

Dealing with the Financial Crisis and Thinking about the Exit Strategy

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This article looks at the stages of crisis management and some of the different degrees of transparency on losses and risks in the US and Europe. It also compares alternative approaches to dealing with impaired assets used in the USA and Europe. Exposure to off-balance losses remains a key issue. Europe, surprisingly, has been and remains the major issuer of collateralised synthetic obligations that have been so prominent in the crisis. The capital needs of banks over the next few years is examined, and great uncertainties remain due to the unknown extent to which off-balance sheet vehicles will need to be consolidated. Finally, the requirements of longer-run reform are outlined.

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I. Overview: How to think about the problem

The global financial infrastructure is a big remaining issue

Major crises always come out of distortions. At the level of the global financial system, the basic problem has been the undervaluation of Asian (managed) exchange rates that have led to trade deficits for Western economies, forcing on them the choice either of macro accommodation or recession. The choice of easy money policies results in excess liquidity, asset bubbles and leverage.

Principal agent problems are key on the micro side

At the micro level regulatory, tax and structural distortions create principal-agent problems. Principals are taxpayers, shareholders, bond holders and depositors. The agents are central banks, regulators/supervisors, treasury/tax/competition authorities and CEOs/Boards of companies (especially within banks). The agents together have failed the principals by creating incentives that lead to excess leverage, too little capital and the formation of systemically important companies. The mixing of equity and credit culture in this process, and the incentive to maximise private benefits through excessive risk taking while socialising much of the losses, has led to the biggest crisis since the Great Depression and a massive bill for global taxpayers.

This crisis was preceded by similar crises in the early 1980s and early 1990s, each one successively larger than its predecessor. But the lessons were not learned. In essence it is a solvency crisis, and that has led to liquidity problems and deleveraging that is bearing down on the economy.

Crisis measures versus exit issues

There are a number of phases in dealing with such a crisis. Some of this follows the standard psychological paths, and this has certainly been a strong feature of the current crisis: shock and denial in the early stages (particularly by the agents such as banks and policy makers); guilt, as denial becomes less defensible; then anger and/or depression (particularly by investors and taxpayers). It is at this latter stage that crisis measures to minimise the impact on the real economy really gets under way. Proper reform, however, requires acceptance of past mistakes and hopes for a better future returning. Crisis measures need to be accompanied by genuine reform of the regulations and other incentive structures that caused the crisis. Finally, **exit strategies** from the emergency measures towards a sustainable long-term financial system. This latter phase will require some very careful thought about the issue of “exit back towards what?” It would be entirely inappropriate to exit to the principal-agent structure that led to the crisis in the first place.

Denial and the risk of avoiding major reform

The countries involved most in the crisis remain at quite different stages. The US has been most transparent, both in its financial reporting and with its recent stress tests and policy measures. Others remain in aspects of denial about the crisis – perhaps with a view to keeping markets calm or because poor reporting standards make it hard to know how concerned one should be. While keeping markets calm always has some merit, there are costs, too, which come from trying to *minimise* the crisis and not get to the stage of genuine reform. Governments will always throw enough money at the problem as the economy is hit, and should succeed in generating a government-spending-tax-led period of positive growth. But this carries risks for the future, including that of a double-dip recession and/or another major financial crisis in the longer run.

Credibility means thinking about exit at the same time that crisis measures are taken

The financial markets are looking for **credible crisis response policies** that fit together and are also consistent with longer-run economic goals. Crisis measures should be consistent with a sensible approach to ‘exit’ and with the sustainable long-term strategies. Actions to deal with the crisis now will be more credible to the extent they are consistent with long-run goals (or at least are accompanied by a clear strategy and time-line for making it so later on). These **long-run goals** include: the effective balance between prudential risk control and competition; competitive level playing fields; open investment markets; transparency in corporate structures and reporting; and reduced agency problems through better governance. These objectives are concerned with realigning incentive structures to minimise the chances for crises of this sort to recur in the future. However, in the near term they will need to be pursued in a manner that does not exacerbate deleveraging or inhibit lending, which would worsen the impact on the economy. Striking the right balance between the near-term and the longer-run goals is needed to reinforce credibility and instil confidence in financial markets.¹

II. Where are we in the crisis?

Lessons of past crises

The cost of this crisis has been rising as policy action did not keep pace with the deterioration of bank assets, leading to insolvency and a sharp contraction of financial activity with growing effects on the real economy. The lesson of the S&L crisis was that the issuing of insurance and liability/asset guarantees is not effective if the economy is moving into recession, because asset prices continue to deteriorate, guarantees are triggered, more guarantees and capital are needed and the ‘insurer’ becomes bankrupted. Similar conclusions come out of the Japan crisis: keeping ‘*zombie companies*’ on bank balance sheets with the promise of government capital injections became a self-defeating process.

The basic lesson of the past solvency crises is that three steps are always required:

1. Insure all relevant deposits during the crisis to prevent runs on banks.
2. Remove the ‘*bad assets*’ from the balance sheet of banks.
3. Recapitalise the asset-cleansed banks.

Step 2 cannot be avoided as deleveraging and uncertainty rise in a declining economy. Assets not previously at risk become impaired and the crisis spreads. Step 2 is crucial. If institutions are not systemically important and cannot reasonably be saved, they should be closed (or nationalised) before their assets become worthless (raising the public contribution cost). But where complex global financial institutions that are systemically important are involved, their bad assets need to be dealt with via public sector actions of some form.

Only the public sector is able to exchange risk free

Why? The reason is because only the public sector can issue risk-free assets and exchange them for risky assets in a crisis, which is critical when liquidity is jammed and there is widespread uncertainty and a buyers’ strike on

**assets for risk
assets in a crisis**

the part of natural holders such as pension funds, mutual funds, insurance companies, sovereign wealth funds (SWFs) and the like. These impaired assets ('toxic' to investors) would then play no further role in the crisis and can be dealt with in the most sensible way. This exchange, through purchases of impaired assets, can be done in a way that promotes orderly market conditions: by avoiding fire sales of assets by banks and because strong and aggressive buying for the public balance sheet will eventually encourage natural buyers to come into the process (thereby reducing the amount the public sector would have to buy). Much later, in the exit strategy phase, the public sector assets can be sold: gradually removing them from the public balance sheet towards more natural holders such as pension funds, sovereign wealth funds, insurance companies and other investors. Depending on the pricing of assets, and how the process is handled, the taxpayer could eventually recoup some of the losses from the costs of the rescue packages.

Only if bank assets have been "cleansed" in this way will private investors participate in recapitalisation, in the third step.

III. Key issues in dealing with impaired assets

There are a number of **key issues** to think about when dealing with impaired assets, some of which are quite different this time compared to previous crises.

**Valuation is
difficult**

- The assets are especially difficult to value. This is less so for standard non-performing loans on a bank's balance sheet, but very much the case for securitised assets much of which sit in off-balance sheet conduits. The reasons for this are twofold: (i) they are not traded in an open market, and so price discovery via supply and demand flows is not present; (ii) and while some securities and conduits are conforming in the sense of being single-name pass-through certificates² that are rated and can be valued on the basis of underlying mortgages, other assets (mostly level 2 and some level 3 type assets³) are not. Synthetic products that contain complex OTC derivatives for example would fit easily into this category (mostly level 3 type assets).

**Taxpayer risk is
high**

- Because of great uncertainty about valuation, the risk to the taxpayer of buying at too high a price in the emergency measures phase is quite high.

Conduit issues

- It must be stressed that the conduits are a special feature of this crisis. It is not simply a matter of cleansing the observed balance sheet assets, if the conduits are unconsolidated vehicles of the banks, they must be dealt with too if solvency and/or liquidity problems arise in special purpose vehicles.

**Nationalisation
versus v AM
approach**

There are **four broad approaches** to dealing with impaired assets: (i) Asset Management (AM) approach used extensively in the Asia crisis, where funds, (which can be public, private or mixed) buy impaired assets in an open-market auction process (as foreseen in the 23 March 2009 Geithner plan); (ii) full or partial nationalisation of affected banks, separation of the bad assets into a type

of Resolution Trust Corporation (RTC) public balance sheet entity and resale of the government's shares in the 'cleansed' bank back to the private sector later on (the Swiss recently used a variant of this approach for UBS); (iii) ring-fencing the bad assets with government guarantees above a certain 'first loss' amount (as used by the UK government) for a fee; and (iv) mergers between banks – where one of the partners has a better capital position or a stronger retail deposit base to help strengthen the weaker bank.

Advantages and disadvantages of the four approaches

- **The AM approach:** the main **advantages** are: First, it doesn't require public servants to run banks. Second, the process itself creates a market which permits better price discovery. Third, it can be structured as a public-private approach to take risks to the taxpayer into account. Fourth, it is an open-market approach and hence in line with level playing field objectives. Fifth, is speed, as the approach uses existing fund managers and does not require a new institution to be set up. Sixth, if the AM group buys assets at prices above the fair value accounting reported valuations, then banks can write back provisions into the earnings statement thereby helping in the recapitalisation process. **The main disadvantages** are: First, that reliance on private money is uncertain, and if enough is not forthcoming, then there will not be enough funds to deal with the problem. Second, it cannot (and should not) deal with non-conforming highly-impaired assets – truly 'toxic'. This means that there could be a residual of bad assets to be dealt with which – if it proved to be large enough – could still require some element of 100% socialisation of losses.
- **Full or partial nationalisation:** the main **advantage** is certainty; the 100% use of the public balance sheet engenders certainty. **The disadvantages** are many, particularly for this crisis. First large global banks that are systemically important are involved and would be difficult to manage by government officials (in the case of 100% nationalisation), and any disruption to their operations would impact the economy. Second, there is no price discovery by market mechanisms prior to 'purchase'. Third, nationalisation guarantees that 100% of the risk will be borne by the taxpayer in a situation where the assets are taken on to the public balance sheet without any market price discovery. Fourth, it is likely to focus on particular institutions, giving them government guarantees and funding advantages that would create an unlevel playing field. Fifth, investors do not like the '*nationalisation*' signal, and the political risk premium for investing in the financial sector would rise (possibly exacerbating confidence issues in the crisis phase).
- **Ring-fencing: advantages of the scheme** in the UK case are that the fees will be satisfied through the issuance of non-voting ordinary shares (boosting core Tier 1 capital). Another advantage of the scheme is that any losses on the covered assets will be spread out over a longer time horizon, avoiding the costs of up-front funding for such assets by purchasing them outright during a period of market disruption. The main

disadvantages are the non-level playing field aspects and the unknown cost to the taxpayer.

- **Mergers** do not add new net capital or remove bad assets. They create systemically larger institutions. They can violate level playing field issues, especially if combined with government guarantees and any other help on toxic assets for the merged group. Mergers have been used extensively in the US, Europe and the UK, often with mixed outcomes.

US treatment of impaired assets and the issue of whether the plan is big enough

The US Treasury 'Public Private Investment Partnership' (PPIP) plan for buying troubled assets is very much in the AM tradition, and has two prongs to it: loans and securities.

1. Legacy Loan Purchase Program (LLPP)

The plan

Banks identify to the US Federal Deposit Insurance Corporation (FDIC) non-performing balance sheet loans (NPLs) they wish to divest. The FDIC then values the pool with 3rd party input and decides how much leverage (up to a maximum of 6:1) and FDIC guarantees it will allow. The FDIC then auctions the pool to highest price bidders. As an example, if the purchase price is USD 84 of a USD 100 face value: then the FDIC will provide USD 72 of guarantees, requiring USD 12 equity. The Treasury would give USD 6 equity, and the private bidder would provide USD 6. The private bidder (professional fund managers) then has full discretion to manage, with FDIC oversight.

Clever aspects

The loans approach makes a lot of sense, in partially socialising the debt. This essentially creates a group of 50% nationalised SIVs (run by the fund managers) with FDIC guaranteed deposits (just like the problem bank has) and with lots of capital (a 6:1 leverage ratio compared to an average of 18:1 for the bank). It does not necessarily increase the guarantee commitments for the FDIC (a very good thing bearing the exit strategy in mind), as the process will reduce bank balance sheets by a similar amount – they can reduce wholesale guaranteed funding.

The SCAP banks balance sheet losses are only part of the problem

Table 1 shows the assets, capital, leverage ratio, balance sheet write-downs and exposure to off-balance sheet losses for the 19 stress-tested banks in the US Supervisory Capital Assessment Program (SCAP). A balance sheet (SCAP consistent) loss estimate by the authors of USD 361bn is shown in Table 1, consisting mainly of non-performing loans (NPLs). The LLPP amount of around USD 300bn should be enough to clean up banking system NPLs.⁴ That sort of money should be readily forthcoming with the clever structure envisaged. Distressed asset companies with easy leverage (grace of the FDIC guarantee) will likely be happy to participate. However, the balance-sheet loan loss issue is only part of the problem, as it ignores unconsolidated toxic securities that the bank is responsible for and may have to consolidate later.

Table 1: Balance sheet elements and losses for the 19 SCAP banks

Billions US dollar	2007 & 2008	2009 & 2010 (Baseline)
Capital end-2008	608.0	
Assets end-2008	10892.5	
Leverage ratio	17.9	
Balance sheet writedowns	563.6	
SCAP consistent baseline loss forecast		361.3
Capital raised	444.3	0
Shortfall balance sheet	119.3	480.6
Balance sheet capital needs (ex VIEs)		480.6
Off balance sheet exposures		
VIEs now consolidated onto bal.sheet (end-2008)	110.0	
VIE outstanding (end 2008 unconsolidated)	796.3	
Unconsolidated VIE loss exposure		389.4
Residual capital needs end-2010 incl. VIE loss exp.		870.0
QSPE outstanding end-2008	3192.4	
QSPE loss est. (not a US bank problem)		567.0
Losses banks are responsible for (SCAP+VIE)	563.6	870.0
Less earnings estimate ^{a)}		434.0
IMF forecast for all US bank losses	563.6	1040.4

a) Underlying earnings per annum @ 2% on assets end-2008 USD 218bn.

Note: VIEs are Variable Interest Entities, of which the bank is the primary beneficiary and which it must consolidate in the event of liquidity or solvency issues. QSPEs are Qualifying Special Purpose Entities to which the bank has transferred the risk. QSPEs are passive entities generally exempt from consolidation by the transferor.

Source: SEC 10k filings.

2. Legacy Security Purchase (LSP) Program

The plan

Five fund managers are to be chosen that can raise capital, and they will benefit from a dollar-for-dollar equity matching arrangement in a joint venture with the US Treasury, the full amount of which will depend on how much each manager can raise. Treasury will then provide an additional loan equal to its share (up to double its equity in some cases) – so the fund manager will have three (maybe up to four) times his initial investment to buy assets. The Treasury will put a maximum of USD 100bn into this, so if the private sector raises USD 100bn, that would provide a USD 300bn combined fund size in the first instance. The fund managers will have full discretion to buy and manage the assets. They are then allowed to buy from the balance sheet of unrelated institutions. Balance sheet means in the asset-for-sale (AFS) category of the trading account, which is subject to fair value accounting (unlike hold-to-maturity in the investment account).

- The manager is expected to buy and hold (tied in for say up to 10 years).
- It applies only to RMBS or CMBS ABS ('legacy assets') originally rated as AAA and issued prior to 2009.
- The underlying collateral of the assets must be situated predominantly in the United States.

- They must be TARP legislation eligible assets.
- Governance provisions ensure oversight (monthly reports, agreed audited valuation, abuse protection, access to books, inspection oversight, etc).
- There must be an issue of warrants to protect the interests of taxpayers.

Valuation of securities can start with an AM approach

This approach has the potential to deal with the impaired securities problem, with all of the advantages listed above. While assets are going to be difficult to value, this is not a legitimate criticism of this approach since – unlike in the case of full nationalisation – it provides money to offset the buyers strike problem by creating a demand side fund chartered to buy. This is a key prerequisite for kick-starting the process of price discovery by examining and making offers related to underlying collateral.

The main issue is whether there will be enough funds to deal with the size problem

The main issue is going to be whether there are sufficient funds to deal with the problem. In particular, without the FDIC guarantee and 6:1 leverage offered with respect to the loan programme, it may be difficult to raise sufficient capital. Furthermore, unattractive features are: the hold-to-maturity preference that many players won't like; and the absence from benchmark indexes of these products which makes them unattractive to passive mutual and pension funds. In sum, buying illiquid assets is very unattractive right now, except for distressed asset funds, private equity firms and governments. All three groups have a funding problem: the distressed asset hedge fund and private equity firms because of the constrained credit environment and governments due to taxpayer concerns.

If the initial USD 300bn can be raised, despite these issues, **will it be enough?** Table 1 shows that it would be more than enough to deal with the USD 110bn of Variable Interest Entities (VIEs; see footnote to Table 1 for a definition) already consolidated on the balance sheet for the 19 SCAP banks. However, there is a further USD 796.3bn of unconsolidated VIEs that may yet have to be consolidated. Banks' own calculation of the potential maximum loss exposure is some USD 389.4bn. This additional amount would take the potential needs closer to USD 500bn, assuming we can safely ignore the Qualifying Special Purpose Entities (QSPEs).⁵ Fortunately, they may not have to consolidate all the VIEs as many will contain assets that bank clients may wish to keep, a process made easier by recent changes in accounting rules.⁶

But the questions remain:

- Will there be sufficient funds to buy all the qualifying assets that all of the banks wish to sell?
- How quickly will the PPIP money be forthcoming?
- Once the securities buying process is well advanced, will banks have enough capital to resume normal business? Or will the residual assets not qualifying for the program, which still need to be written off, be too much?
- Will any banks still requiring further capital injections be significant or not? And how will this residual problem, if it transpires, be dealt with?

Will there be too many residual assets not covered?

Will some insolvent banks remain?

IV. Losses and recapitalisation needs over the next few years

The US situation

The Table 1 balance sheet loss forecasts in 2009 and 2010 (consistent with SCAP) amount to USD 361.3bn. Together with known write-downs for 2007 and 2008 of USD 563.6, this implies overall losses of USD 924.8bn for the full period 2007-2010. However, capital already raised amounts to USD 444.3bn, so the net balance sheet capital to be raised over the next 2 years (to leave the leverage ratio unchanged at 17.9) is USD 480.6bn. This would not seem such an onerous task, as underlying earnings of say 2% on assets over this period (see the bottom of Table 1) would raise USD 436bn, assuming no growth of assets and no dividend. That would see the problem solved before mid-2011.

However, unconsolidated bank VIEs are not taken into account in this analysis. Allowing for banks' own estimates of maximum loss exposure on these items amounts to USD 389.4bn for the 19 banks. So total losses that banks are responsible for could be as high as USD 870bn (but less than the IMF implied estimate of USD 1040bn). If banks' underlying earnings are allowed for at 2% of assets, that would leave a further USD 434bn (see bottom right of Table 1) to be dealt with after 2010 – essentially a further 2 years. This level of call on earnings (or further dilution) is presumably already reflected in very low bank share prices.

The European situation is more opaque

European banks are more leveraged than US banks

Off balance sheet exposures are not at all transparent

Table 2 shows similar European balance sheet metrics to those shown above for the USA. It stands out immediately that the European group of banks reporting losses have a leverage ratio of 36.2, about double that of their US counterparts – that is, considerably less capital to support their balance sheet assets. Balance sheet losses to date seem to have been matched by capital raised. IMF forecasts for European bank losses over the next two years of USD 350.5bn on assets of over USD 39 trillion seems small, and apparently well inside their potential earnings capacity over that period (shown in the footnote of Table 2). However, unless the bank is listed in the USA (and banks like Hypo Real Estate Group – currently in nationalisation emergency due to its investment banking activities at DEPFA, a subsidiary in Dublin – certainly are not), the lack of reported data makes it very difficult to get a consolidated picture of all of the high-risk off-balance sheet activity and financial engineering that goes on in Europe from published bank annual reports.⁷

Figure 1 shows quarterly issuance of collateralised synthetic obligations (CSOs) in total and an estimate of Europe's share of that issuance; typically Europe's share is around 2/3. Europe has been responsible for about USD 2.1trillion of CSO issuance in this market between 2004 and 2009q1 (see the second bottom panel of Table 2).⁸ Somewhat surprisingly, Europe continues to issue these obligations at a reasonably substantial clip compared to the rest of the world.

Table 2: European banks' balance sheet items and off balance sheet estimates

Billions US dollars	2007 & 2008	2009 & 2010 (Baseline)
Capital end-2008	1076.9	
Assets end-2008	39645.7	
Leverage ratio	36.8	
Balance sheet writedowns	386.5	
Capital raised	380.2	
IMF loss forecast		350.5
Shortfall balance sheet	6.3	356.8
Capital needs (assumes zero off balance sheet exp.)		356.8
Capital to get to the lower US leverage ratio		
Assets allowing for 5% growth ^{a)}		43709.4
Capital required for leverage ratio of 17.9 (USA)		2441.9
Total required capital (assumes no off bal.sheet exp.)		2798.7
Off balance sheet issuance + share US QSPEs		
Total Eur. issuance of CSOs to 2009q1 (book value)	2141.9	
1/3 Share of US QSPE issuance?	1053.5	
Loss exposure that banks are responsible for		UNKNOWN

a) Earnings per annum @ 2% on assets end 2008 USD 793bn.

Source: Bank reports, Credit Flux.

Avoiding regulatory capital is almost always the reason for these CSO transactions. Here is what DEPFA Bank said of a major CSO transaction as recently as December 2007, just as the crisis that would destroy its parent Hypo Real Estate Group was getting under way:

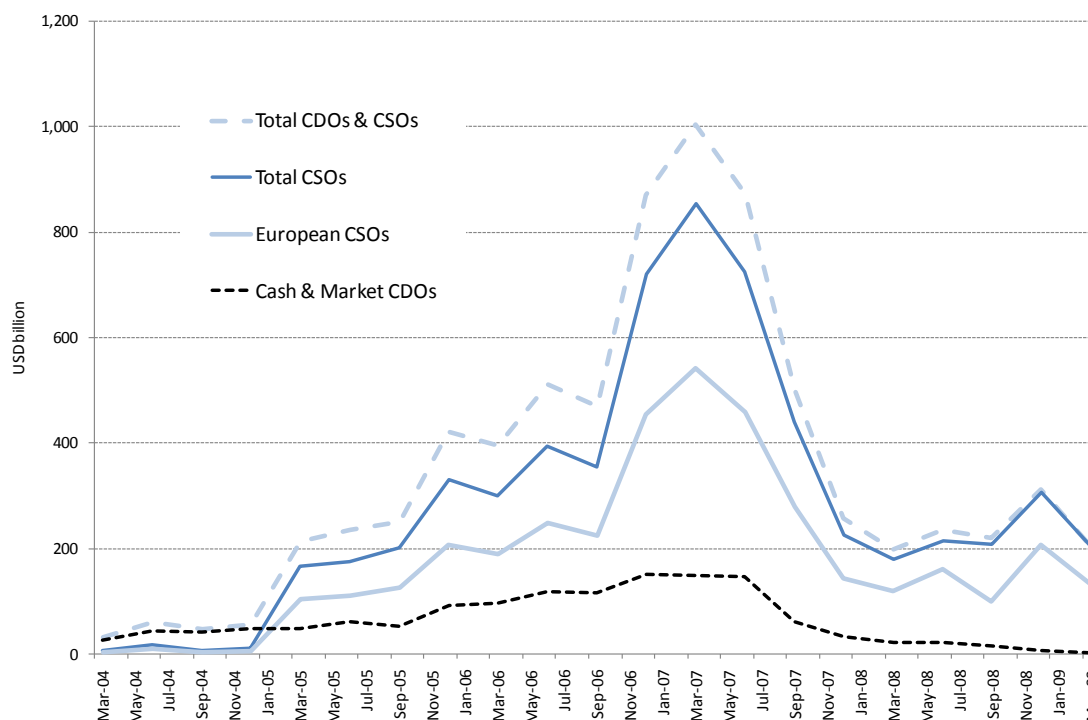
***Hypo Bank and
avoiding
regulatory capital***

*“Since October 2007, DEPFA has been a member of the Hypo Real Estate Group, and this transaction achieves a number of objectives for DEPFA, and the Group as a whole: DEPFA has reduced the amount of regulatory capital required to support the assets (which under current BIS rules are 100% risk weighted, though under Basel II this will reduce substantially), and at the same time has improved the return on equity and credit risk”.*⁹

The message here speaks for itself: the crisis was already under way and the bank was proud to be avoiding capital and doing another deal. There are huge risks in the CSO market, and it is impossible to quantify losses that may yet arise for banks and their subsidiaries involved in it. For this reason Table 2 shows these potential losses in Europe as “*unknown*”. It is to be hoped that the bigger issuers have better funding and strategies than (the very small) DEPFA.

***Europe needs a lot
more capital***

The strategy of keeping capital at minimal amounts via securitisation techniques is problematic, and points to problems with the Basel approach analysed in more detail elsewhere.¹⁰ If it is assumed that there will be no further losses and failures as in the case of Hypo, then just to get European leverage ratios down to the (inadequate) US levels would require the involved banks to raise USD 2.4 trillion in addition to the small amount of forecast balance sheet losses noted earlier, or more than twice the amount of capital that those banks currently have.

Figure 1: Collateralised Synthetic Obligation (CSO) vs. CDO issuance, quarterly

Source: Credit Flux.

This ignores exposure to the Baltics and SE Europe

These loss estimates make no allowance for the exposure of European banks to CSOs. Nor do they try estimate exposures to losses in some small countries in the Baltic and South East Europe regions.

In the absence of sufficient capital, taxpayers are filling the gap via government loans, guarantees and capital injections. Dealing with the impaired asset issue in Europe is a first priority, as some of the issues discussed above suggest.

V. The impact on the real economy: deal with the financial crisis first

The vicious circle risk

Inadequate capital forces banks towards deleverage and in a situation of financial stress to tighten lending standards. This has already had a devastating effect on the economy. Banks are obliged to cut lending, including to sound businesses and credit-worthy consumers. As people lose their jobs they are unable to meet their financial obligations, and this leads to further loan impairment and drops in asset prices. Deleveraging accelerates. The vicious circle turning through falling asset prices, the economy and the financial system will continue to worsen. The impact on the real economy from a credit crunch is rapid and powerful.

In the near term policies to slow

One way to think about this is in terms of the inflows and outflows from the unemployment pool. **Stopping the inflows to unemployment** should be the

inflows to unemployment are more likely to be effective than policies to create outflows from unemployment

main priority, and this means arresting the deleveraging process as quickly as possible. This is a priority because small and medium enterprises (SMEs) are responsible for huge numbers of jobs and are more highly dependent on banks (having little access to the capital market). Spending policies to raise the outflows from unemployment, such as fiscal spending, are very important, too, but can take a long time to get under way – and spending and tax multiplier are likely to be low in the current uncertain environment. **The massive blow to the pension fund industry** (a 23% fall in assets, or USD 5.4trillion between end 2007 and December 2008) is a factor here, and will significantly increase saving behaviour.

Denial and accounting tricks do not change the underlying fundamentals

To stop inflows to unemployment via deleveraging removal of impaired assets and recapitalisation is crucial. It will not help to deny losses, or to define them away with accounting changes and special purpose vehicle ‘tricks’. Bank management and sophisticated investors will focus on the underlying situation, which must be dealt with before intermediation and the ability to invest safely in banks returns to normal – why, for example, would investors buy any bank shares with hidden problems that will be a drain on earnings for years to come? Aggressive priority to the financial rescue and the cleaning up of impaired assets is the most effective way to do this. This requires a strong global effort.

While the cost of the crisis must be socialised via the taxpayer, these costs must be contained by sensible steps that avoid creating new private benefits to special interest groups, anti-competitive market structures and protectionist sentiment.

VI. Thinking about the exit strategy

To transfer the bulk of liabilities on the public balance sheet to the private sector will likely take a decade.

For the longer run, budget deficits are projected to rise to almost 9% of GDP in the OECD as a whole by 2010 (11.7% in the USA, 7% in Europe and 8.4% in Japan). Government gross financial liabilities are expected to rise to around 100% of OECD GDP by 2010 from 74.5% in 2007. The guarantees, loans, purchases of assets and capital injections amount to 73.7% of GDP in the USA, 47.5% in the UK, 21.7% in Germany, 19% in France, 22% in Spain and some very large numbers in some of the smaller European countries.¹¹ Budget deficits have to be reduced and the loans, guarantees and investments on the public balance sheet have – to a very large extent – to be transferred to the private sector. This cannot be achieved without major shifts in financial prices (interest rates and exchange rates) during the exit strategy phase. It is difficult to see this process being completed inside of a decade.

Time-line for exit – financial reform first

Striking the right balance between credibility with respect to long-run goals without exacerbating the

The design of crisis measures cannot be divorced from thinking about ‘exit’ and the sustainability of the strategies undertaken. The more that policy actions to deal with the crisis are consistent with long-run goals, or at least accompanied by a clear strategy and time-line for making them consistent later on, the more markets will judge these actions as credible. Credibility also requires these aims to be achieved in a manner that does not exacerbate deleveraging and its rapid

crisis negative impact on the economy. The most important considerations of such a strategy are: (i) the order in which things are done; and (ii) favouring choices that will promote positive adjustment where feasible. Some issues along these lines are set out below, touching on financial markets, competition, corporate governance, pensions, and investment issues.

Bank capital rules and tax

The clear near-term priorities are:

- A resolution mechanism for the **impaired assets**, already discussed at length above.
- Recapitalisation. Banks need to raise capital to offset losses (analysed above) and to achieve more prudent regulatory capital levels. This could be achieved with a **simple upper limit to the leverage of tangible equity**, *i.e.* a maximum permissible “leverage ratio” (elements of which are favoured in the Turner Report). To ensure higher capital levels, this limit would be much lower than has been typical for regulated banks and securities firms in recent years, and particularly so in Europe. There would also be a clear understanding that in normal circumstances banks should also hold a **significant, though unspecified, cushion of tangible equity beyond the minimum**. Capital requirements would relate to the overall portfolio, rather than to any specific assets. This would reduce the incentives for capital arbitrage implicit in the implementation of risk-weighted capital rules. Management decisions about allocating capital to risky activities would take account of the full market cost of capital, and the potential risks and rewards of investing in the asset, but would not be influenced by regulatory rules specific to that asset.

Capital regulations

If dynamic provisioning is introduced as a remedy to pro-cyclicality issues, build up and run down of reserves over the cycle should be above the buffer capital reserve intended for exceptional losses. Prompt corrective action would need to be set in motion if the latter were exhausted (threatening minimum reserves). A very clear ‘phasing in’ arrangement will be needed over the full time line of the exit strategy to ensure that the building up of capital does not work against the near-term goal of increased financial intermediation.

Liquidity rules in place

- **Liquidity issues.** The prudential supervisory process should include oversight of management systems to ensure that financial institutions are focused on the liquidity issue in ways that are appropriate to their business. Given the problems with CDOs and CSOs, better quantitative measures and indicators are required, and these should also be linked to how large the buffer capital and dynamic-loss-provisioning reserve (discussed above) should be.

Tax issues explored

- **Tax.** A potential **arbitrage opportunity** is created any time different flows of income or expenditure are subjected to differing tax treatment due to variations in the tax rates or other aspects of tax situations that different recipients and payees face. This has received far less attention than the capital arbitrage issues discussed above. Samuel Eddins¹² has

associated the high level of activity in the market for CDSs with the conversion of interest to principal for tax purposes. Whenever tax losses cannot be used equally by all taxpayers, financial derivatives can provide ways to transfer these to places where they can be used more profitably. Tax issues therefore need to be explored in line with reforming capital rules to, ensure that distorted incentive structures do not create new risks via financial innovation in the future.

***Withdrawing
emergency
liquidity without
exacerbating the
crisis***

With the time profile of these and other reforms in place, and as signs of stress in markets decline, the dismantling of emergency liquidity and official lending support should become a higher priority, especially where these have been focused on individual institutions, in order to remove subsidy elements and to restore a level competitive playing field. **This should not be rushed, and should have a voluntary aspect to avoid exacerbating the crisis.** Over time, authorities could consider tightening conditions for such support in order to encourage more recourse to markets. A similar process should be applied to the unwinding of guarantees, which distort risk assessment and competition. These should not be precipitously withdrawn, but as the secondary market develops to price guarantees efficiently, and to the extent that extensions can be avoided, terms and conditions prevailing in the broader market should facilitate adjustment. Where financial institutions are concerned, the ultimate goal of the exit from guarantees is to gravitate towards alignment with a redesigned comprehensive deposit insurance scheme.

Corporate structures

***Internal subsidy
problems***

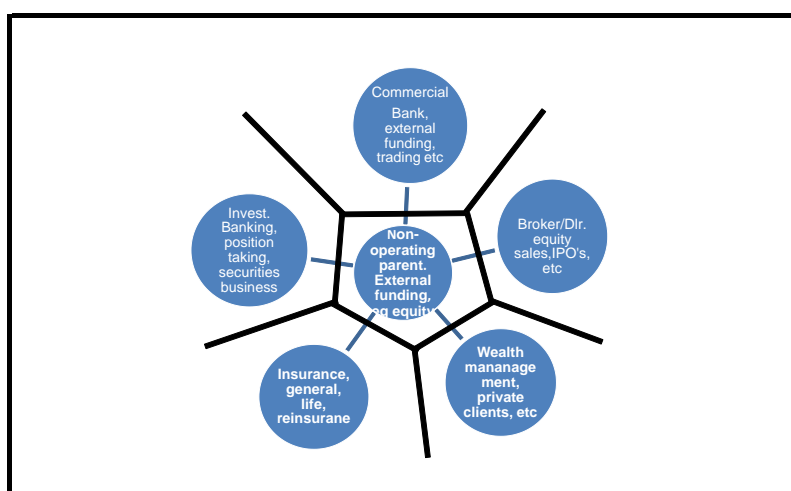
Equally important as regulatory reform is the question of **the corporate structures to which regulations apply**, and their governance. Capital rules are supposed to influence the cost of capital to moderate risk taking. This cannot occur if corporate structures permit the internal reallocation of funding and of capital sharing between affiliates of the group. Nor does such internal funding fit well with principles of level playing fields within the financial system. An affiliate of a banking group will have an unfair cost advantage over a stand-alone competitor – a situation that in the past has led to a clamour for advantageous regulatory changes that a previous report argued to have contributed to the subprime crisis.¹³ It has been contended at times, for example in the Turner Report, that it is not feasible to separate out ‘narrow banking’ in financial conglomerates.¹⁴ This is far from being the case.

Contagion risk

One major lesson of the crisis is the danger of **contagion risk across affiliates of financial conglomerates**, particularly where investment banking is mixed with commercial banking. While holding company structures have many synergies for affiliates (*e.g.* shared technology platforms), it is possible to design structures for such firms that reduce contagion risk and protect the balance sheets of banks without losing economies of scale and scope advantages. Authorities should look at these possibilities, which are perfectly feasible and in some cases have been voluntarily introduced by holding companies themselves to protect bank balance sheets from affiliate activities.¹⁵ In this respect **Non-operating holding company (NOHC)** structures are worth exploring and possibly encouraging in the exit strategy. These structures involve legal

separation of the parent from its affiliates. They facilitate: transparency of the conglomerate (*e.g.* financial reporting, including how much capital the non-operating parent has invested in each of the affiliates); better governance; internal terms and conditions for affiliates more akin to those that would apply to dealing with outside entities (levelling the playing field between affiliates linked to a bank with firms that are not); balance sheet protection of the banking group; and easier regulatory intervention (including use of firewall rules and resolving a failed affiliate). This is illustrated diagrammatically in Figure 2.

Figure 2: Non-operating Holding Company Structure



Mergers

In emergency situations authorities have sometimes been obliged to foster **mergers** of financial institutions as well as to increase public ownership. In principle, if reduced prudential risk and a sound competitive environment are ultimate goals, then it is desirable to minimise the creation of additional systemically important institutions through mergers, especially when these do not add new net capital. **Where mergers are necessary**, competitive considerations favour finding a foreign partner rather than a large domestic firm, or selling businesses in parts.

Positive adjustment mergers?

On the side of positive adjustment, mergers between smaller strong regional banks, well placed to lend now and to compete later with large previously underperforming banks, could help to promote both current lending and long-run goals. Other positive competition policies (*e.g.* reducing regulatory barriers to entry in banking and credit rating agencies; encouraging the widespread availability of more fine-grained credit rating information on SMEs and consumers; and reducing the cost of switching between financial institutions) may also help to meet the current needs of business while promoting long-run competition goals.

Corporate governance reform

Governments as owners

Failures in corporate governance played a clear role in some of the larger financial firms at the centre of the crisis. A number of issues arise at different

Private governance reform

points as governments exit from emergency measures. In the near term, governments have become major shareholders, and major conflicts of interest may arise. During their period as owners, governments should try to exercise governance in line with the *OECD Guidelines on Corporate Governance of State Owned Enterprises*. Prior to exiting their role as owners, it would be desirable to strengthen the implementation by financial institutions of the *OECD Principle of Corporate Governance*. For example, ensuring the independence and competence of directors may call for strengthening the *fit and proper person test* and extending its coverage. Likewise, the risk officer role could benefit from built-in protections to balance the need for independence from management, reporting to the board and access to information.¹⁶

Pensions***Pension funds have been devastated by the crisis***

Many pension funds have been devastated by the crisis, greatly complicating funding arithmetic for public and private schemes, and for individual retirement plans. Plans now risk locking in losses by switching to low-risk assets at the wrong time. This exacerbates selling pressure in the financial crisis (sometimes reinforced by fund rules). As large owners of equities, pension funds and their agents failed to play an active role in promoting better risk control and governance in their own affairs, as well as in the companies in which they invested. With respect to the exit strategy, pension fund investment, in theory, should take up a considerable part of the shares that governments will divest. Governments should move quickly to reinforce near-term confidence in pension schemes, reduce their role in aggravating selling pressure during the crisis and prepare the ground for the exit strategy by:

- Avoiding dipping into funds earmarked for pensions to pay for the financial bail outs.
- Withdrawing as quickly as possible any forbearance permitted on company funding commitments.
- Emphasising the safety net aspects of mixed public/private schemes and the need for focus on longer-run returns, in order to resist pressure to move back from asset-backed schemes.
- Reforming any rules that increase timing risk when moving between accumulation and retirement stages.
- Strengthening the governance of funds, including better oversight of investment risks and monitoring.
- Reviewing statutory performance targets that may force near-term imprudent behaviour, and any regulations that reinforce selling in periods of increased risk.

Privatising recapitalised banks***Speed is less important than getting it right***

As progress is made with some of the above issues, governments will wish to exit from their holdings of bank shares. Banks may also put pressure on governments to exit quickly. But speed is less important than getting it right. If

some banks attain a sound capital position before others, competitive distortions could arise if firms are privatised at different times before reforms are in place.

Another consideration is the need for much higher capital levels for banks, and particularly in Europe. Experience suggests that large privatisation programs can put strains on available sources of equity capital. One aim of the privatisation process is to encourage sources of funds that raise equity net of any leverage (since leverage is at the very centre of the subprime crisis). Pension funds and Sovereign Wealth Funds (SWFs), for example, would be less levered investors than other banks, hedge funds and the like.

NOTES

¹ Some key considerations, for financial markets, competition, corporate governance, pensions, and investment issues are set out in the paper that the OECD recently submitted to the G20. See *Finance, Competition and Governance Strategies to Phase out Emergency Measures*, OECD 2009, at <http://www.oecd.org/dataoecd/52/23/42538385.pdf>.

² Where the interest and principal payments are passed through to bond holders by the bank's servicing arm, taking advantage of REMIC structures allowed after the 1986 tax reform in the USA.

³ Company assets are classified according to the degree of certainty about their value. Level 1 assets are traded on open liquid exchanges. Level 2 assets are based on quoted prices in inactive markets, and/or on models with observable inputs over the full term of the asset. Level 3 assets are difficult to value and are based on management judgement.

⁴ If a loss rate of 49% is allowed for of the consolidated VIEs of USD 110bn, in line with the loss exposures estimated by banks for the unconsolidated VIEs shown in the table, is used the securities losses would be about USD 53bn of this.

⁵ QSPEs are conduits set up and the risks are transferred away from the bank – see Table 1 footnote. There may of course be economic links (goodwill–reputation, and the like) that cause banks to absorb some of the losses.

⁶ While the principles that underpin “fair value” or “mark-to-market” accounting are clearly sound, its applicability where no liquid markets exist has now been reviewed in the US by the FASB and by IASB. Mark-to-market fair value accounting in the face of illiquid markets forces unfair write-downs of assets, exposing companies to overstated financial risks as a result of too low valuations. FSP FAS 157-e will apply prospectively from 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).

⁷ Hypo had Tier 1 capital of EUR 5.51bn, and unweighted assets of EUR 400.2bn at the end of 2007, after the DEPFA deal – a leverage ratio of 72.6! Risk-weighted assets were a mere EUR 101bn bringing the leverage ratio down to 18.3, in part due to the financial engineering with derivatives at DEPFA. Hypo reports EUR 52bn loans to other banks (a 20% weight); EUR 213.2bn loans and advances to customers

(normally a 50% weight if we assume 100% mortgages), financial investments of EUR 88.8bn (100% weight) and other 100%-weighted assets. This might normally require 4% Tier 1 capital of EUR 7.57bn, but Hypo has only EUR 5.51bn. Government guarantees and loans to April to aid the ailing bank have been EUR 100bn, and now the whole entity is being nationalised.

- ⁸ The data is provided by Credit Flux survey data, and covers about 85% of the volume. DEPFA, owned by Hypo Bank, is a specialist in these transactions. Typically it securitises its infrastructure bond portfolios via synthetic collateralised loan obligations. It transfers the credit risk in the assets by purchasing credit protection via monoline insurers. Ultimately institutional investors own the risk. The long maturity assets are essentially funded with shorter term floating rate credit linked notes wrapped in monoline CDS protections.
- ⁹ DEPFA Bank, Archive 2007 Press-/Ad-Hoc Publications. *DEPFA closes third EPIC CLO*. The basic mechanism is this: by purchasing CDS protection on its assets, which remain on its balance sheet, it transfers the credit risk to someone else, and this is recognised in its Basel risk-weighted assets. This is fine as long as counterparties do not fail and the contracts can be renewed if they are of shorter duration than the assets. None of these conditions tend to apply in a global financial crisis.
- ¹⁰ See Blundell-Wignall, A. and P.E. Atkinson (2008), “The Subprime Crisis and Regulatory Reform”, in: *Lessons from The Financial Turmoil of 2007 and 2008*, Reserve Bank of Australia, for a critique of Basel II and related issues.
- ¹¹ See *Finance, Competition and Governance: Priorities for Reform and Strategies to phase out Emergency Measures*, OECD Ministerial Meeting monograph, 2009, forthcoming.
- ¹² Samuel Eddins, “Tax Arbitrage Feedback Theory”, *SSRN 1356159*, March 2009. Eddins argues that an arbitrage incentive is created by tax treatment of interest and credit default losses that is symmetric for financial institutions while many taxable “buy and hold” investors face higher taxes on their interest income than they can recover in the event of losses. This means that **insurance against default is worth more to the buy and hold investor than to the financial institution selling the insurance**. The price of the insurance determines how the difference is shared between the buyer and seller, and Eddins believes that the market for such insurance was so large that the **financial institutions writing the swaps were able typically to get most of the benefit**. And since the derivatives contracts allow the credit risk to be separated from the time value of money component of the contractual interest rate on the security itself, the CDS is a very efficient instrument as it requires essentially no capital since there is no need to pay for the underlying security.
- ¹³ See Blundell-Wignall, Paul Atkinson and Se-Hoon Lee (2008), “The Current Financial Crisis: Causes and Policy Issues”, *OECD Journal: Financial Market Trends*, vol. 2008/2.
- ¹⁴ See *The Turner Review: A Regulatory Response to the Global Banking Crisis*, Financial Services Authority, March 2009.
- ¹⁵ See for example Macquarie Group in Australia. So it is certainly feasible.
- ¹⁶ See the report: “Corporate Governance and the Financial Crisis: Key Findings and Main Messages”, OECD website, forthcoming in June 2009.