Introduction

Contagion and counterparty risk are the hallmarks of this crisis

Contagion risk and counterparty failure have been the main hallmarks of the current financial and economic crisis, making it very different and much more potent than those which preceded it. While some large diversified banks that focused mainly on commercial banking survived very well, financial conglomerates built on investment banking, the structuring of complex derivatives and proprietary trading as the main drivers of growth, as well as other smaller and less diversified banks, particularly those focused on mortgages, suffered crippling losses. In principle, sound corporate governance and a strong risk-management culture should enable banks to avoid excessive leverage and risk taking. But human nature being what it is, there are likely always to be some players eager to push complex products and trading beyond the sensible needs of industry and long-term investors in order to drive profits. Indeed, right now such activity is driving the rapid profit growth of some banks, with little having been learned from the past.

A fundamental reassessment of what banks are supposed to do and how they compete with each other is needed

As the system will always be hostage to the ‘gung-ho’ few, the question is whether there is a better way, via leverage rules or rules on the structures of large conglomerates, to ensure volatile investment banking functions do not dominate the future stability of the commercial banking and financial intermediation environment that is so critical for economic activity. The world outside of policy making is waiting for a fundamental reassessment of what banks are supposed to do and how they compete with each other. It is the “elephant in the room” on which some policy makers have not yet had the time or inclination to focus.

Reforms have to address contagion and counterparty risk directly

The conclusions of the G20 Pittsburgh summit in October 2009 show the main consensus on the need for reform – capital rules, dynamic provisioning, better co-operation for future crises, centralised trading of derivatives and so forth (see Box 1). These initiatives are important, and will help improve prudential supervision. The question is: will such reforms be sufficient if they do not address contagion and counterparty risk directly – the extent of which depends on what banks actually do in their business models.

More ‘lifeboats’ are not enough

One illustration of the mood in the world of ordinary investors comes from one well-respected fund manager/commentator in a quarterly letter to clients:

I can imagine the company representatives on the Titanic II design committee repeatedly pointing out that the Titanic I tragedy was a black swan event: utterly unpredictable and completely, emphatically, not caused by any failures of the ship's construction, of the company's policy, or of the captain's competence. "No one could have seen this coming" would have been their constant refrain. Their response would have been to spend their time pushing for more and improved lifeboats. In itself this is a good idea, and that is the trap: by working to mitigate the pain of the next catastrophe, we allow ourselves to downplay the real causes of the disaster and thereby invite another one. And so it is today with our efforts to redesign the financial system in order to reduce the number and severity of future crises.¹

Box 1. G20 Pittsburgh summary of financial reform proposals

- The G20 summit in Pittsburgh concluded that the revision of capital rules (higher and better quality capital, with a leverage ratio and perhaps countercyclical buffer) would be finalised by end-2010 and implemented by end-2012.
- Better liquidity risk measurement and management will be encouraged, and institutional risk management standards will be strengthened.
- Disclosure will be enhanced, with off-balance sheet positions taken into account.
- Oversight of credit rating agencies has increased and accounting standards should be unified.
- Market practices and underwriting standards in particular have become better regulated.
- The centralised clearing of CDS contracts and the trading of standardised OTC derivatives on exchanges is to be completed by end-2012. OTC derivative contracts should be reported to trade repositories and non-centrally cleared contracts should be subject to higher capital requirements.
- Compensation standards aim to align compensation with long-term value creation (equity incentives and claw-backs being favoured and guaranteed bonuses discouraged). Transparency, independence of compensation committees and supervisory review with the possibility of penalty (via capital requirements).
- Supervisory colleges and contingency planning for coordination between supervisors and firms for crisis management involving major cross-border firms, a legal framework for crisis intervention and improved information sharing in times of stress.
- The hope was also expressed that: *“We should develop resolution tools and frameworks for the effective resolution of financial groups to help mitigate the disruption of financial institution failures and reduce moral hazard in the future. Our prudential standards for systemically important institutions should be commensurate with the costs of their failure. The FSB should propose by the end of October 2010 possible measures including more intensive supervision and specific additional capital, liquidity, and other prudential requirements”.*

Source: Leaders' statement, the Pittsburgh Summit, 25 September 2009, available at www.g20.org.

The structure of large financial conglomerates are the focus of this paper

This paper focuses on those large financial conglomerates without whose involvement this crisis may well have been avoided, at least in terms of the scale and force that that policy makers have had to address. It looks at some aspects of the “ship’s” design, and explores the idea that the “equity culture” in banking came to dominate the “credit culture” in what firms actually do. Common regulatory structures permit very different business models with widely divergent risk and loss profiles. Banks that grew their balance sheets rapidly via derivatives-based products that must be valued at fair value through profit or loss are a distinctive feature of the current crisis. Indeed, they appear to be at the heart of the reason why banks can be “too big to fail”. In looking at reform priorities, this paper emphasises the need for a binding group leverage ratio (which would dominate Basel risk weighting) and a non-operating holding company conglomerate structure with legally separated (siloed) capital for subsidiaries, without which contagion risk cannot properly be addressed.

II. The “equity culture”: conglomerate growth through securities and derivatives

It may be helpful to look at institutions that did relatively well during the crisis...

One important clue to what a safer future financial system might look like can be found by looking at what large systemically important banks actually do. Some countries operating openly on the global financial system, like Australia, Canada, Chile and Brazil avoided having to bail out their banks with capital injections. Within crisis countries, some banks did very well: for the purposes of this study, Santander is included as one example – amongst many others – of a bank that fully participates in commercial banking and the structuring of products, but so far has done so in a well-balanced and-risk controlled way. As was the case with countries affected by the crisis, countries (and banks) that avoided the crisis also had to deal with:

- the same global regulatory and capital rules,
- the same accounting firms and credit rating agencies,
- similar tax distortions,
- the same derivatives including OTC and structured products, and
- the same senior staff bonus mechanisms.

Furthermore, banks in these countries did not have more capital than their US counterparts had.

...to find out what factors helped them to perform better: what banks do is important

Poor incentives created by regulatory and tax loopholes and bonus systems certainly contributed to the crisis – being exploited by some though not all banks. So while increased capital and regulatory reform are important, something else seems to have been at work in many banks and even some financial systems that enabled them to survive the crisis without government capital injections and securities purchases. The same regulations, accounting standards and rating procedures appear to have been compatible with very different bank business models and performance. If what banks do, for given capital and other rules, is also important in explaining the crisis, then this, too, may need to be addressed – the *elephant in the room* so far put to one side.

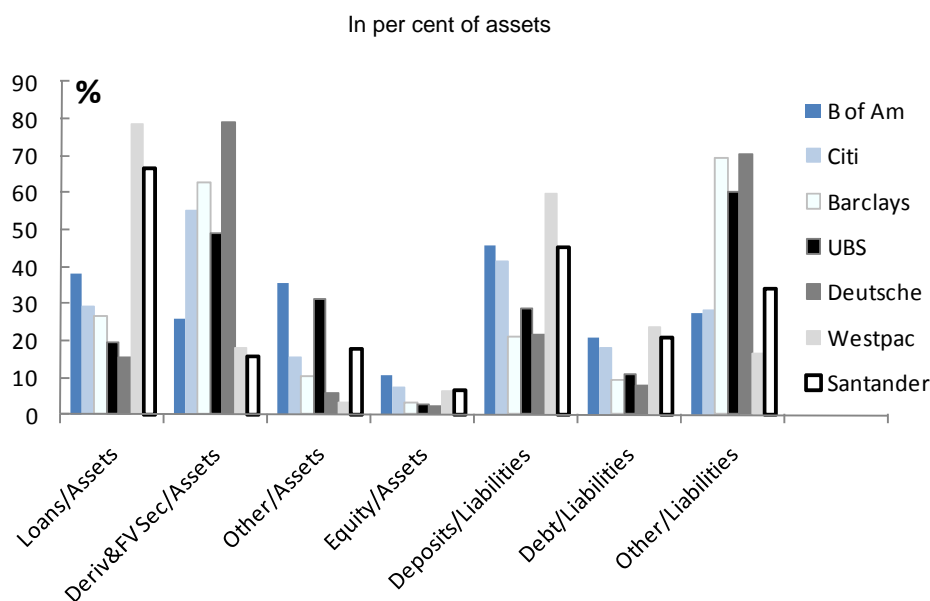
Contrasting banking conglomerate asset and liability composition

“Too big to fail” banks figured prominently in the crisis

Figure 1 shows the main components of the balance sheets of seven banking conglomerates, all of which are very large in their own country. The contrasts are striking. Citigroup, Bank of America, UBS, Barclays and Deutsche Bank all belong to countries that have figured prominently in the crisis. Of around USD 1.1 trillion of bank losses and write-downs admitted to in this crisis, these five alone account for USD 333 billion, or 30% of the total.² They are all within a group of banks that are widely acknowledged as “too big to fail”. The governments of the countries in which these banks operate – the United States, Switzerland, the United Kingdom and Germany – have had to put together massive packages of aid, involving direct capital injections, asset purchases, loans and guarantees, on an unprecedented scale. These four countries (along

with the Netherlands, Belgium and Luxembourg) also happen to be those dominant in the world of investment banking. The balance sheet components of these banks can be compared with those of countries where systemically important banks received no direct aid: Westpac in Australia and Santander in Spain – though the other large Australian banks and most Canadian banks have a similar structure. The salient features are as follows:

Figure 1. Consolidated balance sheet structure of conglomerates



Note: For Citi and Bank of America, unconsolidated VIEs are included as balance sheet items for fair value through profit or loss. This adjustment is not made for the European banks, where getting the gross exposures of SPEs is more difficult. However, the maximum loss exposures reported suggest SPE off-balance sheet exposure is less. See note to Table 1 for definitions of VIEs and SPEs.

Source: Company reports.

The investment banking component of banks in crisis countries is very large

Loans to businesses (for productive investments) and to households (for mortgages and consumption) are shown in the first set of bars. In the case of the five large banks in crisis countries this commercial banking component of their business is fairly small. Direct loans which generate more reliable cash flows (and to which amortised cost accounting applies), are very much larger in the institutions that received no direct aid: the Westpac and Santander examples (all of the other large Australian and Canadian banks have similar balance sheet structures). The “innovative banks” have built their balance sheets up quickly in recent years with securitised assets pools containing imbedded derivatives, as shown in the second set of bars referring to derivatives and securities at fair value through profit or loss.³

Deposit funding is more predominant in Australian, Spanish (and Canadian) banks

Activities on the asset side of the balance sheet are funded primarily out of deposits and longer-term borrowing on the liabilities side in the case of the Australian, Spanish (and Canadian) banks. Deposit funding is relatively stable, and long in duration with predictable cash flows. Wholesale bond funding often from global markets is also longer in duration and requires the maintenance of a

strong credit rating to be cost effective – acting as a discipline on banks. This contrasts with the large European, UK and US banks where deposit and bond funding is relatively lower and liabilities at fair value through profit or loss are very large.

Some banks are like highly-leveraged hedge funds

More details for three of the banks are shown in Table 1. If Westpac conforms to the structure of a “bank” as it is thought of by politicians and the public at large, *i.e.* an institution that funds itself mainly via deposits and longer-term borrowing and lends to households and to companies for investment and consumption, this is not the case of Citigroup or Deutsche Bank, whose balance sheet structure is similar to that of many large European and UK banks. On a consolidated basis these latter institutions look much more like large highly-leveraged hedge funds – though we can hardly imagine any hedge fund running these sorts of structured products would risk of having a leverage ratio of almost 50 (assets versus equity), as is the case of Deutsche Bank.⁴

In mid-2009 67% of Deutsche Bank’s balance sheet consisted of assets at fair value through profit or loss (44% in derivatives) – and this was much higher earlier in the crisis. In the last 6 months alone Deutsche Bank’s overall balance sheet has fallen by an eye-catching 22%. Only 15% of the balance sheet was lent directly to businesses and households. Deutsche Bank raised only 21% of its funding through deposits and 8% through long-term loans.⁵ About 50% of the balance sheet is liabilities at fair value through profit or loss.

Table 1. Key balance sheet and off-balance sheet ratios: Deutsche Bank, Citi, and Westpac

	Deutsche Bank, in EUR million		Citi, in USD million		Westpac, in AUD million	
	Jun 30, 2009	Dec 31, 2008	Jun 30, 2009	Dec 31, 2008	Sep 30, 2009	Sep 30, 2008
Assets	1 732 873.0	2 202 423.0	1 848 533.0	1 938 470.0	589 587.0	439 676.0
Cash-like	108 315.0	118 854.0	423 593.0	427 995.0	21 581.0	26 154.0
Financial assets at fair value through profit or loss	1 140 525.0	1 623 811.0	591 794.0	633 655.0	71 029.0	76 891.0
Financial assets available for sale	19 960.0	24 835.0	0.0	0.0	1 630.0	1 613.0
Loans	264 485.0	269 281.0	605 750.0	664 600.0	463 459.0	313 545.0
Other	199 588.0	165 642.0	227 396.0	212 220.0	31 888.0	21 473.0
Liabilities	1 732 873.0	2 202 423.0	1 848 533.0	1 938 470.0	589 587.0	439 676.0
Cash-like	57 698.0	90 333.0	224 712.0	276 209.0	9 235.0	15 861.0
Deposits	368 532.0	395 553.0	804 736.0	774 185.0	329 456.0	233 730.0
Financial liabilities at fair value through profit or loss	875 115.0	1 333 765.0	119 312.0	167 478.0	47 326.0	41 659.0
Long-term debt	134 811.0	133 856.0	348 046.0	359 593.0	131 353.0	96 398.0
Other	261 277.0	217 002.0	197 559.0	216 983.0	35 646.0	32 557.0
Equity	35 440.0	31 914.0	154 168.0	144 022.0	36 571.0	19 471.0
MAX. LOSS EXPOSURE TO SPE'S	23 900.0	26 400.0	83 756.0	106 405.0	0.0	0.0
KEY RATIOS	%	%	%	%	%	%
Loans/Assets %	15.3	12.2	32.8	34.3	78.6	71.3
Fin.assets at fair value through profit or loss/Assets %	67.2	74.8	34.9	35.3	12.8	18.3
Deposits/Liabilities %	21.7	18.2	47.5	43.1	59.6	55.6
Long-term debt/Liabilities %	7.9	6.2	20.5	20.0	23.8	22.9
Other debt/Liabilities %	3.2	2.3	6.0	7.1	2.3	3.0
Fin.liab. at fair value through profit or loss/Liabilities %	51.6	61.4	7.0	9.3	8.6	9.9
Equity/Assets %	2.0	1.4	8.3	7.4	6.2	4.4
Off-balance sheet VIE's/Assets %	n.a.	n.a.	12.9	15.0	0.0	0.0
Off-balance sheet QSPE's/Assets %	n.a.	n.a.	40.4	42.4	0.0	0.0
Max. loss unconsol. exp VIE/Equity %	67.4	82.7	54.3	73.9	0.0	0.0
Max. loss unconsol. exp VIE/Assets %	1.4	1.2	4.5	5.5	0.0	0.0

Note: VIEs (Variable Interest Entities) are special purpose entities (SPEs) which must be consolidated on the balance sheet if losses arise. QSPEs (Qualifying Special Purpose Entities) are entities where risks have been fully transferred to a third party.

Source: Company reports and OECD.

US banks have larger off-balance sheet exposures

Citigroup has a greater percentage of commercial banking on its balance sheet than Deutsche Bank, but has larger off-balance sheet exposures in the variable interest entities (VIEs) for which it remains responsible. Citigroup's VIE exposure was the equivalent of 13% of balance sheet assets in mid-2009.⁶ Deutsche Bank does not report its gross SPE exposures, but these might be around ¼ to 1/3 of that of Citigroup if the maximum loss exposure to these vehicles is any guide.⁷ Deutsche Bank's report for mid-2009 shows a maximum loss exposure to unconsolidated SPEs of around 1.4% of their balance sheet, and a very high 67% of their equity. The equivalent figures for Citigroup's maximum loss exposures are 4.5% of assets and 54.3% of equity, in the middle of 2009. Citigroup of course holds more capital than the German bank.

Structured credit product issuance by conglomerates

Structured credit product issuance has picked up again in 2009

Figure 2 shows issuance by major banks of standardised structured credit products (index tranche), notional and delta adjusted.⁸ Just prior to the crisis, issuance was running at USD 500 billion notional and USD 2.4 trillion a quarter when delta adjusted. It fell away sharply during the crisis in delta-adjusted terms – particularly in the last quarter of 2008. However, the policies to support recovery – including zero rates in some countries and massive liquidity support have generated a pick-up in this activity again in 2009. As the market rallies and spreads narrow the delta-adjusted volumes rise. With fair value accounting this flows through to profits, just as the collapse led to large losses. Authorities may be happy to see this rally, but these products (that must be accounted for at fair value) also contributed to the losses and write-downs that made this crisis so different from others.

These products contributed to the crisis

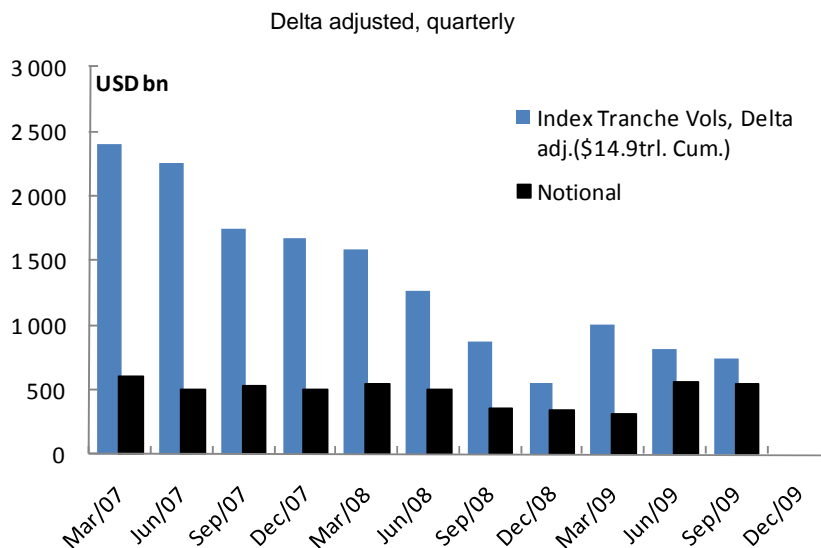
Figure 3 shows the cumulative issuance of standardised structured credit products since 2007 by the banks that issued them and accounting for almost 85 per cent of all issuance. Many of these banks needed to rely on government support of various forms.

Figure 4 shows the same concept for synthetic collateralised obligations (CSOs). These less standardised products are based on derivatives, such as credit default swaps (CDS), rather than requiring the bank or its SPE vehicle to buy the underlying physical assets.⁹ They are even more prone to valuation difficulties and major liquidity problems during times of financial crisis. These products are a major source of risk when insurance companies, hedge funds and others acting as counterparties in the writing of CDS contracts fail. The main issuers of these CDS based products are shown in Figure 5.

The most active issuers incurred large losses

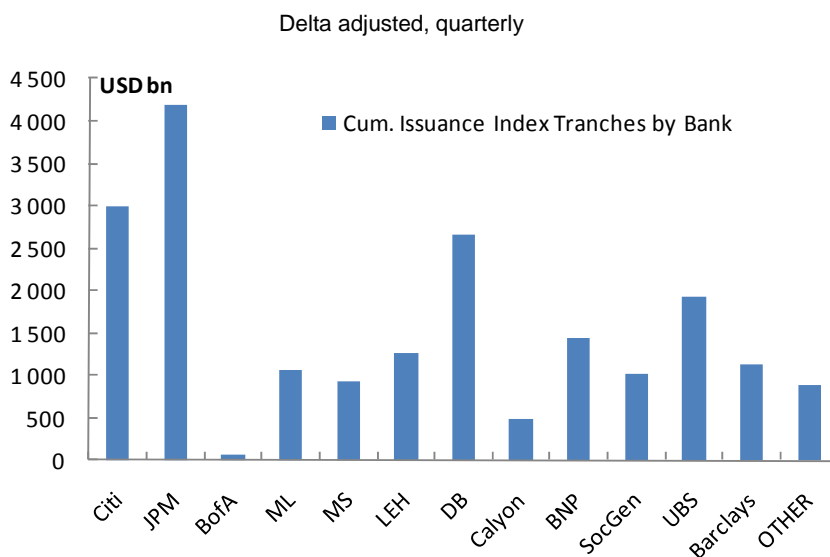
The banks shown in Figures 2 to 5 are responsible for USD 508 billion dollars of the USD 1.1 trillion losses admitted to by banks, some 46% of the total. If the ultimate losses resulting from the total collapse of Lehman Brothers were included (rather than the write-downs before the collapse) the total would be much higher, and these banks would be responsible for 2/3 of the higher total losses. Similarly, losses of Bear Stearns absorbed by JP Morgan will not be apparent for up to another 10 years (collateral held by the Fed in exchange for a loan of USD 30 billion).

Figure 2. Issuance of CDO index tranche volumes



Source: Credit Flux, OECD.

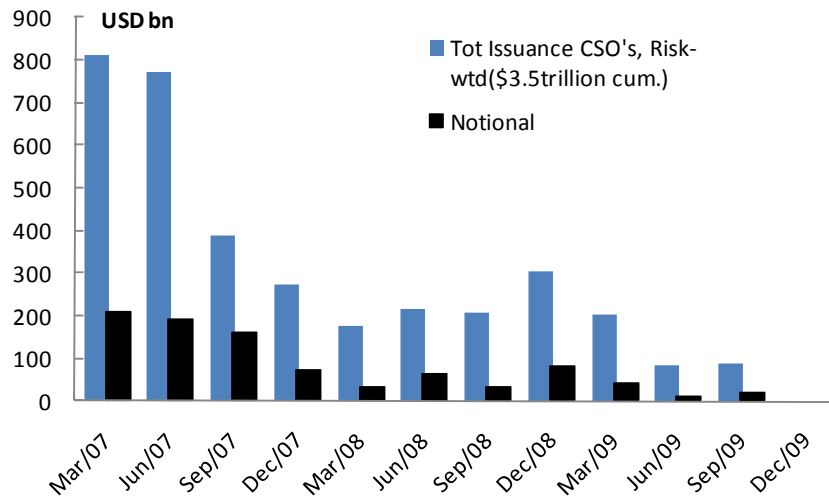
Figure 3. Issuance of CDO index tranche volumes by issuer



Source: Credit Flux, OECD.

Figure 4. Issuance of CSOs

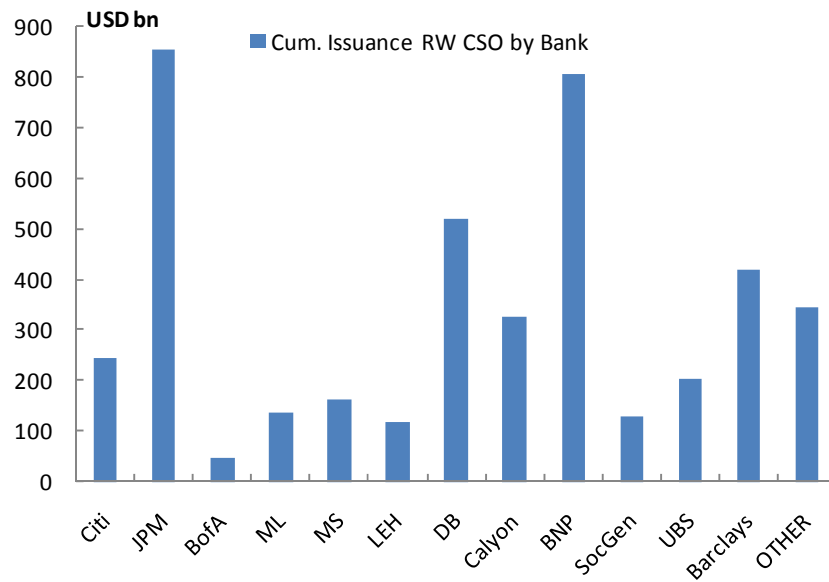
Delta adjusted, quarterly



Source: Credit Flux, OECD.

Figure 5. Issuance of CSOs by issuer

Delta adjusted, quarterly



Source: Credit Flux, OECD.

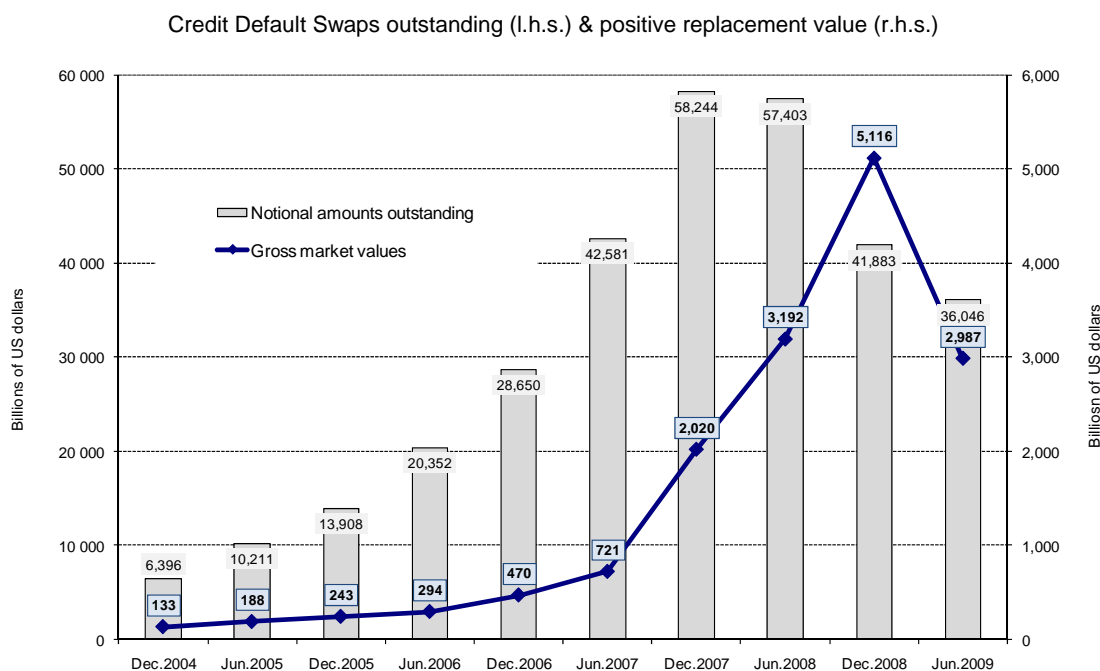
Regulatory factors are behind explosive CDS growth from 2004 to 2007

Figure 6 shows CDS contracts in notional outstanding amounts and their net value. The truly explosive growth in CDS from 2004 to 2007 is explained by regulatory factors – notably SEC rule changes in 2004 allowing investment banks to be supervised on a consolidated entities basis, which permitted a leap in leverage, as well as the growing use of CDS (that reduce risk-weighted assets) for gaming Basel weighting procedures.

CDS played a very large role in the losses incurred in this crisis

Netting allows counterparties to settle net positions in the event of a bankruptcy. But once volatility changes and liquidity dries up in a crisis these net positions can be enormous relative to the capital of a bank. CDS played a very large role in the losses incurred in this crisis. In practice there is no safe amount of capital that banks can reasonably hold to protect themselves from such events.

Figure 6. Credit default swaps outstanding



Note: Notional amounts are all the debt exposure covered. Gross market values on the right-hand side refer to how much money would actually change hands after netting if derivatives were sold on the reporting date at prevailing market prices.

Source: BIS, OECD.

USD 1.6 trillion crisis related losses of financial institutions

Table 2 shows losses of banks (most of which participated in the “equity culture” in banking), the insurance companies like AIG that wrote CDS contracts and Fannie and Freddie (that were the massive mill for mortgage securitization in the process). Losses admitted to (and excluding the payouts to AIG counterparties and the losses of the Lehman balance sheet after it collapsed) sum to USD 1.6 trillion.

Table 2. Major financial institutions' write-downs and credit lossesTotal since 2007, in USD billion^{a)}

	Writedown & Loss		Writedown & Loss
<u>Banks & brokers</u>		<u>Insurance companies</u>	
Citigroup Inc.	112.2	American International Group	101.4
Wachovia Corporation	101.9	ING Groep N.V.	17.7
Bank of America Corp.	69.6	Ambac Financial Group Inc	12.1
Merrill Lynch & Co.	55.9	Hartford Financial SVCS GRP	11.6
UBS AG	53.1	Metlife Inc	10
HSBC Holdings Plc	50.1	Prudential Financial Inc	9.2
JPMorgan Chase & Co.	49.2	Aegon NV	8.7
Washington Mutual Inc.	45.3	Swiss Re	8.3
Wells Fargo & Company	32.8	Allstate Corp	7.8
HBOS Plc	29.5	Allianz SE	7.6
Royal Bank of Scotland Group Plc	29.0	MBIA Inc	5.8
National City Corp.	25.2	Genworth Financial Inc-CL A	5.4
Barclays Plc	23.7	Other	58.8
Morgan Stanley	23.0	Total	264.4
Credit Suisse Group AG	19.2	<u>Government sponsored entities (US)</u>	
Deutsche Bank AG	18.7	Freddie Mac	119.6
BNP Paribas	17.0	Fannie Mae	118.3
Other	343.7	Total	237.9
Total	1,099.1	GRAND TOTAL	1,601.4

a) As of 13 August 2009; write-downs and credit losses since January 2007. All the charges stem from the collapse of the U.S. subprime-mortgage market and reflect credit losses or writedowns of mortgage assets that are not subprime, as well as charges taken on leveraged-loan commitments since the beginning of 2007. They are net of financial hedges the firms used to mitigate losses and pre-tax figures unless the firm only provided after-tax numbers. Credit losses include the increase in the provisions for bad loans, impacted by the rising defaults in mortgage payments. All numbers are in billions of U.S. dollars, converted at current exchange rate if reported in another currency.

Source: Bloomberg.

Large US payments to settle AIG obligations

Table 3 shows the amounts US authorities paid out to settle bank exposures to the single counterparty AIG during the crisis. Had the US allowed AIG to fail, it is not at all clear how well any of the banks in the table would have withstood the additional losses (Goldman Sachs included), the drain on their capital, and the indirect effects of the turmoil that would have followed in the markets to which they were exposed. The issuers of products exposed to CDS in which AIG was involved would have had a further USD 70.6 billion of direct losses – and much more, potentially to the point of collapse, as the crisis would have deepened.

Table 3. US payments to settle AIG obligations after its failure

Institution	In USD billion			As a share of capital ^(c) at end-2008
	Collateral postings for credit default swaps ^{a)}	Payments to securities lending counterparties ^{b)}	Total	
Goldman Sachs	8.1	4.8	12.9	29.1%
Société Générale	11	0.9	11.9	28.9%
Deutsche Bank	5.4	6.4	11.9	37.4%
Barclays	1.5	7	8.5	20.0%
Merrill Lynch	4.9	1.9	6.8	77.4%
Bank of America	0.7	4.5	5.2	9.1%
UBS	3.3	1.7	5	25.2%
BNP Paribas	...	4.9	4.9	8.3%
HSBC	0.2	3.3	3.5	5.3%
<i>[memo: Bank of America after its merger with Merrill Lynch]</i>			12	<i>[18.1%]</i>

a) Direct payments from AIG through end-2008 plus payments by Maiden Lane III, a financing entity established by AIG and the New York Federal Reserve Bank to purchase underlying securities.

b) September 18 to December 12, 2008.

c) Common equity net of goodwill; net of all intangible assets for Merrill Lynch and HSBC.

Source: AIG; company reports for capital data.

III. What is “Too Big to Fail”: size or structure?

“Too big to fail” is defined by systemic implications not size as such

A bank “too big to fail” might be defined as referring to a bank that has grown in a manner that its failure would have systemic implications.¹⁰

- For the country in which it operates, by interrupting commercial bank financial intermediation to such an extent that the economy and hence other financial firms would suffer significantly, or
- For the stability of other financial firms connected in counterparty transactions with the failing bank that would also impact the intermediation process.

In this case, creditors of and investors in the bank will consider the external cost of failure to be so large that policy makers would not permit it to happen, and this will be factored in to risk premiums in all financial transactions associated with the bank. But this is not so much a question of the size of the financial firm’s balance sheet as one of its structure. Banks (*e.g.* those shown in Figure 1) less driven by investment banking and structured products fared much better in terms of being able to absorb losses despite being very large in their domestic markets. Banks that were driven by investment banking were much more problematic in terms of contagion and counterparty risk regardless of their balance sheet size.

Contagion and counterparty risk

Securities business sharing capital with commercial banking creates contagion risk

The “too big to fail” problems peculiar to this crisis arose from the losses associated with excessive growth through derivatives and structured products. Banks carry relatively small amounts of capital. Assets valued at fair value for profit or loss on both sides of the balance sheet may be extremely volatile in a crisis, particularly where liquidity issues arise, and can wipe out the capital of the group. If the conglomerate includes a commercial bank alongside other subsidiaries it will be wiped out (in the absence of a rescue) along with the rest: *i.e.* ‘contagion risk’. This is because the (highly volatile) securities business ‘shares’ capital with the less-volatile commercial bank where cost amortisation accounting applies.

Derivatives transactions create counterparty risk

The use of counterparties to structure securities and derivatives adds a second source of risk (other than the volatility of the assets held). The failure of a counterparty – which may be a bank (Lehman), insurance company (like AIG, MBIA, AMBAC, Radian, etc.) or a hedge fund – may impact many banks at the same time. No matter how well hedged a bank may be in a technical sense, a counterparty failure can be devastating, as the AIG example shows. In Figure 9, Société Générale, Goldman Sachs, Deutsche Bank, Barclays, Merrill Lynch and UBS would each have incurred losses in the range of 20% to 77% of their capital, and an indeterminate amount in the further chaos, had AIG not been rescued. Bank of America including Merrill Lynch would have been exposed to the tune of 18% of their capital.

Exposure limits may break down when they are most needed in a major crisis

In the case of Deutsche Bank, the failure of AIG resulted in a payout by the US Fed equal to 37% of the bank’s capital at the time. Since regulatory rules do not allow such large exposures to single entities, the question arises as to how this could have happened. A sudden rise in volatility and collapse of liquidity in a crisis can result in levered derivatives exposures moving sharply and delta-hedging the portfolio to keep the exposure limited is not possible, as no-one will trade. Prior to the crisis, limits were no doubt respected. Exposure limits work well enough in normal periods, but may break down with speed when they are most needed in a major crisis.

Commercial versus investment banking

Commercial banking has experienced large losses in previous crises

Commercial banking has experienced large losses in previous crises. The fact that the unique feature of this crisis was business models based on securities and derivatives activities that are prone to contagion and counterparty risk does not mean that less volatile commercial banking is ‘safe’ for all future states of the world:

- Commercial banks that are small and concentrated in assets in a particular region can have major problems if that region suffers idiosyncratic recessions and asset price falls.
- Excessive concentration in specific assets such as mortgages or commercial real estate can also lead to major problems (the S&L crisis; Australian banks in the early 1990s, etc.).

- Related-party transactions with industrial companies, as in Japan and Korea in the Asia crisis can be very problematic, as can such transactions in family-owned banks.
- Borrowing in foreign currency within countries that run current account deficits has been a major issue (Latin American debt crisis).

However, pricing issues are less problematic in commercial banking crises

In this crisis, hundreds of small regional banks focused on mortgages have failed and are being merged or closed.¹¹ More are likely to follow and this may well spread to regional banks excessively exposed to commercial real estate. Nevertheless, a credit culture combined with the right degree of concentration in banking has one great advantage over investment banking securities businesses: the flows of incoming and outgoing cash are reasonably predictable and may be accounted for with amortised cost accounting. Securities prices, particularly those embedded with derivatives are accounted for at fair value, and losses may arise with volatility and/or the failure of counterparties. Furthermore, these losses can be very large and sudden: overwhelming the capital of a financial conglomerate and impacting on other financial firms with national and/or global systemic implications.

External cost of crises and resolution credibility

While large support for the financial sector has averted mayhem, it may lead to complacency

Some idea of the level of external support to stem the crisis can be found in Table 4, which shows estimates of total capital injections and capital facilities in the first column (USD 1.5 trillion), asset purchases, guarantees and facilities in the second (USD 5.2 trillion), and debt guarantees and debt guarantees facilities in the third (USD 4.6 trillion).¹² No doubt these extremely large numbers were justified to forestall even more damaging financial disruption. But the risk now is that the respite from the crisis achieved through support may lead to complacency and a refusal to acknowledge how much damage the “equity culture” in banking may have done this time and – left unconstrained – may do again in the future.

“Too big to fail” problem requires thought about a number of interrelated issues

To deal with the “too big to fail” problem requires thought about a number of interrelated issues:

- Key institutions do need to be large enough to carry out intermediation without the excessive geographic and/or product concentration that can lead to solvency problems in small undiversified banks;
- but all banks also need to face sufficient competition to meet consumer needs at reasonable costs.
- There needs to be some separation in the structure of financial firms that ameliorates the problem of contagion and counterparty risk.
- A resolution regime needs to be in place that has some credibility – *i.e.* that the external costs of allowing a firm to fail are sufficiently small that it will not cause major systemic problems.¹³

Contagion and counterparty risk loom large

The capital and derivative markets are inherently volatile and interconnected globally, so contagion and counterparty risk loom large. Under present structures, if one aspect of a business fails, the repercussions can be extensive and damaging. The world should not have to suffer damage from such financial turmoil again. The rest of this paper focuses on priorities for reform that addresses contagion and counterparty risk.

Table 4. The externalities of the unconstrained equity culture in banking

Country	Capital injection and facilities	Asset purchases, guarantees, facilities	Debt guarantees and facilities
	USD billion	USD billion	USD billion
	Total	Total	Total
Australia	0	7	amount not specified
Austria	22	0	15
Belgium	31	57	134
Brazil	0	0	1
Canada	0	119	amount not specified
China	19	0	1
Denmark	20	0	119
Finland	6	0	74
France	40	6	474
Germany	119	711	667
Greece	7	0	22
Hong Kong, China	0	0	0
India	0	0	0
Ireland	15	114	amount not specified
Italy	0	0	amount not specified
Japan	144	299	1
Korea	17	0	100
Luxembourg	4	0	7
Mexico	0	0	1
Netherlands	62	86	296
New Zealand	0	0	amount not specified
Norway	9	9	1
Portugal	6	0	30
Singapore	0	0	1
Spain	133	197	148
Sweden	10	0	216
Switzerland	6	39	amount not specified
United Kingdom	81	243	36
United States	806	3 322	2 300
TOTAL	1 556	5 209	4 644
Europe	571	1 463	2 239
United States	806	3 322	2 300
Other	180	425	105

Note: Estimates based on information available as of October 2009. The exchange rates used for conversion of non-USD figures are as of October 2009 (irrespective of the timing of the measures).

Source: OECD.

IV. Assessing priorities to ameliorate contagion and counterparty risk

1. The accounting issues: IFRS 9

Changing rules is tempting, but...

One approach that may tempt policy makers is simply to change the accounting rules so that banks heavily focused on investment banking and structured products can ignore asset price volatility. This would make some sense if asset price volatility were mere 'white noise' and not the result of

excessive risk and leverage. However, the events of the past three years are entirely inconsistent with this view.

...financial reports need to be reliable, understandable and comparable

Accounting standards are set to ensure that investors and creditors of firms have clear information. Financial reports need to be reliable, understandable and comparable between companies and across jurisdictions. This includes both the inclusion of all off-balance sheet entities for which banks are exposed to loss, and the correct accounting for securities valued at fair value through profit or loss versus those to which amortised cost accounting might apply. These requirements are important to maintain the confidence of investors in public markets and to help reinforce shareholder discipline on management. This discipline helps to prevent crises in an ex-ante sense. During the crisis, when illiquid markets cast doubt on market valuations, IASB reviewed the issue extensively and made adjustments to interpretations of IFRS 9 that allow some greater flexibility:

- Debt instruments that are not held for trading purposes may be measured at amortised cost (even if listed).
- Equity instruments only have to be measured at fair value through profit or loss if they are to be traded. If they are not, the firm has a choice between the fair value approach and a method that does not require impairment charges to be taken to profit or loss.¹⁴

Accounting changes allow loan reclassification...

Similarly, FSP FAS 157-e applies since June 2009, allowing banks more judgment in determining whether a market is not active and a transaction is not distressed when discounting future cash flows of assets held to maturity (as opposed to the fair market price at the time).

... but allowing firms too much scope to switch accounting categories undermines transparency

The above changes allow banks within reasonable limits to reclassify some loans: essentially when the intrinsic value of assets is judged by management to exceed their estimated fair values, due to significantly reduced liquidity, and returns would be optimised by holding them as hold-to-maturity investments – essentially reclassifying them from financial assets at fair value through profit or loss to loans where amortised cost methods would apply. However, allowing firms too much scope to switch impaired fair value assets to amortised cost accounting categories – re-classifying a complex structured product with imbedded derivatives as a loan for example – because it suits the bank in the short run is inconsistent with sound long-run objectives. Transparency is very important:

- Mark-to-market and cost amortisation techniques should apply strictly according to the business' intentions with respect to the assets, and
- Accounting standards should apply in a globally consistent and comparable way.

Global consistency and comparability should be the aim...

However, some banks and policy makers have suggested that the above changes do not go far enough.¹⁵ As the accounting profession tries to bring about convergence between FASB and IFRS, and as countries in the Asian and Oceania regions have adopted IFRS in the expectation that this would occur,

allowing further latitude in switching assets among accounting categories would be damaging to the aim of global consistency and comparability between listed companies.

...and to enhance corporate governance

In the longer run good corporate governance requires transparent and material information, so that the discipline of the market applies to management at all stages of the asset cycle.¹⁶

2. Corporate governance and compensation reform¹⁷

Reform of corporate governance should be given priority

Reform of corporate governance should be a high reform priority – given the role it played in some companies that weathered the crisis well – but the problem is that it will always require companies to embrace it voluntarily, so that good principles are translated into practice. Sound governance is to a large extent cultural – within banks where shareholder rights are respected and good standards of governance are valued and reflected in long-run share price performance.

Asymmetry between stockholders' and creditors' interest is a problem

The fundamental problem is that bank shareholders/CEOs have a “put option” that is effectively written by depositors/creditors – and reinforced by CEO remuneration. The value of equity cannot fall below zero on the downside but can increase without limit on the upside. In essence, CEOs and stockholders are incentivised to reduce the risk-adjusted value of the creditor claim on the bank and thereby reallocate wealth from creditors to stockholders. It is in creditors’ interest to prevent excess risk taking by stockholders (as is quite common in loan covenants in non-financial companies but rare in banking). An additional asymmetry is that remuneration and other short-term goals of management may drive a wedge between shareholders and their management agents.

Regulators need to encourage the fiduciary role of shareholders

Regulators need to encourage the fiduciary role of shareholders by supporting transparent accounts that reveal meaningful losses early and procedures that allow shareholders greater room to act:¹⁸

- Appropriate accounting standards that reveal losses and management errors in strategy in a timely way.
- The removal of barriers to voting (e.g. share blocking; rules against acting in concert including alternative investors).
- The publication of voting records.
- A requirement for a majority of directors to be independent, with diversity of background and competence (and training requirements) in material aspects of the industry.
- The encouragement of independent committees and advisors for setting bonuses and pay that should be approved at shareholder meetings (with a focus on long-term and risk-adjusted performance).

Boards need to be accountable for

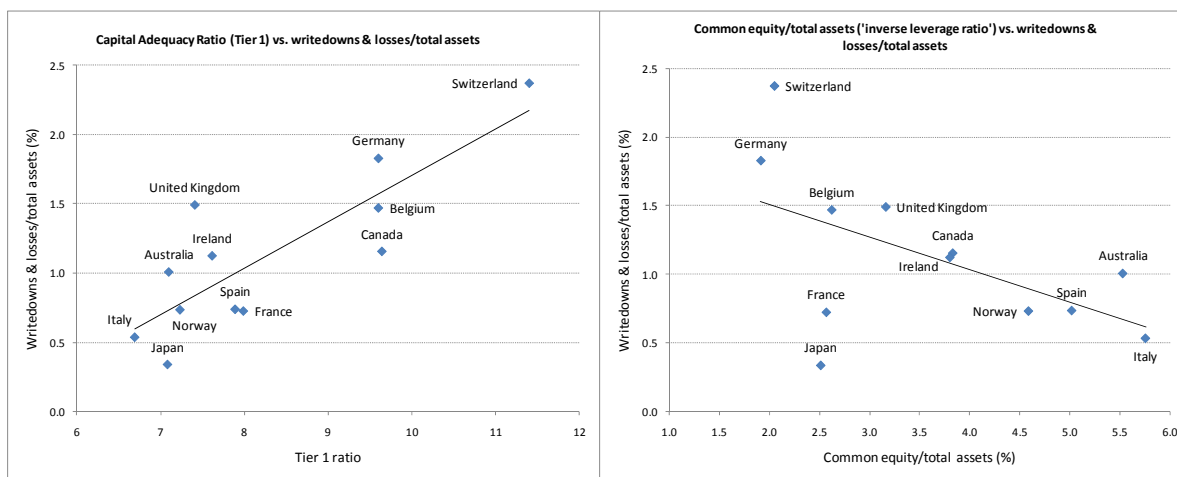
But none of these measures address the ‘creditor put’ to bank shareholders and the incentive it gives for short-termism. Boards need to be accountable for

risk in a more holistic manner

risk in a more holistic manner, which includes bank creditors. This means focusing on risk as part of a longer-run corporate strategy – risk should certainly not be subordinated to profit centres. Risk officer reporting channels to the board that are independent of the CEO could help. But the problem with banking is its high degree of connectivity – can good governance be left to self regulation when contagion and counterparty risk can play such a large role? If some firms do not embrace sound governance voluntarily then excessive leverage and risk will emerge may negatively impact those that do.

3. Capital regulation reforms*Substantial reform of capital adequacy rules has perhaps highest reform priority*

Substantial and far-reaching reform of the Basel capital adequacy approach and the migrating of a leverage ratio on un-weighted assets is perhaps one of the strongest priorities for reform. Earlier publications have argued that Basel I and II to date have acted to exacerbate the crisis by promoting capital arbitrage, increasing leverage and allowing CDS contracts misleadingly to conceal risk and reduce risk-weighted assets.¹⁹ Figure 7 shows the Tier 1 capital adequacy ratios (averages 2006-2008) for the loss making banks of the country shown versus their cumulative losses from 2007 to mid-2009 as a percentage of total assets.²⁰ It is of no comfort to supporters of the Basel risk-weighting approach (as it has been formulated to date) that this relationship is a positive correlation. The un-weighted assets leverage ratio (negatively defined as equity over assets) has the expected negative association between capital held and losses.

Figure 7. Capital adequacy and leverage vs. losses

Note: Calculations based on the sample of banks reporting write-downs and credit losses as reported by Bloomberg (see Table 2), excluding US banks. Writedowns & losses are accumulated from January 2007 until mid-2009; Tier 1 ratios, total assets and common equity are averages of 2006-2008 end-of-year data (2007-2008 for Japan Tier 1 ratio).

Source: Bloomberg, Worldscope, Thomson Reuters Datastream, and OECD.

European banks' low capital levels are a hurdle to quick reform

European banks' low capital levels are a hurdle to the quick resolution of the capital standards via the addition of a leverage ratio. This would require a significant capital raising in a short period, or deleveraging with its negative impact on the economy. It is to be hoped that the 2010 and 2012 deadlines set at

the Pittsburgh G20 summit can be achieved without resort to inconsistent accounting methods. A two-track speed would be preferable to policies that might hamper the progress with other aspects of reform – and most notably the transparency needed for sound corporate governance and for less risk corporate.

4. NOHC structures for financial firms

Contagion risk due to the structure of financial firms

Adding a leverage ratio that applies at the group level will help constrain risk through excess leverage. But one further aspect of conglomerate structure needs to be addressed if the issue of composition – what banks do – is to be dealt with to reduce contagion and counterparty risk significantly in the future. The problem is that for a given group leverage ratio banks can still allocate shared capital to higher risk/return activities so that contagion risk remains. Removing “too big to fail” problems will not be credible if it is clear to investors that contagion risk is present.

Leverage ratios need to be complemented by NOHC company structures

The following section illustrates why a leverage ratio needs to be complemented by non-operating holding company (NOHC) structures. This proposal does not require divestment of affiliates (as in Glass-Steagall) but does require legal separation of the capital pools for group subsidiaries with vastly different risk characteristics.

V. “Too Big to Fail”: Leverage ratio and NOHC capital separation compared

Three alternative structures for illustration purposes

Table 5 sets out three alternative structures to illustrate:

- the problem of lack of a leverage ratio constraint and the “too big to fail” implicit guarantee in structure (case A);
- what imposing a leverage ratio does and does not do in case B; and
- what legal separation of capital into siloes in a NOHC does in case C.

Case A: too big to fail, no leverage ratio constraint & excessive risk

The simplified example in case A is not far off the situation in some conglomerates before the crisis. The group consisting of a commercial bank and an investment bank (IB) has a holding company parent or group executive that raises USD 100 billion in capital shown as equity in the example. It is assumed the bank is too big to fail and there is therefore an implicit guarantee from the taxpayer that causes the cost of leverage via derivatives to be too low (under priced):

- The bank allocates USD 70 billion capital to the IB and only USD 30 billion to the bank (constrained by deposit raising and long-term borrowing) in order to grow its business more rapidly.

Table 5. Alternative structures A, B & C in descending order of risk

ALTERNATIVE CONGLOMERATE STRUCTURES						
PARENT	(A) TBTF ^{a)}		(B) TBTF & levgr.restr. ^{b)}		(C) NOHC (siloed cap.)	
Capital market activity	Equity 100		Equity 100		Equity 100	
SUBSIDIARIES	Comm. Bank	Invest. Bank	Comm. Bank	Invest. Bank	Comm. Bank	Invest. Bank
Equity investment parent, USD bn	30	70	70	30	70	30
Debt, USD bn	480	3 500	1 120	780	1 120	570
Balance sheet total, USD bn	510	3 570	1 190	810	1 190	600
Debt/equity ratio	16	50	16	26	16	19
Leverage ratio (assets/equity)	17	51	17	27	17	20
Profit, ^{c)} USD bn	5	36	12	24	12	6
Return on equity, %	17	51	17	81	17	20
max. loss rate, in % assets	2.5	5	2.5	15	2.5	5
max. loss, USD bn	13	178	30	121	30	30
max. loss in % of equity	43	254	43	403	43	100
GROUP						
Balance sheet total, USD bn	4 080		2 000		1 790	
Leverage ratio (assets/equity)	41 times equity		20 times equity		18 times equity	
Unweighted capital ratio (common equity), %	2.5		5.0		5.6	
max. loss in % of equity	191		151		60	
Return on equity, %	41		36		18	

a) A conglomerate "too big to fail" (TBTF), thus with implicit government guarantee; no restrictions on leverage ratio imposed.

b) A conglomerate "too big to fail" (TBTF), thus with implicit government guarantee; but assuming a group leverage restriction of 20 times equity is imposed.

c) Profits are assumed as 1% return on assets ("spread", ROA, on balance sheet total) for all cases except for the IB in case B where profits are assumed to be 3% ROA (due to riskier IB activities compensating for the reduction in ROE caused by restrictions on leverage).

Source: OECD.

- Assuming the debt/equity ratio for the bank is 16 and for the IB is 50 times, the bank has a balance sheet total of USD 510 billion and the IB USD 3 570 billion. The group balance sheet is USD 4 080 billion and the group leverage ratio is almost 41 times (a 2.5% unweighted capital ratio).
- The bank and the IB are both assumed to earn 1% on their balance sheet, and the higher return on equity employed in the IB of 51% derives purely from the greater leverage ratio. The maximum loss rate on IB activities is assumed to be 5%, double that of the bank due to counterparty and volatility risks in the derivative products it uses.
- The key point to note is that the combined loss exposure of the bank (USD 13 billion) and the IB (USD 178 billion) sum to USD 191 billion nearly double the capital of the group. Hence sudden sharp price movements or an AIG or Lehman-scale failure affecting the IB may wipe out the capital of the whole group, including the commercial bank and still leave a large bill for the taxpayer – a familiar story in the recent crisis. This is contagion risk writ large.
- The proportions of commercial banking versus investment banking are constructed to be like some of the "equity culture" banks discussed earlier. This banking group would indeed be "too big to fail": it has

been allowed to grow very large with its volatile investment banking business and with the market lending it excess of what it could lose due to the implicit guarantee.

Case B: imposing a group leverage ratio of 20 (un-weighted capital adequacy of 5%)

Imposing a group leverage ratio of 20 on large bank conglomerates would have management scrambling for a new strategy, and profitability would be hit badly, particularly if risk and return in the IB were not increased. This explains why such banks may be expected to resist calls to raise more capital and reduce leverage:

- In the example shown, the bank re-allocates capital to the commercial bank (USD 70 billion) with its assumed leverage ratio of 16 and halves the leverage ratio of the IB from 50 to 26 times its USD 20 billion capital. This achieves the group leverage ratio of 20.
- However, other things equal, this would essentially halve the rate of return on equity for the IB (if it were leveraging a 1% spread as in case A). The group leverage ratio of 20 does not stop the IB from increasing its risk and return to make up for this. In the example shown the bank is assumed to lever 26 times a 3% spread (ROA) and triples the maximum loss risk for its balance sheet from 5% to 15%. (For example, it moves into lower-rated bonds, more emerging market debt, equity and commodity trades.)
- The policy of introducing a leverage ratio has greatly reduced the riskiness of the bank: the overall return on equity falls from 41% in case A to 36% in case B. But it does not eliminate contagion risk. If counterparties fail, the IB can lose USD 121 billion, 4 times the capital allocated to the IB. In a crisis this would spill losses over into the commercial bank ‘easily’ absorbing all of its capital of USD 70 billion. This would lead to deleveraging and or taxpayer support if policy makers wanted to avoid this outcome. Counterparties would happily trade this degree of leverage in the IB as they potentially have access to USD 100 billion of capital for the group as a whole.
- Once again, it would not be credible that the structure in case B would be allowed to fail in a crisis scenario. The group leverage ratio, while a good step in reducing risk, does not eliminate the contagion risk from which “too big to fail” is mostly derived.

Case C: the NOHC structure with silo capital pools

If the parent of the group was non-operating, and could only raise equity on the market and invest in its subsidiaries, which were legally separated – separate reporting and balance sheets with their own boards and governance – then an entirely new dynamic is introduced (case C). Counterparties will be aware that they do not have access to group capital in a crisis but only to the separate capital of the subsidiary – in this example, to the USD 30 billion of the IB. The

bank and the IB have capital in separate silos. Market discipline through margin requirements and leverage limits would restrain the activities of the IB. The market would enforce lower leverage and/or risk taking to ensure that the maximum loss did not more than exhaust the IB's capital:

- In the example shown the IB is forced to cut the leverage ratio to 19 times (so that the assumed maximum loss would not exceed equity) and to reduce its risk/return exposure back to what it was in case A (1% spread and 5% maximum loss).
- Note also that it is entirely credible that regulators could shut down the IB independently of the commercial bank in the event that it did lose all its capital. It is a separate legal entity, and its size is smaller due to the market disciplines of the structure.

The double gearing issue

In all of the above examples the parent may also use double gearing if regulations permit it. Double gearing would occur, for example, if the parent did not raise USD 100 billion on the stock market, but instead say raised half in various forms of debt or hybrids. Debt and equity would be invested as 'equity' into the subsidiaries, to which they would apply their own debt/equity ratios as before. If in the above example USD 50 billion was raised as subordinated debt or hybrids, and USD 50 billion equity, then the rate of return on equity could be doubled and the group leverage ratio to true equity would rise sharply. It is imperative that the concept of capital to which any new leverage ratio rules apply should be for equity only.

VI. Advantages of an NOHC Structure

The non-operating parent would have no legal basis to shift capital between affiliates in a crisis

Under the NOHC structure proposed, the parent would be non-operating, raising capital on the stock exchange and investing it transparently and without any double-gearing in its operating subsidiaries – the bank and the securities firm in the above example – that would be separate legal entities with their own governance. The subsidiaries would pay dividends through the parent to shareholders out of profits. The non-operating parent would have no legal basis to shift capital between affiliates in a crisis, and it would not be able to request “special dividends” in order to do so.

NOHC structures allow separation insofar as prudential risk and the use of capital is concerned while permitting synergies and economies of scale and scope

These structures allow separation insofar as prudential risk and the use of capital is concerned without the full divestment required under Glass-Steagall. In response to recently expressed concerns of Paul Volcker and Mervyn King,²¹ such extreme solutions should remain the proper focus of competition authorities. With a NOHC structure, technology platforms and back-office functions would still be shared, permitting synergies and economies of scale and scope. Such a transparent structure would make it easier for regulators and market players to see potential weaknesses. Mark-to-market and fair value accounting would affect those affiliates most associated with securities businesses, while longer-term cost amortisation would dominate for commercial banking. It would create a tougher, non-subsidised environment for securities firms, but a safer one for investors.

Risk pricing would be improved

If a securities firm under this structure had access to limited ‘siloes’ capital and could not share it with other subsidiaries, and this were clear to the market, this would be priced into the cost of capital and reflected in margins for derivative transactions. The result would likely be smaller securities firms that are more careful in risk taking than has been the case under the “double gearing” scenarios seen in mixed or universal bank groups.

Affiliates could fail without affecting its sister firms

Finally, if a securities affiliate were to fail under such a structure, the regulator could shut it down without affecting its commercial banking sister firm in a critical way – obviating the need for “living wills.” Resolution mechanisms for smaller, legally separate entities would be more credible than those needed in the recent past for large mixed conglomerates – helping to deal with the ‘too big to fail’ issue. To protect consumers, deposit insurance and other guarantees could apply to the bank without being extended to the legally separate securities firm.

Exit strategies need to entail a reassessment of rules and a structure of conglomerates

Banks would resist this proposal because of its impact on their risk taking and potential short-term returns (as shown in the example). Until now, the implementation of regulatory standards and accounting rules has been eased. Fiscal policy has supported the economy and interest rates are being kept low to support the underlying earnings of banks and their ability to issue new equity in rising markets. This strategy may work in the short term. But it cannot go on forever. Sooner or later exit from the extraordinary support measures will be necessary. The world is still waiting for a full reassessment of rules and a structure of conglomerates that will change what banks do to reduce the chance of it ever happening again.

VII. Conclusions*Systemic failure is linked to what banks actually do*

The main cause of systemic failure in the current global crisis was seen to be linked to what banks actually do within the broad global regulatory framework which failed adequately to restrain excessive leverage and risk taking.

Equity culture pushes leverage and risk taking

Improved corporate governance could in principle bring about safer conglomerates. However, the above examples on alternative structures show enormous differences in the potential returns that can be gained with different leverage and risk taking assumptions. Derivatives are powerful tools to transform and shift risks to avoid many regulatory constraints and to structure products to take advantage of tax loopholes for the benefit of financial firms and their clients. The scope for innovation under the equity culture – pushing leverage and risk taking for short-term gains – is virtually unlimited and may again prove too great a temptation for many firms.

Transparent and comparable accounting rules and improvements in corporate

This paper emphasised the need for transparent and comparable accounting rules and for improvements in corporate governance. But the interconnected nature of banking makes it quite different to industrial firms, and it is unlikely that voluntary improvement will be enough to change the potentially damaging things that banks do. Two aspects of the reform process are essential to deal with

governance are not enough contagion and counterparty risk that are so integral to the ‘too big to fail’ issue:

- The imposition of a group leverage ratio foreshadowed at the Pittsburgh Summit to provide the binding constraint that Basel risk-weighted rules have been unable to achieve.
- A NOHC structure to address contagion and counterparty risk directly.

A group leverage ratio applied to on and off-balance sheet structures...

The leverage ratio is effective if applied to on and off-balance sheet structures, and provided it is based on the equity of the firm (and not a broader concept of capital which would leave scope for double gearing). However, on its own it does not prevent increased risk taking for a given leverage ratio, and nor does it exclude contagion risk.

...needs to be combined with an NOHC structure that, while legally separating capital within a conglomerate, would still allow benefits from synergies and economies of scale and scope

A NOHC structure addresses contagion and counterparty risk directly. It is also quite practical. Nearly all banks organise their internal allocation of capital in terms of profit centres with different risk/return characteristics that must meet internal hurdle rates or return in the group capital allocation process. They simply do not go the extra step required for legally separate (‘siloed’) capital pools for subsidiaries, so that the market can better determine the cost of capital for each business segment. Encouraging legal separation would be relatively simple. Banks would oppose it legitimately on the grounds that it would raise the cost of capital for high risk activities and likely shrink their securities businesses (as risk would be re-priced with the reduction in implicit public guarantees and internal cross-subsidisation). They could not, however, legitimately oppose the structure on the basis of arguments about economies of scale and scope – legal separation of capital and a non-operating parent still enables sharing of technology platforms, cross-selling and back-office synergies. Fair value market-to-market accounting will affect securities businesses more than commercial banking, where cost amortisation will dominate, making accounts more transparent and ensuring that volatility is reflected clearly where it should be found.

NOTES

¹ Grantham (2009).

² If banks with similar business models to these 5 are added: JP Morgan now absorbing Washington Mutual and Bear Stearns (with a 10 year guarantee of USD 30billion by the Fed), Lehman Brothers, Merrill Lynch (within Bank of America), Well Fargo (Wachovia), Credit Suisse, Crédit Agricole (Calyon), Royal Bank of Scotland (ABN Amro), Morgan Stanley, ING, BNP Paribas, Société Générale, and the 3 main non-bank loss makers in dealing with securitization and CDS: AIG, Fannie Mae and Freddie Mac, then USD 1.05trillion of the USD 1.61trillion of losses and write-downs admitted to globally for banks and insurers is accounted for. A lot of the rest is made up of 'copy cat' banks getting into the act, Fortis, Dexia, Hypo Real estate and so on. These figures do not include the full failure loss of Lehman Brothers, nor losses that have been essentially hidden with accounting rulings, regulatory forbearance and losses quietly absorbed by state-owned banks.

³ The trading assets are consolidated with other assets at fair value through profit or loss. The US banks include unconsolidated VIE's in this category.

⁴ A typical hedge fund has a leverage ratio of 4 or 5.

⁵ The Deutsche Bank balance sheet has been strengthened by a three- tranche deal to giving it access to equity held as deposits in Deutsche Postbank.

⁶ Citigroup's QSPEs are an order of magnitude higher than its VIEs, but Citi in theory has transferred the risk to third parties. QSPE's in June were USD 747 billion or 40.4% of the reported balance sheet.

⁷ Maximum loss exposure is the amount of money that would change hands in net term if all counterparties simultaneously failed.

⁸ This is a highly standardised single tranche CDO, with (say) iTraxx Europe or CDX NA IG as its reference portfolio. Besides using standard portfolios, the attachment and detachment points, maturity and documentation of index tranches are also standardised, ensuring that these products are much more liquid than bespoke synthetic CDOs. Structured equity products are not included.

⁹ Synthetic CDOs can either be single tranche CDOs or fully distributed CDOs.

¹⁰ Note that the Financial Stability Board (FSB) is currently looking into these issues, including definitions for systemic importance; see IMF-BIS-FSB (2009).

¹¹ See www.FDIC.gov. By 23 December 2009, 166 banks have failed since 2008; almost all in the small specialised category (www.fdic.gov/bank/individual/failed/banklist.html). Local savings banks in Spain are also in trouble and the so-called dynamic provisioning (counter-cyclical) capital rules have not been able to prevent this.

¹² OECD estimates of losses looking forward are provided in Blundell-Wignall and Atkinson (2009).

¹³ The Financial Stability Improvement Act that has just passed the House focuses on co-ordinated oversight, and gives strong powers for resolution to the Treasury, the Fed and the FDIC. It does not directly address the structure of financial firms.

- ¹⁴ If held to maturity, temporary impairment reverses on a fair value measurement and “fair value through other comprehensive income” allows dividend income only to be taken to profit or loss.
- ¹⁵ The European Commission has asked for more time to consider IFRS9. Jörgen Holmquist, Director General of Internal Markets at the European Commission, argued in a letter to the IASB that more assets might be marked to market under the new system than even under existing rules. He urged the IASB “urgently” to consider further changes.
- ¹⁶ In this respect, the reform proposal to migrate OTC derivatives to exchanges and the use of centralised clearing has strong advantages and should be encouraged in the reform agenda. First, it improves liquidity and transparent pricing – in particular, margin requirements based on historic volatility patterns are possible, which facilitates transparent netting arrangements. Second, netting and holding collateral with the clearer make settlement in the event of losses and/or counterparty failure safer and more rapid. Third, centralised counterparties may make things clearer for regulators in the event of unravelling trades in a crisis. This type of reform is important, but it is not a panacea. The problem is that many OTC derivatives are idiosyncratic and cannot easily be standardised for trading purposes. The sheer size of trades, too, means that losses may overwhelm exchanges which might remain small in size – never gaining the depth required for the bulk of the products used in securitisation.
- ¹⁷ See OECD (2009) for a more detailed discussion of these issues.
- ¹⁸ See also Kirkpatrick (2009).
- ¹⁹ See Blundell-Wignall and Atkinson (2008) and Blundell-Wignall *et al.* (2009).
- ²⁰ The US is excluded from the scatter plot as most conglomerate losses occurred in off-balance sheet vehicles to which Basel capital adequacy did not even apply.
- ²¹ See, for example, the report to the G30 by the Working Group on Financial Reform led by Paul Volcker (Group of Thirty, 2009), and the speech by Mervin King (King, 2009).

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