The Financial Crisis

REFORM AND EXIT STRATEGIES

OECD

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Foreword

The crisis that struck in 2008 forced governments to take unprecedented action to shore up financial systems. As economic recovery takes hold, governments will want to withdraw from these extraordinary measures to support financial markets and institutions. This will be a complex task. Correct timing is crucial. Stepping back too soon could risk undoing gains in financial stabilisation and economic recovery. It is also important to have structural reforms in place so that markets and institutions operate in a renewed environment with better incentives.

From the start OECD has said "Exit? Yes. But exit to what?" It is obvious that financial markets cannot return to business as usual. But the incentives and failures that led institutions to this perilous situation were many: remuneration structures, risk management, corporate board performance, changes in capital requirements, etc.; and they interacted in unexpected ways with tax rules and even the structure of institutions themselves. Sorting through all these issues will take time, but some are urgent. There can be no question that the effort is necessary. Financial markets cannot again be allowed to expose the global economy to damage like what has been suffered over the past year.

Two questions, then, are at the core of this report: How and when can governments safely wind down their emergency measures? And how can we sensibly reform financial markets? The purpose is to draw together and demonstrate the interconnections among a wide range of issues, and in doing so to contribute to global efforts to address these challenges.

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It is necessary to address many issues in order to restore public confidence in financial markets and put in place incentives to encourage a prudent balance between risk and the search for return in banking. While there is considerable scope for flexibility at specific levels, a few strategic priorities for policy reform stand out:

- Streamline the regulatory framework, emphasise prudential and business conduct rules, and strengthen incentives for their enforcement.
- Stress integrity and transparency of markets; priorities should include disclosure and protection against fraud.
- Reform capital regulations to ensure much more capital at risk (and less leverage) in the system than has been customary. Regulations should have a countercyclical bias and encourage better liquidity management in financial institutions.
- Avoid impediments to international investment flows; this will be instrumental in attracting sufficient amounts of new capital.
- Strengthen governance of financial institutions and ensure accountability to owners and creditors with capital at risk. Non-Operating Holding Company (NOHC) structures should be encouraged for complex financial firms.
- Once the crisis has passed, allow people with capital at risk, including large creditors, to lose money when they make mistakes. This will help to reduce moral hazard issues

arising from the exceptional emergency measures taken and guarantees provided.

- Strengthen understanding of how tax policies affect the soundness of financial markets.
- Respond to the increased complexity of financial products and the transfer of risk (including longevity risk) to households with improved education and consumer protection programs.

Exit strategy principles

Reforms along these lines should be put in place as quickly as feasible. Stabilising the economic and financial situation will take time. But once this happens, governments will need to begin the process of exiting from the unusual support measures that have accumulated in the course of containing the crisis. As the situation will be fragile, recovery should not be jeopardised by a precipitous withdrawal of the various support measures. Getting the exit process right will be more important than doing it quickly. While there is great scope for pragmatism, clear principles guiding the process should be established early on. These should be:

- The timeline for exit (including a full sell-down in government voting shares) will be conditional in part on progress with regulatory and other reforms consistent with the above principles.
- Level competitive playing fields will eventually be re-established and support will be withdrawn.
- Viable firms will be restored to health and expected to operate on a commercial basis in the market place.
- Support will not be withdrawn precipitously but will be priced on an increasingly realistic basis.
- If beneficiaries do not find ways to wean themselves off support, then such pricing will increasingly contain a penalty element.
- As adequate pools of equity capital become available, state-owned or controlled financial firms will be privatised and

expected to operate without recourse to any implicit guarantees that state-ownership usually implies.

- The bad assets and associated collateral that remain in governments' hands should be managed with a view toward recovering as much for the taxpayer as is feasible over the medium term.
- Reinforce public confidence in, and the financial soundness of, private pension systems and promote hybrid arrangements to reduce risk.

I. Introduction

The global financial crisis is far from over. This section provides background on the state of the crisis, outlining 1) requirements for moving away from the exceptional measures taken to contain it and 2) the need for far-reaching reform of the financial sector. It also describes the probable time frame of these actions and the environment in which they will occur, as well as short-term and long-term risks of different approaches.

The problems the world faces in dealing with the global financial crisis are far from over. Much work remains to remove toxic assets from bank balance sheets, recapitalise banks, and for governments to exit from their extraordinary crisis measures. And there is a long way to go in the reform process before these exit strategies can be contemplated.

The best analogy for the crisis is one of a dam filled to overflowing, past the red danger line beyond which it may break, with the dam being the global liquidity situation prior to August 2007. The basic macro problem for the global financial system has been the undervaluation of Asian managed exchange rates that have led to trade deficits for Western economies, forcing on them the choice of either macro accommodation or recession. With social choices always likely to be biased towards easy money policies, the result was excess liquidity, asset bubbles and leverage.

Water of course always finds its way into cracks and faults, causing damage and eventually forcing its way through the wall. These faults and cracks have been the incentives built into capital regulations (such as Basel I and II) and tax rates. The ability to arbitrage between assets with different capital weights and to use off-balance sheet vehicles and guarantees (via credit default swaps) to minimise regulatory capital has been a key factor in the crisis. Tax arbitrage, too, including the use of off-shore entities, was a key factor in the explosive growth of structured products (as is elaborated in the main text below).

This led to a too low cost of capital and to arbitrage opportunities for traders that were levered up many times to generate strong up-front fee and profit growth, while longer-run risks were transferred to someone else.

The too low cost of capital in the regulated banking sector, high-return arbitrage activities and SEC rule changes in 2004 that allowed investment banks to expand leverage sharply, meant that these high-risk businesses became much bigger than they would have been with a higher cost of capital and better regulation. That is, systemically important (too big to fail) financial firms emerged, as a direct consequence of policy, with excess leverage and lots of concentrated risk on their books.

The poor governance of companies exacerbated this process. The model of banking changed for many institutions from a “credit model” – kicking the tyres and lending to SMEs and individuals that can’t raise money in the capital markets – to a model that was based on the capital markets. An equity culture in deal making through securitisation, the creative use of derivatives and financial innovation emerged. Competition in the securities business increased as companies taking the low-hanging fruit outperformed their peers, and staff benefited through bonuses and employee stock ownership programs.

The result has been the emergence of excess leverage and the concentration of risks. US banks, with an average leverage ratio of 18, proved to have too little capital. Under new SEC regulation post 2004, US investment banks moved towards very high leverage levels of around 34, not unlike those in Europe, where capital levels are relatively low.

Once defaults began (the faults in the dam opening up) a solvency crisis emerged – losses outweighing the too-little capital that banks had – among highly interconnected (“too big to fail”) banks with business models that depended on access to capital markets. This was accompanied by a buyers’ strike (with uncertainty about who was and was not solvent) and a full-fledged financial crisis was under way.

When this occurs, any number of things results:

- *Banks go bust* in banking conglomerates via contagion risk; in mortgage specialists and stand-alone investment banks that have too-concentrated risks; and in banks that were counterparties to derivative trades with problem banks and insurance companies. Panic rises and the crisis spreads.
- *Liquidity risk rises* as business models with short funding of long assets face a buyer’s strike at the short end, equally leading to bank failures.

- *Regulators and supervisors come under extreme pressure and mistakes occur*, particularly where there are overlapping regulatory structures and responsibilities.
- *Failing banks get merged into other banks*, which may save the failed bank for a short time, but weaken the stronger bank. Inevitably the taxpayer has to come to the rescue, leaving the country with a big actual and / or contingent tax liability and a larger too big to fail bank.
- *Banks have to be saved by injections of taxpayer money* – the government buys a common equity stake or preferred equity with warrants or opts to guarantee deposits and assets. This can happen either transparently or quietly behind the scenes (as in many European countries).
- The *affected banks (and others) tighten lending standards and begin deleveraging*. Recessions emerge, with trade spillover effects pulling economies with sound economic management into the crisis.
- *Struggling banks cut dividends*, as they divert earnings to capital building and provisioning for losses, so erstwhile investors may face not only dilution risk (as new shares are issued) but income risk too.
- *Interest rates are savagely cut by central banks and liquidity policies are expanded* to ease liquidity pressures, raise the profitability of banks and support the economy (in reality, the classic pushing on a string scenario).
- *Bad assets are placed on the public balance sheet* in the form of loans and guarantees, which have to be unwound in the longer-term exit strategy.
- *Budget deficits soar*, as growth reverses and as governments act to support the economy, and have to be reversed in a world where trend growth will likely be slower, making the task very difficult indeed.

Table I.1 shows headline support packages for the financial sector in selected OECD countries.

Table I.1. **Selected support packages**

	Capital injection **(A)**	Purchase of assets and lending by Treasury **(B)**	Central Bank Supp. prov. With Treasury backing **(C)**	Liq. Provision & other supp. By central bank (a) **(D)**	Guarantees (b) **(E)**	**TOTAL A+B+C +D+E**	Up-front Govt. Financing (c)
OECD members							
Australia	0	0.7	0	0	n.a.	0.7	0.7
Germany	3.7	0.4	0	0	17.6	21.7	3.7
Ireland	5.3	0	0	0	257	263	5.3
Japan	2.4	6.7	0	0	3.9	12.9	0.2(f)
Netherlands	3.4	2.8	0	0	33.7	39.8	6.2
South Korea	2.5	1.2	0	0	10.6	14.3	0.2(g)
Spain	0	4.6	0	0	18.3	22.8	4.6
United Kingdom	3.5	13.8	12.9	0	17.4	47.5	19.8(i)
United States	4	6	1.1	31.3	31.3	73.7	6.3(j)

Source: See Table III.9 in the main text.

The US stands out at close to 80% of GDP. The European numbers are also very large, and likely understated (because of less transparent reporting and the way in which crises are handled). In some EU countries this problem is compounded because losses often accrue to state-run banks where the crisis manifests itself as future tax contingent liabilities.

Australia has been one of the best performing countries in the OECD. There are some insights from this observation, which can be used to motivate some of the thoughts in the main text that follows. Why has Australia performed relatively well?

One reason is that Australia had very strong macro credentials at the start of the crisis, unlike many other countries, starting with a budget surplus and higher interest rates (not distorted by the need for the central bank to focus on prudential supervision as well as monetary policy). This has allowed room for strong support for the economy.

Second, Australia has long adopted the sound “twin-peaks” regulatory structure (prudential supervision at APRA [Australian

Prudential Regulatory Authority] and corporate law and consumer disclosure, etc. at ASIC [Australian Securities and Investment Commission]). The central bank is not responsible for prudential management which can lead to conflicts in policy objectives (the RBA focuses on monetary policy, lender-of-last-resort and the stability of the payments system only).

Third, Australia has followed a clear and sound competition policy with the Four Pillars approach to its major banks (the four medium-sized oligopolies are not permitted to merge and hence they did not compete excessively in the securities area).

Finally, Australia's one major investment bank was encouraged to implement a non-operating holding company structure in 2007, and the legal separation of operating affiliates helped to protect the balance sheet of the group as a whole from contagion risk.

Australia also had two pieces of good luck:

- First, US and European investment banks took a lot of the local business and their problems of excess competition in securitisation and the use of derivatives became a US/European policy concern.
- Second, Australia is tied into the Asian economic region with better fundamentals than the US or Europe.

The problems that other parts of the world face in dealing with this crisis are far from over. The lessons of all past crises of the solvency kind are threefold:

1. *Guarantee deposits to stop runs on banks*.
2. *Remove toxic assets from bank balance sheets*. These should be dealt with in a bad bank over a number of years, in the hope that hold-to-maturity values might be better than current mark-to-market values of illiquid toxic assets.
3. *Recapitalise asset-cleansed banks, and get out* (sell the government's holdings of shares and transfer any loans and guarantees from the public balance sheet back to the private sector).

Where are we in dealing with the crisis?

Unfortunately, we are not far into the process and we face a very long period of slow growth as budget deficits are stabilised and slowly reduced in unfavourable circumstances. The reason for this is that countries have not yet dealt with removing toxic assets from bank balance sheets. In the United States, a PPIP (public-private investment plan) has been conceptualised (a reasonably good plan), but little has happened. Within Europe, Switzerland moved on toxic asset of UBS, but only a couple of EU countries have even started to conceptualise "bad banks"; nothing yet has happened.

Less transparent approaches do not change anything. Banks know the facts and they won't lend anyway if they have no capital and are dealing with regulators behind the scenes about restructuring their balance sheets, and deleveraging continues. Lack of transparency can result in delays in policy action and bigger losses in the end for taxpayers. It will also result in bad will from investors and a permanent rise in the cost of capital: the political risk premium from investing in financial firms will rise.

In short, there is a long way to go before strategies to exit from the extraordinary crisis measures can be contemplated, and weak lending by banks combined with easy monetary and fiscal policies is a dangerous cocktail.

The carry trade has already begun again (commodities and some emerging market equities are now bubbling back up via this mechanism), and the reform process is moving slowly and sometimes not in the right directions. This means that support policies could stay in place too long, while slower growth will make it harder to reduce budget deficits.

Requirements of reform and exit from extraordinary policies

The exit strategy requires policy makers to think about the place to which they want to exit, which is surely not to similar incentive structures to those used prior to the crisis! A sound framework requires six very basic building blocks that all jurisdictions should work to have in common. These are:

1. *The need for a lot more capital* – so that reducing the leverage ratio has to be a fundamental objective of policy. Europe has a very long way to go in this respect if there is to be some equalisation across the globe.

2. *The elimination of arbitrage opportunities in policy parameters* to remove subsidies to the cost of capital. This means many features of the Basel system for capital rules should be eliminated (and the leverage ratio may well become the binding constraint, as recommended in the Turner Report and in the OECD).[1] It also means looking at the way income, capital gains and corporate tax rates interact with financial innovation and derivatives to create concentrated risks and to eliminate ways to profit from such distortions.

3. *The necessity to reduce contagion risk within conglomerates*, with appropriate corporate structures and firewalls. This issue is not unrelated to the too big to fail moral hazard problem. It must be credible that affiliates and subsidiaries of large firms cannot risk the balance sheet of the entire group – they can be closed down by a regulator leaving other members of the group intact.

4. *The avoidance of excessive competition in banking/securities businesses* (the "keep on dancing while the music is playing" problem) and a return to more emphasis on the credit culture banking model. The stable oligopolies in Australia and Canada have been resilient in the current crisis lending support to this idea.[2]

5. *Corporate governance reform is required*, with the OECD recommending: separation of CEO and Chairman (except for smaller banks where the CEO is the main shareholder); a risk officer reporting to the board and whose employment conditions do not depend on the CEO; a "fit and proper person" test for directors expanded to include competence, and fiduciary duties clearly defined. These reforms would go a long way to dealing with remuneration issues that have been strongly debated of late.

6. *The need to rationalise the governance of regulators in some key jurisdictions that failed dismally in the lead-up to this crisis*. The benchmark for a sensible regulatory

structure is the twin peaks model – a consumer protection and corporate law regulator and a separate prudential regulator. Central banks should not be a part of either. This leads to conflicts of interest.

It seems very unlikely that these building blocks will be in place any time soon – many governments do not even accept all of them as desirable features. The starting point is always the existing rules, regulations and institutional structures, and the process of change is always at the margin. Groupthink implicit in economic and market paradigms, unfortunately, takes a long time to change.

So, exiting from government ownership of banks, and from guarantees and loans and other forms of aid, will likely occur in a second-best environment. Toxic assets and recapitalisation will be dealt with slowly, and hiding the issues with changes in accounting rules will achieve little in the longer run. While improving headline banks earnings, reduced transparency does not alter the underlying solvency issues, and may serve to delay essential policies and store up problems for later on.

The reform of global exchange rate regimes and the dollar reserve currency problem is extremely important, but is also unlikely to be achieved any time soon.

The main near term risks are: slow growth and intractable budget deficits; the reigniting of rolling asset bubbles through easy monetary policy; and a double dip recession, as the fiscal impetus wanes and attempts to restore government finances become necessary.

The longer-term risks are: rising long-term interest rates, as the exit strategy process (*i.e.* the transferring stock and debt from the public to the private balance sheet and the cutting of budget deficits) begins to take place; stagflation pressures; and a failure to use the current crisis as the catalyst for far-reaching and globally-consistent regulatory reform based around the six key building blocks noted above.

Exit strategies need to be broadly consistent with longer-run economic goals. These goals include:

- Better and more symmetric information flows (transparency) to reduce the risk of liquidity crises.
- Non-distorting regulation
- Corporate governance and tax regimes that promote incentive structures for better risk control.
- Corporate structures that address contamination risk from affiliates.
- Competitive markets with level playing fields within and between countries.
- Macroeconomic and social policies that are sustainable and do not crowd out private activity or worsen long-run employment and welfare prospects.

The remainder of this report focuses on two sets of issues:

- **Part II:** How to reform the environment in which financial market participants operate to prevent another crisis of this kind from recurring in the future; and
- **Part III:** How to exit from the emergency measures that have been undertaken as the crisis has unfolded.

Notes

1. Financial Services Authority 2009, *The Turner Review: a regulatory response to the global banking crisis*, including Discussion paper 09/02, March. See “Finance, Competition and Governance: Priorities for Reform and Strategies to Phase out Emergency Measures”, paper prepared for the OECD Ministerial Meeting, June 2009.
2. As argued by former RBA Governor Ian Macfarlane at the 2009 ASIC Summer School conference.

II. Priorities for Reforming Incentives in Financial Markets

As a result of the current financial crisis, governments have supported failed financial institutions and may need to continue to do so. Many banks are not functioning normally, and confidence in financial systems continues to deteriorate. This section discusses lessons from past experiences, and emphasises the need to clarify the responsibilities of regulatory institutions and to restore confidence in the integrity of financial institutions.

The current crisis has already required support for failing or failed financial institutions in many jurisdictions. So long as property prices continue to fall and recession damages the quality of bank assets, new cases requiring support will emerge. Too many banks, whether still independent or bolstered by state aid are unable or unwilling to function normally. As a result the credit crunch persists, and confidence in the financial system has continued to deteriorate.

A. Lessons from past experience[1]

Of the three lessons noted earlier, governments have all imposed massive guarantees, but the second step required – the removal of toxic assets from banks' balance sheets – has not progressed very far by August 2009. Indeed the change in accounting rules to give banks more discretion in deciding whether assets are mark-to-market or hold to maturity (with better accounting values) has removed much of the incentive for banks to participate. So the strategy appears to have evolved into one of liquidity policies and guarantees helping to push up equity prices (making it cheaper to issue new equity) and to reduce spreads (narrowing losses and improving capital positions). The approach of not dealing directly with the impaired assets failed in Japan (the "lost decade") and also had to be abandoned in the US savings and loan crisis of the 1980s.

Government fiscal packages have been introduced to stimulate demand and slow the downward spiral in the real economy caused by the crisis. As unemployment rises, they will also extend social safety net policies. Since the cause of the crisis is financial, and since rising unemployment leads to further loan impairment, resolving the financial aspects of the crisis is urgent to prevent even greater inflows into unemployment. Spending and tax policies will be important to help stimulate outflows from unemployment.

Box II.1. **G 20 reform of financial markets**

The November Declaration of the Summit on Financial Markets and the World Economy by the Leaders of the Group of Twenty provides the starting point for systemic reform by offering a set of agreed principles:

- Strengthening transparency and accountability;
- Enhancing sound regulation;
- Promoting integrity in financial markets;
- Reinforcing international cooperation;
- Reforming international financial institutions

The Leaders also set out an extensive Action Plan for their implementation, and asked their officials for progress in a number of areas before end-March 2009 (for G-20 documents, see *www.g20.org*).

Four working groups were set up and have already reported on how to proceed to translate the principles into reality. In addition, a number of substantial reports have been prepared which survey the issues and set out concrete recommendations, most importantly the de Larosiere Report[1] for the European Commission, the Turner Report and its accompanying discussion paper[2] for the Financial Services Authority in the United Kingdom and the Report prepared by the Group of Thirty,[3] a group of eminent former officials. Finally, the US Treasury has set out its priorities for reform.[4] These reports contain differences of emphasis and substantive disagreements on specific points but collectively they constitute a developed agenda which will guide future action.

The Leaders met again in April, reviewed progress and committed to doing whatever is necessary to restore confidence, growth and jobs. They also: (i) set out a more developed set of priorities for strengthening the financial system; and (ii) committed themselves to increasing the resources of international financial institutions charged with ensuring an adequate flow of capital to emerging markets and developing countries to protect their economies and support world growth.

The Leaders will meet again before the end of the year.

1. J. de Larosiere, et al, Report of the High-Level Group on Financial Supervision in the EU, Brussels, February 2009.
2. Financial Services Authority, The Turner Review: a regulatory response to the global banking crisis, including Discussion Paper 09/2, March 2009.
3. Group of 30, Report by the G-30, A Framework for Financial Stability.
4. US Treasury, Framework for Regulatory Reform, March 2009.

Whether or not the current approach is successful in the near term remains to be seen. Ultimately, however, reforms are needed in a number of areas to create incentives in financial markets that encourage a better balance between the search for return and prudence with regard to risk.

The agenda is broad and ambitious (see Box II.1) and implementation has already begun. Where possible, it is important to design new fiscal and financial measures so they are consistent with this agenda (in order to avoid policy reversals later on).

Equally important to consider is that markets will look critically at the sustainability of crisis measures. If the policies are perceived as inappropriate, in the sense of not being sustainable, the market will reject them and the crisis will deepen. As policy makers choose emergency measures, they should seek (where possible) actions that are consistent with long-term goals in order to reinforce credibility.

B. Strengthen the regulatory framework

1. Streamline regulatory institutions and clarify responsibilities

A widely held myth about the current crisis is that it has occurred in regulatory vacuum. It is true that deregulatory initiatives and regulatory restraint have played a role in the crisis. But these have taken place within an overall framework of complex rules and regulation by multiple agencies whose responsibilities have not always been clear or adapted to a changing world. Furthermore, at times these agencies have found themselves with responsibilities that they were poorly placed to carry out. Partial deregulation in such a context can easily lead to "second best" problems, causing worse outcomes by reinforcing existing distortions. This seems to be what has happened.

In the United States the Gramm-Leach-Bliley Act of 1999 allowed subsidiaries of banks to conduct most financial activities, and hence to compete with securities firms and insurance companies. Thrifts too were permitted to engage in banking and securities businesses. It also streamlined supervision of bank holding companies by clarifying the regulatory role of the Federal Reserve as the consolidated supervisor. Otherwise it reaffirmed the role of functional regulation (similar activities should be regulated by the same regulator) of the various affiliates by state and other federal financial regulators, while allowing a number of possible arrangements for supervision at the group level. As early as 2005 the General Accounting Office (GAO) expressed concern about this arrangement, noting: “Multiple specialized regulators bring critical skills to bear in their areas of expertise but have difficulty seeing the total risk exposure at large conglomerate firms or identifying and pre-emptively responding to risks that cross industry lines.”[2] In 2007 it reported to Congress that the Federal Reserve, the Office of Thrift Supervision (OTS) and the Securities and Exchange Commission (SEC) “employ somewhat different policies and approaches to their consolidated supervision programs” and reiterated a recommendation that Congress modernize or consolidate the regulatory system.[3]

Perhaps most important, while the SEC remained responsible for broker-dealer subsidiaries of investment banks, no provision was made for compulsory consolidated supervision of investment banks even if they had banking affiliates.[4] This posed a problem for internationally active securities firms since operating in Europe required consolidated supervision to comply with the EU’s Financial Conglomerate Directive.

To deal with this situation the SEC adopted a purely voluntary “Consolidated Supervised Entities” (CSE) programme in 2004. This was recognized by the Financial Services Authority (FSA) in the United Kingdom as equivalent to other internationally recognized supervisors, providing supervision similar, although hardly identical, to Federal Reserve oversight of bank holding companies. It proved to be inadequate.[5] Furthermore, even if the SEC had been well-equipped to carry out supervisory responsibilities beyond the activities of broker-dealer subsidiaries, the scope for different approaches to enforcement noted by the GAO would have remained as a potential distortion to competition.

In Europe the Financial Services Action Plan published in 1999 consisted of 42 measures aimed at completing the single market in financial services by: (1) unifying the wholesale market; (2) creating an open and secure retail market; and (3) implementing state-of-the-art prudential rules and supervision. Supervisory responsibilities were left with national agencies, which meant that EU rules were open to different interpretations by different national regulators. This made better coordination of supervision at the EU level a high priority. Under the "Lamfalussy" arrangements, committees of European supervisors for securities, banking and insurance and occupational pensions (Level 3 committees) have been created to allow national supervisors to communicate and implement rules coherently. However, as the de Larosiere Report concludes, the framework lacks cohesiveness. The overall result is that (1) the system is very complex, with financial institutions operating across borders facing a large number of supervisors; and (2) supervisors' jurisdiction and areas of competence increasingly failing to align with financial firms' actual operations, creating, at minimum, complexity in risk management and regulatory compliance.

In Japan financial supervisory power was transferred from the Ministry of Finance to the Financial Supervisory Agency in 1998, and was then reformed into the Financial Services Agency (FSA) in 2000, with the merger of the Financial Supervisory Agency and the Ministry of Finance's Financial System Planning Bureau. In Korea, considerable consolidation of regulatory arrangements was achieved following the distress experienced by their banking sectors in the late 1990s. Financial supervision was consolidated into a single agency, the Financial Services Commission, in 1998.

Simplification of regulatory structures to clarify mandates and roles and, at least in the United States, to reduce scope for "forum shopping" is needed. Oversight should be extended to all financial service activities and, at least where these are substantial, to the parent companies providing them. Generally, moves toward a single regulatory agency along the lines of the US Treasury's proposal for "systemically important firms", adequately staffed and funded, with mandates clearly specified would be desirable. Alternatively, an objectives-based consolidation of authority in separate prudential and business conduct regulators, adopted in Australia and the Netherlands,[6] would streamline arrangements substantially in many countries.

In the EU establishment of a single bank regulator, already recommended by OECD,[7] would be a good first step. Both within and beyond the EU, complexities would remain at the international level, but with fewer agencies, communication and coherent cooperation would probably be easier. A basic guiding principle, however, should be that the creation of new agencies without reducing the number of existing ones and reformulating mandates should be avoided.

2. Stress prudential and business conduct rules and their enforcement

Better (which is not the same as more) regulation requires arrangements that recognize the limits of what can be achieved. Supervisors are not well-placed to run banks. They are too often under-resourced and obliged to operate with tight funding constraints (see Box II.2). They are also detached from the markets in which the supervised institutions regularly operate. Mandating them to override bankers' business judgments is unlikely to be successful.

Box II.2. **Staffing financial supervision**

Relatively few resources, as measured by staffing levels, have been devoted to financial supervision in recent years (Table II.2). It is not possible to assess whether these resources have been adequate or sufficient without taking into account their mandate, but they have been tiny in comparison with the size of the institutions being supervised. Without substantial increases only relatively modest ambitions involving light oversight would appear to be realistic.

It is notable that in the United States supervisory resources failed to keep pace with the rapid growth of the industry being supervised. There was a significant increase in staffing at the Securities and Exchange Commission following the passage of the Sarbanes-Oxley Act. But other key agencies lagged the growth of the industry, 9.5% in terms of full time staffing and nearly 28% in terms of real value added between 2000 and 2006. In some cases, notably that of the Office of Thrift Supervision, they contracted. In contrast, supervisory resources at the main agencies in the larger European countries generally increased in line with the industry.

Primary emphasis should instead be placed on sound design of the prudential and business conduct rules that form the regulatory framework and on making provisions for enforcing them. These rules influence behaviour and if well-designed they can and should align incentives to generate market outcomes that reflect a prudent balance between risk and search for return. Their enforcement is essential since rules that are not enforced will likely be ignored, inviting fraud and other abuse. This points to the need to ensure that staffing, funding and processes to make enforcement effective must be in place.

Table II.2. **Financial intermediation and supervisory resources in selected OECD countries**

Country	All financial intermediation			Agency	Supervisory resources	
	Employment		Real value added		Staff	
	Level in 2006 (FTEs)	Change from 2000	Change from 2000		Level in 2006 or latest year	Change from 2000 or nearest year
United States	6.33 million	9.5%	27.7%			
				Federal Reserve(1.)	2 980	-8.3%
				Office of Controller of the Currency	2 855('04)	-0.7%
				Office of Thrift Supervision	964	-24.2%
				New York State Banking Department	576	7.9%
				Securities and Exchange Commission	3 916	26.3%
				Commodities and Futures Trading Commission	500	-10.1%
Germany	1.23 million	-3.7%	-5.4%			
	(not FTE adjusted)			Federal Financial Supervisory Authority (BaFin)	1 669	59.0%
				Bundesbank(1.)	850	n.a.
United Kingdom	1.10 million	-2.4%	37.4%			
	(not FTE adjusted)			Financial Service Authority	2 500	38.9%
France	764 000	8.6%	16.2%			
				Commission Bancaire	600	n.a.
				Autorité de Marche Financière	352	10.0%
Italy	612 000	4.2%	13.6%			
				CONSOB(2.)	451	10.5%
				ISVAP(3.)	361	6.2%

1. Supervisory staff only.
2. Commissione Nazionale per le Societa e le Borsa
3. Instituto per la vigilanza sulle assicurazioni private e di interesse collettivo

Source: OECD STAN database; How Countries Supervise their Banks, Insurers and Securities Markets, 2008, London.

An important issue is the degree to which regulatory and supervisory policies should move beyond the micro-prudential approach, substantially focused on individual institutions, to a broader macro-prudential approach focused on systemic stability. Movement in this direction has been endorsed by the Leaders of the G-20 at their summit in April. A concrete framework for how this should work is still being developed but it is clear that to be effective it will have to contain three key elements:

- Procedures to ensure the systematic flow of information between monetary authorities and supervisors;
- Effective early warning mechanisms; and
- Ways to ensure effective supervisory action.

The first two of these elements are clearly desirable, although strengthening procedures for information flow may be easier to achieve than more effective early warnings, since the future will always remain uncertain. The third, which requires both identification of effective instruments and ways to trigger their use, may be even more challenging. One issue will be how to choose between interest rates and prudential "policy tools such as additional capital requirements, liquidity requirements, maximum loan-to-value ratios and reserve requirements"[8] when discretionary adjustments seem warranted. Another issue will be how executives managing financial institutions adapt to a situation in which the rules that guide their portfolio behaviour are subject to change at any time for reasons not related to their business. The contribution that discretionary prudential adjustments can make to safeguarding the financial system will have to be balanced against any costs arising from uncertainty generated in financial institutions about the prudential framework in which they operate.

3. Beware of capture

Particular care is needed to address the threat of capture, the process in which supervisors act to please the people or institutions they are supervising at the same time they are attempting to carry out their mandates. Any oversight functions that supervisors are given, from enforcement of rules to judgmental oversight of management's business decisions, risk being compromised unless the people carrying out these functions are independent of the people they are overseeing. This problem exists in most regulatory policy areas but may be especially acute in financial services where salary and remuneration differences between supervisors and people being supervised can be very large.[9] Incentives for supervisors to maintain good relations with people they are supervising are strong so long as there is a realistic prospect of future employment at much higher remuneration levels. Frequent career moves by supervisory staff to supervised institutions are evidence of the existence of this problem.[10]

The capture problem can be addressed at two levels: (i) institutional; and (ii) individual staff. Institutionally, greater accountability for performance would work to combat the problem by concentrating the attention of the chief executive and by influencing the bureaucratic culture. There are obvious limits to defining outputs in a measurable way in the context of supervisory agencies, but similar problems exist throughout the public sector. Strengthening and clarification of mandates and employment contracts of chief executives of these agencies may be useful vehicles in this regard. The counterpart to greater accountability is sufficient autonomy to achieve specified objectives. In particular, this points to the desirability of direct funding and the absence from governing boards of government and other agency representatives where conflicts in policy objectives may be present.

With regards to staff, elements of a solution include: remuneration packages better designed to offer attractive long-term career prospects and to retain staff who can realistically regard the financial sector as a viable career alternative as well as tighter restrictions on mobility between supervisory agencies and institutions being supervised (for example, extensive “gardening leave”– perhaps 12 months – before being allowed to take up a position). This may well involve remuneration that seems out of line with typical public service pay, which may create labour relations issues in the public sector. But similar problems exist with specialists in other domains such as science, health and tax, and ways must be found to deal with them. The counterpart of higher remuneration must be greater accountability for performance, which may mean less job security than public service usually offers.

C. Focus on integrity and transparency in financial markets

1. Restore confidence in the integrity of financial markets

Reassuring the public about the integrity of financial markets has become essential. Recent high-profile events, notably the losses at *Société Générale* as a result of a rogue trader vastly exceeding his exposure limits, the USD 65 billion fraud associated with Bernard Madoff, the USD 8 billion fraud alleged by the SEC at Stanford International Bank, and the missing USD 1 billion at the outsourcing company Satyam all reflect failure to ensure that agents handling other people's money are doing so honestly and as authorized. Reports of smaller frauds are accumulating. Such reports, especially when they prove to be true, work to discredit the entire financial sector, and call attention to issues of negligence with regard to standard controls and cross-checks.

Anyone acting professionally as a fiduciary agent should be subjected to processes that verify, by independent oversight, that the interests of the principals are protected. Where the issue is the adequacy of internal controls, supervisors should verify that such controls are in place and effective. Where the issue is the adequacy of external audits, supervisors should ensure that these are undertaken seriously.

2. Strengthen disclosure and information processing by markets

A central role of financial markets is the processing of information to mobilize saving and allocate it toward investment opportunities as efficiently as possible. Since obtaining and processing information can be expensive, mechanisms that do this transparently and economically should be encouraged and even supported by public policy. Disclosure, wide dissemination and accurate processing of information should have the highest priority. Since it is efficient for market participants and the wider public to use such mechanisms it is important that they be fully trustworthy, particularly where they carry some form of official endorsement. Several areas stand out as requiring improvement:

3. Audit

Independent audits of financial statements, if done properly and on a regular basis,[11] provide a check against fraud. They should also provide a verified overview of the financial evolution of the business. Neither relieves market participants of the need to make their own assessments when placing capital at risk. But they do provide basic information that few investors would have the means to assemble themselves, either in terms of resources or access to information. The audit industry, therefore, is central to transparency and efficient processing of information in the markets.

Audit oversight has been strengthened since the Enron scandal earlier in the decade, and responsibility of executives and boards of directors has been enhanced.[12] However, this has not extended to oversight of accounting firms' activities on a consolidated basis and problems remain. Auditors continue to be paid by the businesses they are auditing, which may not encourage objectivity. The major firms also provide non-audit services, often in unregulated areas, which influences their overall financial situation and, in particular, their exposure to litigation.

The industry has also become highly concentrated. It is dominated by four large firms with the ability to audit large international businesses[13] and the collapse or withdrawal from the market of any of these would reduce capacity in the industry and further increase its concentration. Oversight should at minimum be extended to ensure that strong risk management systems and the financial capacity to meet financial claims are in place (*e.g.* through capital reserves or insurance).[14]

Notwithstanding that these firms benefit from a client base legally mandated to use their services, strengthening the industry is a challenge. Disincentives to entry of medium-sized audit firms arise from liability structures and restrictions on ownership that exclude anyone who is not a qualified auditor. The urgency of addressing this issue is debated: the GAO in the United States argued last year that there is "no compelling need" for action in view of the lack of obvious immediate problems;[15] the Financial Reporting Council in the United Kingdom regards this as too sanguine.[16] But in the medium term it seems clear that more competition among firms capable of auditing large international businesses would be desirable. At a minimum, the industry should be opened to new entrants with the capital needed to build a viable international business by permitting organizational forms other than partnerships owned only by qualified auditors.

4. Credit rating agencies

Credit rating agencies (CRA) provide investors with low-cost information about the credit risk characteristics of different securities. Like audit firms, they have a captive market arising from official recognition of their services that provides them with a government endorsement and makes their wide use nearly obligatory – this creates a strong barrier to entry. CRAs played a facilitating role in creating the current crisis by making vast pools of capital available to special purpose entities selling complex, illiquid securities which would have had very little appeal without an investment grade credit rating.[17]

The three main rating agencies are paid by issuers. The issuer-pays model creates a conflict of interest with a bias toward inflating ratings to satisfy issuers as opposed to meeting investors' interest in unbiased, accurate and timely ratings. In addition, securitised structured products are fundamentally more complex than standard corporate and government bonds so a separate system of ratings should be considered for them, even if issuers and credit rating agencies reimbursed by issuers oppose this development.[18]

Competition between CRAs to satisfy investors is likely to raise the quality of their ratings. Business models should be encouraged in which payment for ratings is provided by investors whose interest is accurate ratings.

To improve the efficiency of the market for credit ratings, ways should be sought to reduce barriers to entry, including possibilities such as:

- Simplification of registration requirements.
- A reconsideration of official endorsement in regulatory procedures of a few rating firms, and similar endorsements in mandates for public pension funds

- Making information available to all agencies on an equal, but confidential, basis so that issuers will provide new rating agencies with the information they need despite the risk that they may deliver lower ratings; and
- Allowing and encouraging unsolicited ratings to stimulate the expansion of small credit rating agencies with new business models.

5. Derivatives

The explosion of over-the-counter (OTC) derivative trading, notably credit default swaps (CDSs) shown in Figure II.1, has added a highly non-transparent element to financial markets. This proliferation of contracts creates huge but unknown volumes of counterparty exposures which can generate panic when problems arise. The Lehman bankruptcy in September 2008 reportedly left 900 000 derivative and financial contacts outstanding with counterparties,[19] which contributed to the panic that followed. The subsequent collapse of AIG was driven by problems with its CDSs, some of them sub-prime related, involving dozens of institutions in the United States and numerous other, mainly European, countries. With AIG's total derivatives book at USD 2 trillion, bankruptcy in the context of the panic generated by the Lehman collapse was not regarded by the authorities as tolerable. Hence AIG was rescued.

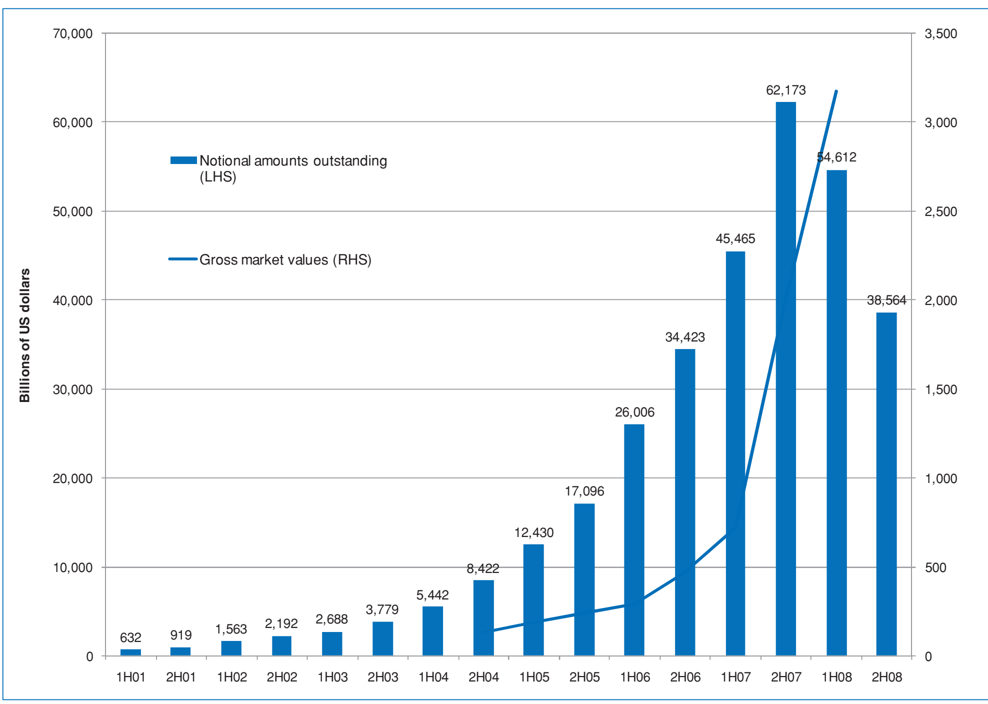
A clear consensus has emerged that infrastructure is needed to support markets in these instruments and that meaningful oversight is desirable. The best solution would be to move as much trading as possible to an organized exchange. Progress can also be made in harmonizing standards and practices and establishing central counterparty clearing arrangements to reduce the gross size of outstanding contracts by netting mechanisms.[20]

6. Accounting standards

There are a number of areas, some of which are already under review, where accounting standards and reporting requirements should be developed or strengthened. Notably, better methods of valuing complex securities and greater transparency as regards off-balance sheet items would be desirable. 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).

Figure II.1. **Credit default swaps outstanding (LHS) and positive replacement value (RHS)**



Source: BIS, ISDA, OECD.

D. Strengthen capital adequacy rules

Both the de Larosiere and Turner Reports call for serious reform of the Basel capital adequacy rules. Scope for strengthening these rules stands out in four main areas:

1. Ensuring capital adequacy: more capital, less leverage

The Basel I capital adequacy framework, now being phased out, allowed regulated banks and securities firms to operate with excessively low levels of capital and too much leverage. Since regulatory minima can easily become reference points for management, the Basel rules may even have encouraged high leverage. Indeed, it is notable that many unregulated entities, such as hedge funds, typically operated with much less leverage than regulated banks (Table II.3). The revised Basel II framework now being implemented addresses many problems arising with Basel I, notably as regards off-balance sheet activities. However, since in normal (*i.e.* non-crisis) circumstances it will mostly lead to lower minimum capital requirements and permit even greater leverage, modifications will need to be made.

A strong capital base is the single most important reform

A strong capital base would be the single most important element of reforms to focus bank owners and management on the need for a prudent balance between risk and the search for return. Furthermore, high levels of capital (and consequently less leverage) in all financial institutions would make the entire system more resilient. Market participants would have less need for defensive behaviour to preserve their own capital and greater confidence in the soundness of counterparties, notably in the inter-bank market. With more resilient financial intermediaries, credit markets would be more robust, exposing banks' customers to less liquidity pressure. Even in the context of market corrections such as have been occurring recently, one could expect fewer margin calls, less need for collateral and fewer forced asset sales (and the associated collapse in security and equity markets) by leveraged entities such as hedge funds. Revisions to the capital adequacy framework should include, first and foremost, in the words of the Turner Report: "minimum regulatory [capital] requirements significantly above existing Basel rules”.[21] A higher overall capital base and a lower overall leverage ratio may be more important than reducing pro-cyclicality of capital rules and changes to risk weightings (see below).

Table II.3. **Pre-crisis leverage ratios in the financial sector**
(ratios, as of year end)

	2006	2007
Banking and securities firms (Total assets/ Tier 1 capital)		
US commercial banks	16.5	18.9
US investment banks	27.8	33.8
European banks	n.a.	33.5
Unregulated institutions (Market position/Assets under management)		
Hedge funds	2.9	2.8

Notes:

1. Leverage ratios are calculated for 15 largest US commercial banks, 4 largest US investment banks, and 52 selected large European banks, respectively.
2. For US investment banks and European banks, equity less goodwill data instead of Tier 1 is used to calculate leverage ratio.

Source: Company reports; Hedge Fund Research, as reported by Andrew Lo, "Hedge Funds, Systemic Risk, and the Financial Crisis of 2007-2008", written testimony prepared for the US House of on Oversight and Government Reform, 13 November 2008. Representatives Committee

2. Strengthening liquidity management

Many of the liquidity problems that have arisen to date have been precipitated by withdrawals of short-term wholesale funding for long-term assets. The combination of high leverage and mismatch between liquid liabilities subject to withdrawal and illiquid long-term assets can make the entire system very vulnerable. Where assets consist mainly of real estate, *c.f.* Northern Rock and other specialized lenders, it is an invitation to business model collapse should interest rates rise or liquidity in the wholesale markets evaporate.

While the problem is clear the solution is not. The multiplicity of funding instruments, uncertain liquidity of assets such as complex securities and the variety of contingencies for which financial institutions must plan, limit the scope for simple quantitative rules to be used effectively. For example, the privileging of specific-funding instruments risks creating incentives for regulatory arbitrage that could generate new and unforeseen distortions. Nevertheless, indicators of the degree of exposure to funding risk and norms appropriate to differing circumstances would provide useful guidance to supervisors. At this stage, considerable work is needed to identify useful concepts and measures as well as to identify the circumstances in which they could be applied. As useful indicators are developed they can be integrated into the supervisory process with a weight appropriate to their robustness.[22]

3. Avoiding regulatory subsidies to the cost of capital

Basel I risk weights favoured claims on government, regulated banks and securities firms and residential real estate with low minimum capital requirements.[23] This effectively provided regulatory subsidies to the cost of capital for mortgage lending, especially when funded through the wholesale markets, and securitisation activities. It is not clear how the revised Basel II framework, which allows capital requirements to be based on banks' own risk modelling or external ratings analysis of current and historical market prices and default performance, will affect relative minimum capital requirements given the recent damage to credit ratings in many areas.[24] But the framework should be designed to ensure that regulated entities carrying out high-risk activities confront a full market based cost of capital, comparable to what unregulated borrowers face. This would encourage a more prudent balance between risk and search for return. One prerequisite for this to work properly relates to the structure of conglomerates to which capital rules apply – the practice of double gearing and recourse to the same capital pool in a conglomerate may work to offset the intent of capital regulation – an issue which is taken up below.

4. Avoiding pro-cyclical bias

The revised Basel II framework has been widely criticized for having a pro-cyclical bias. This is mainly because it allows capital requirements to be based on analysis of current and historical market prices and default performance, which themselves reflect cyclical developments. This works to bias capital requirements down in the benign part of the cycle and conversely in the downswing. Ideally, capital requirements should encourage the opposite: a build-up of capital in good times to provide a large buffer in bad times. Some redesign is needed.

5. The leverage ratio option

An approach that would further some of these objectives, which draws on some elements of the Turner Report, would be to incorporate a simple upper limit to the leverage of tangible equity, *i.e.* a maximum permissible leverage ratio. To ensure higher capital levels, this limit would be much lower than has been typical for regulated banks and securities firms in recent years. 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. Therefore 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.*

To encourage a countercyclical character of such an arrangement financial institutions should be obliged to provide, as a charge against income and on a regular basis, for losses that have not yet materialized but that are likely during cyclical downswings.[25] These would be used to accumulate a reserve which would be available to absorb losses as they occur. The size of the regular provisions, hence the eventual build-up of the loss reserve, might vary from bank to bank, depending on the size of the tangible equity cushion above the required minimum. But it should be large enough to absorb losses that can reasonably be expected over the cycle. This would leave the tangible equity cushion above the required minimum to absorb any exceptionally large losses until new capital can be raised. Prompt corrective action would be set in motion if the loss reserve were exhausted and the tangible equity cushion declined to the point where there was no meaningful buffer to absorb losses without threatening minimum requirements.

In light of the earlier discussion considerable flexibility should be envisaged as regards liquidity management. The prudential supervisory process should include oversight of management systems to ensure that financial institutions are focused on the issue in ways that are appropriate to their business. As quantitative measures and indicators emerge from methodological work, they should be integrated into the process in proportion to the degree that they are robust and operational. In the meantime, judgments about the degree of exposure to liquidity risks can be factored into decisions about how large the loss provisions discussed above should be.

E. Strengthen understanding of how tax policies affect the soundness of financial markets

Tax considerations influence virtually all economic decisions and may have exacerbated other forces at work in the current crisis. The main focus of this report is the current banking crisis where securitisation, the proliferation of collateralised debt obligations (CDOs) and the extraordinary boom in CDS contracts played such a central role. There are also more longstanding issues, such as debt-versus-equity and the deductibility of mortgage interest, that also deserve serious consideration as background influences.

The OECD's Committee on Fiscal Affairs and Centre for Tax Policy and Administration and its committees are in the process of identifying what further work is needed, if any, to align tax and regulatory incentives to strengthen financial stability. Such exploratory studies could include the following.

1. Debt versus equity

One longstanding issue – though not the current banking crisis focus of this report – is that there is an overall bias in many countries' tax systems which works to encourage corporate leverage. Corporate tax in many countries favours debt rather than equity financing by taxing profits both at corporate and personal level when they are distributed as dividends (see Table II.4). Opportunities for tax-favoured leverage are magnified by well-documented tax arbitrage between national tax systems, exploiting hybrid structures to obtain cheap borrowing financed by multiple interest deductions ("double dips") or by tax credits which turn a pre-tax loss into an after-tax profit.[26] Market disciplines may work to align the interests of various corporate stakeholders (*i.e.* shareholders, creditors and managers) as regards exposure to risk of individual enterprises. But the overall result may be more leverage than is desirable from a systemic point of view.

Table II.4. **Tax bias against equity in OECD countries**

Systems for Taxing Dividends at Corporate and Personal Levels
Systems with No Double Taxation
Full imputation (full taxation at corporate level, full credit at personal level): Australia, Mexico, New Zealand
No personal taxation of dividends (profits taxed only at corporate level): Greece, Slovak Republic
Systems with Double taxation of Economic Rents Only
Govt. taxes dividends above a deemed normal level at the corporate & individual level: Norway, Belgium
Systems Involving Double Taxation
Classical (full taxation at both corporate and personal levels): Austria, Czech Republic, Germany, Iceland, Ireland, Netherlands, Switzerland*
Modified classical (classical system but preferential taxation at personal level): Denmark, Japan, Poland, Portugal, Spain, United States
Partial imputation (full taxation at corporate level, partial credit at personal level): Canada, Korea, United Kingdom.
Partial inclusion (taxation at corporate level, partial exclusion at personal level): Finland, France, Italy, Luxembourg, Turkey.
Split rate (dividends taxed higher than retained earnings at corporate level): None
Schedule Relief (dividends taxed but at a lower flat rate than progressive income tax): Hungary.

* Some cantons use a modified classical system.
Source: OECD.

2. Capital gains versus income and securitisation

Often for good policy reasons, tax systems commonly contain a preference for investment returns in the form of capital gains. But this can create a bias in favour of investment in risky assets, where returns are likely to come largely in the form of appreciation. The fact that preferential tax treatment for capital gains is matched by limited relief for capital losses reduces this bias only if investors actually consider the possibility of price declines. The same bias favours the relatively risky activities of private equity and hedge funds, whose managers are typically taxed at preferential capital gains rates, even where there is no risk of capital loss. It could also provide an important motivation for securitisation, benefitting investors who face higher taxes on their interest income than they can recover in the event of credit default losses. This is the case for mortgages in the United States where the 1986 Tax Act created Real Estate Mortgage Investment Conduits (REMICs) as vehicles which are not themselves subject to tax but pass the tax liabilities through to investors much as a partnership does. It shifts the basis for taxation from the principal and interest received by the REMIC to the form in which it is paid to investors. This often involves conversion of interest to principal, creating tax benefits for many recipients. These tax benefits rise with the degree of credit risk of the underlying assets since, the larger the risk premium incorporated in interest rates, the greater the tax benefit arising from paying it out as principal.

3. Possible tax link to credit default swap boom

Tax arbitrage inevitably arises in an environment which is and will continue to be characterised by tax systems that are both complex and differ between countries. 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. Samuel Eddins[27] has associated the curiously high level of activity (noted earlier) in the market for CDSs with the conversion of interest to principal for tax purposes noted above.

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.

The empirical weight that should be placed on this argument is not clear, since linking the impact of the CDS through to the ultimate "buy and hold" investors who would benefit from the arbitrage is not straightforward. Nevertheless, it is clear that significant investment into securitised sub-prime mortgage debt was made by hedge funds, which would have been able to pass those benefits onto to individual investors in the form of higher after-tax returns. More generally, incentives become embedded in prices, even if no one has a full overview of the forces at work and, since tax rates are fixed legal parameters, differentials do not get arbitraged away, however large the volume of transactions becomes.

4. Tax havens and SPVs

Interplay between tax and regulation appears to have contributed to the widespread use of tax havens as jurisdictions for the Special Purpose Vehicles (SPVs) at the centre of the crisis.[28] For example, restrictions on credit quality applied to the underwriting standards of mortgages that could be securitised in the United States are fairly high. By using SPVs in tax havens these restrictions could be avoided and the (higher) tax benefits of securitising lower quality mortgages could be obtained. Since certain tax havens levy no business income tax, SPVs offering CDOs can be structured there as limited liability companies without incurring any tax liabilities at the level of the SPV. For mortgage investors, this replicated the tax benefits of REMICs across a wider range of mortgages. For investors in private equity and hedge funds carrying out active management of businesses they have purchased onshore, this provided access to passive income without any tax complications arising from business activity. In particular, non-US and tax-exempt US private equity and hedge fund investors avoided the need to file returns or pay tax on a share of "effectively connected income" or "unrelated business taxable income" that the partnership structure of US based SPVs would have required.

More generally, the tax neutral environment of tax havens means they can facilitate the conversion of income to capital or the deferral of income, which will generate higher after-tax yields or lower after tax costs of capital through tax arbitrage, increasing incentives to leverage and distorting the allocation of resources. A lack of effective exchange of information for tax purposes also provides a draw for non tax-compliant investors safe in the knowledge that high returns from their investment will not be disclosed to home tax authorities.

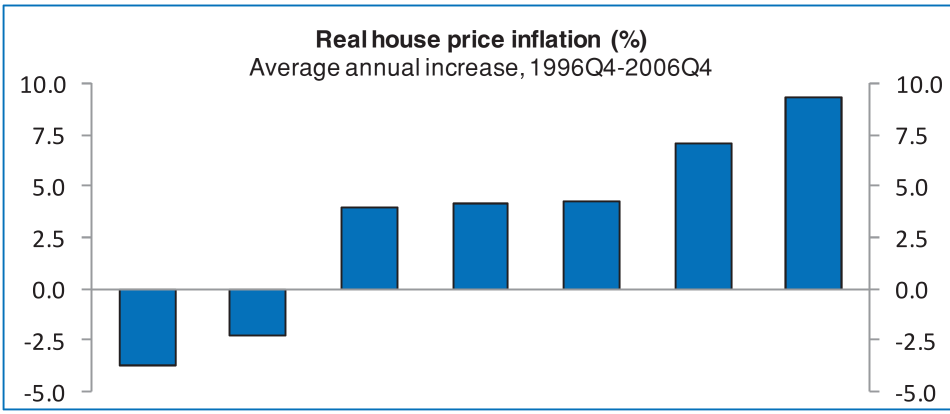
5. Mortgage interest deductibility

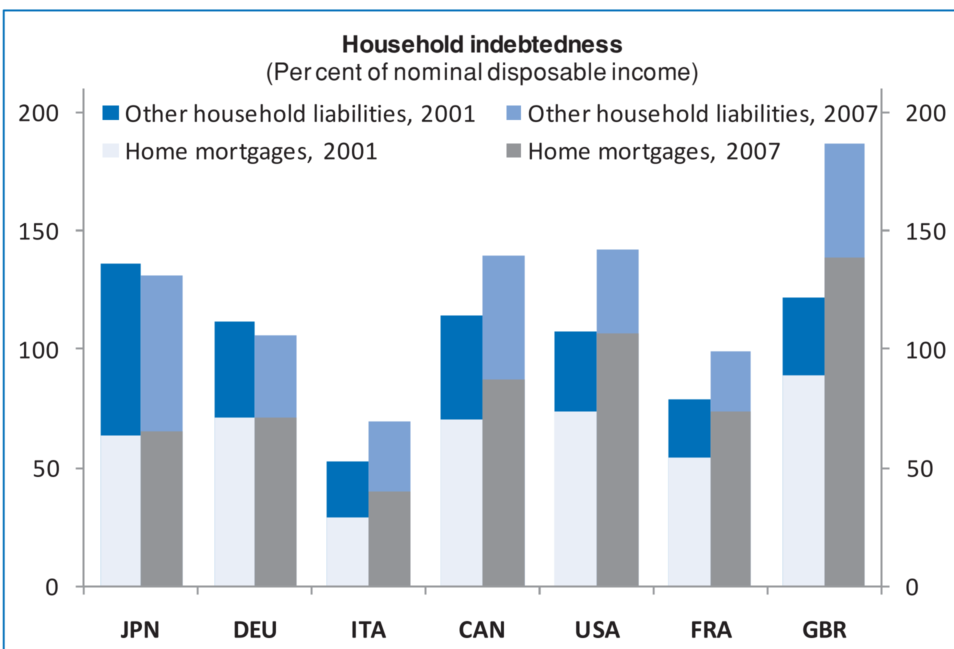
As regards households, tax advantages for home ownership and other forms of real estate, ranging from interest deductibility to favourable treatment of capital gains, work to encourage high levels of household debt and upward pressure on property prices. It must be recognized, however, that property-related personal debt and real house prices have risen in many countries, Japan and Germany being the main exceptions (see Figure II.2), notwithstanding wide variations in tax incentives. So other forces are clearly at work. There is some evidence, however, that high tax relief on mortgage interest correlates with high variability in house prices which can lead to serious household credit problems.[29]

6. Tax and bank capital adequacy

A feature of the Basel capital adequacy regime for banks is that regulatory capital which takes the form of debt (much Tier 2 capital and so-called innovative Tier 1 capital) can qualify for a tax deduction, further reducing the cost of capital. Such instruments work to ensure stable funding, but the debt-servicing arising from them remains a claim on the shareholders' income. There may be a case for tax systems not to encourage Tier 1 capital to be issued in the form of debt-like instruments (which in regulatory terms are functioning as equity).

Figure II.2. **House prices and household indebtedness, selected countries**





Source: DataStream, OECD

7. Further work

As can be seen from the above discussion, the interface between tax, leverage and excess risk taking is complex. A better understanding of how tax policies affect the soundness of financial markets is needed. Work underway by the Committee on Fiscal Affairs should facilitate that understanding.

F. Ensure accountability to owners whose capital is at risk

1. Strengthen corporate governance of financial firms

The crisis has highlighted pervasive principal-agent problems which need to be corrected by improvements to corporate governance. Two issues stand out. First, CEOs and other top executives, notably including those charged with credit risk assessment and management, are rarely controlling shareholders of large financial institutions. They are shareholders' agents who have all too often failed to act in shareholders' interests. The high exposure of shareholders' funds to risk and the very high levels of compensation unrelated to performance, paid out of shareholders' funds, point to the need to ensure better accountability for management decisions to the principals, *i.e.* the shareholders. This requires clear reporting responsibility and accountability of the CEO and management team to the Board of Directors. The Board must be independent, not controlled by the management and motivated to act in the interests of shareholders.

Second, the "originate-to-distribute" business model that has increasingly replaced the traditional "originate-to-hold" model has allowed too many decisions to be taken by people or institutions rewarded for completing a transaction, *i.e.* by collecting a fee, commission or bonus, while transferring the risk to someone else. This "someone else" is often poorly placed to assess the risk. Even many of the investors who make the capital allocation decisions on which the chain of transactions depends, *e.g.* hedge funds, pension funds and insurance companies, are themselves merely agents for the ultimate risk holders. These include pensioners, insurance policyholders, mutual fund owners and hedge fund investors who are not in a position to influence decisions.

Table II.5. **Deposit insurance schemes in selected OECD countries**

Country	Ceiling on coverage		Foreign currency deposits covered?	Interbank deposits	Administration	Funding
	Before crisis	Currently				
Euro area (EUR)						
Austria	20 000	No limit	No	No	Private	Ex post
Belgium	20 000	100 000	No	No	Joint	Ex ante
Finland	25 000	50 000	Yes	No	Private	Ex ante
France	70 000	70 000	No	No	Private	Ex post
Germany	Varied	No limit	Yes	No	Joint	Ex ante
Greece	20 000	100 000	No	No	Joint	Ex ante
Ireland	20 000	No limit	No	No	Government	Ex ante
Italy	103 291	103 291	Yes	No	Private	Ex post
Netherlands	40 000	100 000	Yes	No	Government	Ex post
Portugal	25 000	100 000	Yes	No	Government	Ex ante
Spain	20 000	100 000	No	No	Joint	Ex ante
Other European Union (national currency)						
Denmark	300 000	No limit	Yes	No	Joint	Ex ante
Sweden	250 000	500 000	Yes	No	Government	Ex ante
United Kingdom	35 000	50 000	No	No	Private	Mixed
Other OECD countries (national currency)						
Australia	Not relevant	Unlimited	Yes	No	Government	Ex post
Canada	100 000	100 000	No	Yes	Government	Mixed
Japan	10 million	10 million	No	No	Government	Ex ante
United States	100,000	250,000	No	Yes	Government	Ex ante

Notes:
"government" means administered by a public body, including the central bank.
Ex ante funding is a scheme where the regulator has decided to create up-front a cash fund for the purpose of deposit insurance. The sources of the fund include; (i) initial capital and membership fees, (ii) regular and additional premiums paid by member institutions, (iii) additional resources like borrowing from the market and/or budget. On the contrary, an *expost* scheme does not create any funds up front, but only when there is a need for a payout. In practice, it is possible to both accumulate a fund and to impose an additional levy *ex post*, if the fund proves to be insufficient.

Source: OECD, *Financial Market Trends*, December 2008

Provided the Board is acting effectively on behalf of the shareholders, it will align key executive and board remuneration with the longer-term interests of the company and its shareholders, as called for by the OECD Principles of Corporate Governance and the FSB Principles for Sound Compensation Practices. In this case bonus, commission and other staff compensation are best left to management and regulatory intervention should be avoided. However, recognition of income from fees received from outside parties for origination of assets that will have an extended life should depend on the ultimate performance of the assets. Such fees would include those for underwriting bonds, originating loans and establishing CDOs. Ideally, they could be put in escrow and drawn over the life of the loan. At minimum, even if the fees are fully paid up front, recognition of the revenues and associated income can be deferred over the life of the asset much as interest on a standard mortgage is spread over its life.

2. Deposit insurance, guarantees and moral hazard

Federal deposit insurance was established in the United States during the 1930s to reassure depositors about the safety of their money and thus protect the banking system against runs on their funding. By and large this has been successful in stabilizing the system's deposit base. Guarantees can do much the same thing.[30] However, such insurance or guarantees can create a moral hazard by relieving depositors of any need to concern themselves with the way their funds are used. Indeed, during the 1980s high risk investments by saving and loan institutions led to large losses to be covered by US taxpayers. How can we obtain the benefits in terms of system stability while minimizing the downside risks to taxpayers?[31] OECD countries have taken three main approaches:

- Provide only partial coverage by limiting eligibility, capping insured amounts or covering only a percentage of the total so that depositors could not avoid all exposure to loss. Until the current crisis, which has led most OECD countries to increase their coverage limits (see Table II.5), inter-bank deposits have generally been excluded from coverage.

- Ensure that substantial capital is maintained at risk in banks benefiting from guarantees or insurance coverage for their deposits. In the event of losses, insurance or guarantees should only be drawn after the risk capital has been fully exhausted. This gives shareholders a strong incentive to exercise effective oversight.
- Exercise strong regulatory and prudential oversight to protect taxpayer interest.

The balance among these should be shifted by insisting, as suggested above, on substantially more capital at risk in financial intermediaries than has become customary. Most retail depositors are not in a position to monitor banks' portfolio management and limits to making oversight more effective were discussed above.

The real challenge for policy relates less to guarantees and insurance which are explicit, than to what might be called implicit guarantees. The implicit guarantee problem exists because experience suggests that state ownership, potential political pressures and/or concerns about systemic consequences will lead governments to provide state support beyond their explicit commitments. In the United States, until the Lehman bankruptcy even inter-bank depositors had rarely been allowed to lose money, notwithstanding theoretical coverage limits. In the United Kingdom the authorities responded to the run on Northern Rock by extending deposit coverage fully[32] while in France, the security of depositors' funds at state-owned Credit Lyonnais was never in question despite huge losses during the 1990s. As a general rule, bank failures have punished shareholders by wiping them out entirely or, as in the case of Bear Stearns, nearly so, and top executives and significant parts of the staff have lost their jobs. But depositors and big creditors who provide large amounts of funding in wholesale markets have typically been made whole.

The problem has not been confined to bank failures. During the 1990s several large financial crises involving large non-bank debtors, including sovereigns such as Mexico and several emerging Asian countries, the hedge fund Long-Term Capital Markets (LTCM), were resolved with the help of officially organised financial support packages.[33] These episodes were successful in that they were reasonably contained and wider systemic crises were avoided. They also punished the borrowers who got into trouble since difficult adjustments in the context of IMF programs were unavoidable, and LTCM was ultimately liquidated. However, major creditors whose imprudent lending activities contributed to the crises benefited from the large scale financial support and were generally not seriously disciplined.

During the current crisis the largest recipient of cash assistance has been an insurance company, AIG, and the same pattern seems to be unfolding: While AIG shareholders have been largely wiped out, CDS and securities lending counterparties who assumed large exposures to AIG have benefited from direct payments or collateral postings which have been possible only because of the cash support that the US authorities have provided (see Table II.6). This support was necessary in view of the direct damage that withholding these payments would have done to the capital bases of some major banks, and hence the international system, even without taking account of any contagion effects. But, again, major financial institutions have avoided discipline for imprudent behaviour.

Table II.6. **Payments to major AIG counterparties 16 September to 31 December 2008**

Institution	(billions of US dollars)			As a share of capital[3] at end-2008
	Collateral postings for credit default swaps[1]	Payments to securities lending counterparties[2]	Total	
Goldman Sachs	8.1	4.8	12.9	29.1%
Société Générale	11.0	0.9	11.9	28.9%
Deutsche Bank	5.4	6.4	11.9	37.4%
Barclays	1.5	7.0	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	5.0	25.2%
BNP Paribas	…	4.9	4.9	8.3%
HSBC	0.2	3.3	3.5	5.3%
[memo: Bank of America after its merger with Merrill Lynch]			*12.0*	*18.1%*

1. 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.
2. September 18-December 12, 2008.
3. Common equity net of goodwill; net of all intangible assets for Merrill Lynch and HSBC.

Source: AIG; company reports for capital data.

Every effort should be made to discourage implicit guarantees. Large creditors and depositors should either face the cost of guarantees or *caveat emptor*. However, it is very difficult for any government to pre-commit its successors. And it is doubtful that this would make sense even if it were possible, since future cost-benefit trade-offs cannot be anticipated. But some things can be done to minimize the dangers:

- Realistically price any deposit insurance or guarantees. Costs should be reflected in lower returns on insured deposits.
- Use the proceeds to build a fund that can cover expected losses as they arise so that the scheme normally needs no recourse to taxpayers.
- Avoid state ownership of banks since, politically and for reasons of reputation in financial markets, it is very difficult for an owner to walk away from a subsidiary's debts.
- Encourage private deposit insurance schemes as first lines of defence against loss, leaving state schemes as back-up. This will be no stronger than the capital adequacy of the insurers, and can be considered as part of the second bullet above, but any additional risk capital that this provides will be helpful.
- Avoid, as far as possible, letting individual institutions become too big to fail, since this destroys any credibility of threats or promises not to go beyond explicit commitments to cover losses. Support for Bear Stearns, Fannie Mae and Freddie Mac, AIG, Northern Rock and RBS, among others, arose from fears that the damage of doing otherwise would be too severe to be contemplated. The bankruptcy of Lehman Brothers, the exceptional case that did not receive support, was an object lesson in how large the damage can be.
- Where implicit guarantees are likely to be perceived by markets – notably for large, complex institutions and state-owned banks – bring institutions formally into the insurance scheme. Small retail depositors should similarly be formally covered. Guarantees should become explicit and

counterparts in terms of fees and prudential supervision should apply.

- In a systemic crisis the system must be fully supported. But in normal times, once this crisis has passed and stability is restored, ways should be sought to allow at least some non-retail depositors, other creditors and counterparties of failing (non-systemic) institutions to lose money, alongside other creditors and shareholders. This would encourage a more prudent balance between risk and the search for return.

G. Corporate structures for complex financial firms

1. Contagion risk and firewalls

The subprime crisis has brought the issue of **contagion risk** squarely back into focus. Much of the losses that undid companies like UBS and Citigroup were related to activities such as:

- **Warehousing securities** marked for securitisation and buying subprime-based securities for their own account.
- **Credit facilities and guarantees** to enhance marketability and creditworthiness of bank-ineligible securities of affiliates
- Creating affiliated **off-balance sheet conduits** to avoid capital regulations (but to which banks were fully linked), and to take advantages of tax anomalies with the use of CDS synthetic structures (see above).
- Using the group name to borrow close to Libor and **internally allocating funds** to affiliated investment bank affiliates which undertook high risk and heavily levered activities.

This latter activity in particular not only created contagion risk, but the subsidised nature of the activity meant that the securities and trading activities of these affiliates grew to be much larger than they would have been if the securities firm had to borrow in its own right at the full cost of capital.

Europe has permitted universal banking, while the US until 1999 did not, following the massive issues of contagion risk in the Great Depression. Regulatory lobbying led the US to eliminate firewall rules in the late 1990s and finally to abolish Glass-Steagall with the Gramm-Leach-Bliley Act of 1999 (the regulatory situation in the OECD prior to Gramm-Leach-Bliley is shown in Table II.7). This in turn led to even greater pressures on stand-alone US investment banks which operate globally (due to cross-subsidisation of investment banks attached to a banking group). The argument used in favour of broad banking is that increased integration allows economies of scale and scope – for example: via shared technology platforms; by the cross selling of products and services, taking full advantage of securitisation, derivatives and other innovations (where investment banks play a key role); and by reducing the cost of regulation. The US use of firewall rules varied over the post-war period. The Banking Act of 1933 (Glass-Steagall) prohibited Federal Reserve member banks from conducting investment bank activities (securities underwriting and dealing, etc.) and insurance. Section 23A (dealing with firewalls) restricted to a total of 10% bank capital transactions with affiliates (loans, security repos, etc), with a total of 20% of capital for all such transactions. This was toughened with the Bank Holding Co Act of 1956 which prohibited transactions that had been restricted by section 23A, and extended this to non-member banks owned by bank holding companies. The period from 1956 to 1966, when this Act was repealed, was relatively safe in terms of bank failures, and was also characterized by strong economic growth for most of the period – failure to achieve scale economies and innovation did not appear to hold the economy back – see Figure II.3. This was not the case from 1967 to the late 1980s, when firewall rules were weakened. Stronger firewalls were reintroduced – following numerous bank failures – at the end of the 1980s, and again a period of relatively safe growth ensued. Various firewall rules and then Glass-Steagall itself were removed in the late 1990s, allowing the mixing of banking, securities underwriting and dealing, and insurance, helping to set the scene for the subprime crisis from 2007.

Table II.7. **Affiliate restrictions applying prior to Gramm-Leach-Bliley**

	Restrictions Applying in 1997, Just Prior to Removal of Glass Steagall			
	Securities[(1)]	**Insurance** [(1)]	**Bank owns Comm. Firms** [(2)]	**Bank owns Bank** [(2)]
Main Countries				
USA	Restricted	Prohibited	Prohibited	Prohibited
Japan	Restricted	Prohibited	Restricted	Prohibited
Germany	Unrestricted	Restricted	Unrestricted	Unrestricted
France	Permitted	Permitted	Permitted	Permitted
United Kingdom	Unrestricted	Permitted	Unrestricted	Unrestricted
Italy	Unrestricted	Permitted	Restricted	Restricted
Canada	Permitted	Permitted	Restricted	Unrestricted
Spain	Unrestricted	Permitted	Unrestricted	Permitted
Switzerland	Unrestricted	Unrestricted	Unrestricted	Unrestricted
Others				
Austria	Unrestricted	Permitted	Unrestricted	Unrestricted
Belgium	Permitted	Permitted	Restricted	Unrestricted
Denmark	Unrestricted	Permitted	Permitted	Unrestricted
Finland	Unrestricted	Restricted	Unrestricted	Unrestricted
Greece	Permitted	Restricted	Unrestricted	Unrestricted
Ireland	Unrestricted	Restricted	Unrestricted	Unrestricted
Luxembourg	Unrestricted	Permitted	Unrestricted	Restricted
Netherlands	Unrestricted	Permitted	Unrestricted	Unrestricted
Portugal	Unrestricted	Permitted	Permitted	Unrestricted
Sweden	Unrestricted	Permitted	Restricted	Unrestricted

Notes:

1. **Unrestricted**: A full range of activities in the category can be conducted by the bank.
   Permitted: A full range of activities permitted, but mainly in subsidiaries.
   Restricted: Less than a full range of activities in bank or subsidiaries.
   Prohibited: Activity cannot be conducted in bank or subsidiary.
2. **Unrestricted**: 100% ownership permitted
   Permitted: Unrestricted, but ownership is limited based on banks equity capital.
   Restricted: Less than 100% ownership.
   Prohibited: Prohibited.

Source: J.R. Barth, R. Brumbaugh Jr. and James A. Wilcox, “The Repeal of Glass-Steagall and the Advent of Broad Banking”, *Journal of Economic Perspectives*, May 2000.

Contagion risk came strongly into play during the crisis as a result of:

- The lack of appropriate arms-length relationships between affiliates (see above).
- Double gearing via investments in subsidiaries that overstate capital, and the use of shell companies by business units that become counterparties to derivatives contracts with competing groups to reduce capital at risk for the bank.
- Asset-liability mismatch resulting from diverse products with different maturity profiles within the various business groups, but a centralised internal funding process where short-term funds are regularly deployed against products of some business units with longer-term maturity.
- Financial impairment in one entity impacting the reputation of other members of the group, causing customers and credit counterparties to refuse to do business with them.

The opaque universal/broad banking structure is represented in Figure II.5. Solvency problems arise because financial losses in members of the group, *e.g.* in the investment bank, absorb all of the group capital, as losses are shifted between affiliates. The opaque structure also creates ambiguities about governance, and the interaction of the different internal boards and management.[34]

2. The NOHC structure

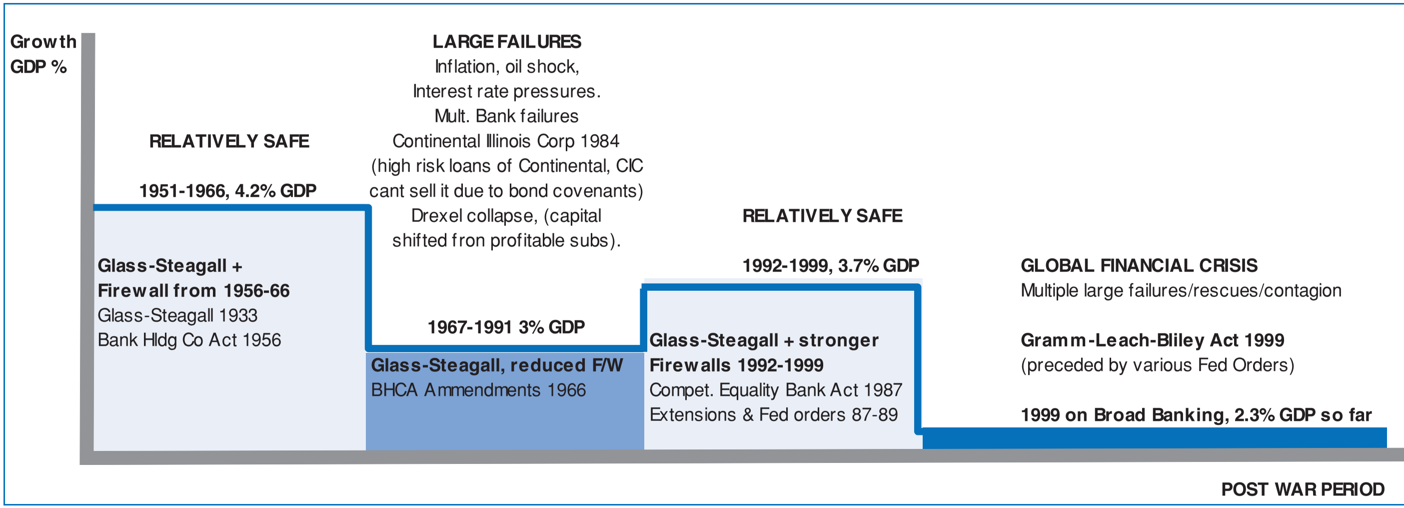
The Turner Report argues that it is not possible to use firewalls in global financial market reform, largely because Europe would be unlikely to participate (given the tradition of universal banking) and because: "rising prosperity…requires large complex banking institutions providing financial risk management products which can only be delivered off the platform of extensive market making activities" (p.94). This sounds very much like the old argument that firewall restrictions limit diversification and economies of scale and scope in financial institutions. The Turner Report concludes: "A more formal and complete legal distinction of 'narrow banking' from market making activities is not feasible" (p.9).

The innovation and growth argument is disputable (as noted above), and this line of thinking appears to downplay the possibility that all banking and securities activities can be combined within a Non-Operating Holding Company (NOHC) structure, shown in Figure II.5. Such structures have recently been put in place voluntarily in some jurisdictions by holding company groups that contain a bank.[35] Their more widespread use in all jurisdictions would facilitate reduced contagion risk.

The guiding principles for an NOHC are: (a) for the parent and affiliates to deal with each other in a balance sheet sense, as far as possible, on the same arms-length basis as they might deal with outside entities, and (b) increased transparency which facilitates monitoring, regulatory compliance and dealing with crises in any of the underlying businesses via public support or failed firm procedures. The NOHC structure has the following key characteristics:

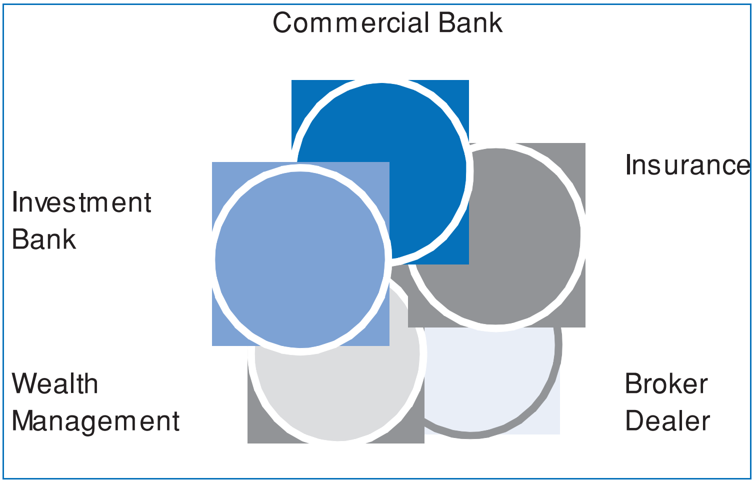
- **Legal separation**, (not technological separation) so that the commercial bank's balance sheet, in particular, can be protected. The assets and liabilities of the banking and securities affiliates are essentially quarantined from each other, with a non-operating holding company (group) parent. Each affiliate is separately capitalized and subject to separate reporting obligations.
- The NOHC may include listed and non-listed companies. **The parent invests in affiliates (in a clear transparent way – no double gearing)**, and may draw dividends from affiliates. It may lend to affiliates on a basis similar to how it would lend to outside entities while respecting internally or externally imposed firewall limitations.

Figure II.3. **Glass-Steagall and periods with firewalls shifts**



Source: OECD

Figure II.4. **Opaque universal banking model**



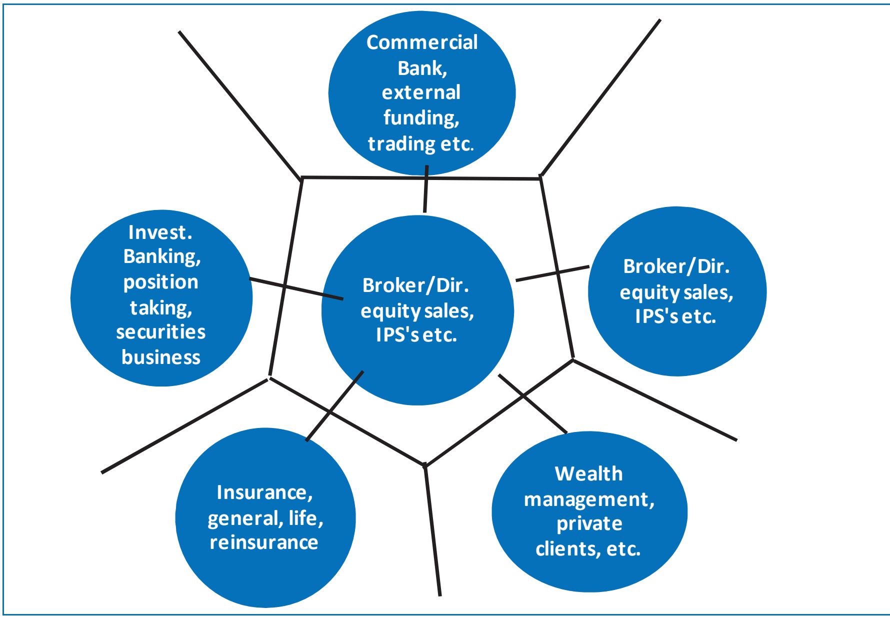
Source: OECD

3. Advantages of the NOHC structure

This NOHC structure has the following advantages:

- The legal form makes reporting transparent to regulators, analysts and investors, facilitating the monitoring of balance sheet contagion. Formal regulatory rules could also apply more easily to such structures, but may not be required. Contagion risk is reduced.
- Regulators may act quickly to deal with problems in any particular affiliate via direct support or by exiting a failed firm from the group, without all of the complexity of interconnected structures and risks to the commercial banks balance sheet.
- It permits separate governance structures that can operate in an arms-length manner, and the different remuneration structures that may be required for different groups.
- A better level playing field for global competition – for example where a bank group affiliate competes with a stand-alone boutique, bank, broker, fund manager, etc.

Figure II.5. **Non-operating holding company structure, with firewalls**



Source: OECD.

H. Strengthening financial education programmes and consumer protection

Financial risks have been increasingly transferred to individuals in recent decades. Not only do defined-contribution pension plans transfer longevity and investment risks to individuals, but the crisis has exposed an array of vulnerabilities where poorly-prepared households endangered their own financial security by purchasing inappropriate products. These same purchases – of adjustable mortgages with reset provisions or interest-only loans in the US; the use of foreign currency loans (including some small emerging European countries)–played a key role in the crisis. The sale of complex structured products to pension funds with trustees who did not understand the risks is another example of weak individual performances affecting systemic outcomes. To better equip individuals to deal with a more complex world, financial education needs to be a priority, complementing regulatory reform.

Consumers are now facing greater financial insecurity, including unemployment, asset repossessions and healthcare issues, at a time when governments are trying to stimulate demand and stimulate credit flows. It is important that these policies are accompanied by education that promotes rational household decision making, in order to avoid future crises. Effective financial education and awareness campaigns help individuals to understand financial risks and products and thus take decisions better adapted to their personal circumstances. They also help them understand the need for policy action and reform. Informed (or financially literate) consumers also contribute to more efficient, transparent and competitive practices by financial institutions. Better educated citizens can also help in monitoring markets, and thus complement prudential supervision.

Governments will also need to improve consumer protection with respect to financial products. The crisis has shown that innovations in the credit markets and mis-selling led to the development of inappropriate financial products and their distribution to vulnerable retail consumers. Further, the transfer of financial risks to households has opened gaps in consumer protection that need to be addressed by market conduct regulations. Consumer protection regimes need to be reviewed with an emphasis on advertising and selling strategies of financial service providers, proper disclosure provisions and consumers' access to, and the effectiveness of redress mechanisms in case of abuse or dispute.

Notes

1. See Adrian Blundell-Wignall, Paul Atkinson and Se Hoon Lee, "The Current Financial Crisis: Causes and Policy Issues", Financial Market Trends, OECD, Paris, January 2009, pp 16-18.
2. General Accounting Office, GA-05-325SP, p.28.
3. General Accounting Office, *Agencies Engaged in Consolidated Supervision Can Strengthen Performance measurement and Consolidation*, GA-07-154, Washington DC, March 2007, p.i.

4. For investment banks with no US banking affiliate the law does provide for voluntary supervision of the holding company. Only Lazard Ltd opted for this arrangement. The five (former) major investment banks all had some US banking affiliates and hence were uncovered until the Consolidated Supervised Entity program described in the main text was created. For discussion, see Erik Sirri, Director, Division of Trading and Markets, US Securities and Exchange Commission, "Testimony concerning the turmoil in credit markets: examining the regulation of investment banks by the Securities and Exchange Commission", before the Subcommittee on Securities, Insurance and Investment, United States Senate, May 7, 2008.

5. A report by the Inspector General of the SEC in Sept. 2008, reporting on the Bear Stearns collapse, was very critical of the CSE program and SEC supervision: "…we have identified serious deficiencies in the CSE program that warrant improvements. Overall, we found that there are significant questions about the adequacy of a number of program requirements, as Bear Stearns was compliant with several of these requirements, but nonetheless collapsed. In addition, the audit found that [the SEC] became aware of numerous potential red flags prior to Bear Stearns' collapse… but did not take actions to limit these factors." (pp. viii-ix). *SEC's Oversight of Bear Stearns and Related Entities: the CSE Program*, Report No. 446-A, September 25, 2008.

6. The US Treasury*, Blueprint for a Modernized Financial Regulatory Structure*, 31 March 2008, endorsed this approach and proposed that the United States adopt it. This appears to have been superseded by new proposals announced on 26 March, 2009. See, also, N. Wellink, "Supervisory Arrangements – Lessons from the Crisis", speech to the 44th SEACEN Governors' Conference 2008, *Preserving monetary and financial stability in the new global environment*, Kuala Lumpur, 6 February 2009.

7. OECD, *Economic Survey of the EU*, 2008.

8. The Turner Report's discussion paper develops the concept of macro-prudential policies in some depth. It singles out these policy tools as possible instruments for implementing macro-prudential policies, although without implying that they would be appropriate in the UK context. Other instruments it discusses include leverage ratios and core funding ratios.

9. A vacancy notice for a Securities Compliance Examiners at the Los Angeles Regional Office of the SEC, for example, offers a salary range of USD 44 600 to USD 78 600. A notice for a Supervisory

Securities Compliance Examiner, who would be Assistant Regional Director, proposes a range of USD 130 900 to USD 202 600. The Financial Services Authority in the United Kingdom proposes salary ranges of GBP 151 000 to 243 000 for Directors and GBP 92 000 to 172 000 for Heads of Department. It also has a system which provides modest bonuses. These are far below compensation levels that may be available in large complex regulated financial firms.

10. M. Lewis and D. Einhorn, "The End of the Financial World as We Know It", *New York Times*, January 3, 2009, cite several examples, including the two most recent directors of enforcement at the SEC who moved on to become General Counsel at JPMorgan Chase and Deutsche Bank.

11. For quoted companies, these are done quarterly in the United States and Japan, semi-annually in the United Kingdom, Europe, and Australia.

12. In the US, this is done by the Public Company Accounting Oversight Board (PCAOB) which is independent of the profession and comes under the SEC. PCAOB also goes abroad usually in combination with the local independent regulator. In Europe, the audit directive also means that all must have independent audit oversight, (*i.e.* independent of the profession). They look at actual audits, standards within audit firms, compliance with ISA. However, enforcement varies across countries.

13. As of 2006, the Big 4 audited 99 of the FTSE 100 and 242 of the next 250 largest corporations in the United Kingdom. In the United States the GAO estimated their market share in terms of revenue at 94%. In France the Autorité des Marchés Financiers reports that all the firms that make up the CAC 40 are clients of at least one of the Big 4, and that their share of revenue of these firms was nearly 94%. The report by Oxera, "Ownership rules of audit firms and their consequences for audit market concentration", October 2007, published by the European Commission recommends changes to ownership rules imbedded in directives to encourage more entry.

14. See the Turner Report and its discussion paper for more elaboration.

15. GAO, *Audit of Public Companies, Continued Concentration in Audit Market for Large Public Companies Does Not Call for Immediate Action*, January 2008.

16. See Paul Boyle, "Reassurances over domination of the Big Four are misplaced", *Financial Times*, January 24, 2008.

17. In Europe, 75% of structured product ratings began as AAA while in the U.S., 62% of structured product ratings were rated AAA. These ratings were followed by an unprecedented level of rating downgrades, with an average of 9076 structured product downgrades in each agency in just one quarter of 2008 (Q2). (See Impact Assessment of Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies, SEC (2008)2745 12.11.2008.)

18. See Financial Stability Forum “Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience”, 7 April 2008, p. 34.

19. See Carole Loomis, “AIG: the Company that Came to Dinner”, *Fortune*, January 19, 2009.

20. The G-30 and Turner Reports offer developed proposals for strengthening over-the-counter derivative markets. The US Treasury’s Framework for Regulatory Reform outlined in March 2009 envisages a comprehensive framework of oversight, protection and disclosure for the OTC derivatives market.

21. Turner Report discussion paper, DP09/02, p.22.

22. The Turner Report and its discussion paper, DP09/02, propose the concept of “core funding”, consisting of funding sources that are sustainable throughout the business cycle. It notes, however, that the precise definition required to make this operational needs extensive analysis and consultation.

23. Claims on regulated banks and securities firms in OECD countries carried “risk-weights” of 20%, effectively exonerating 80% of such claims from capital backing. Residential mortgages carried a risk-weight of 50%. All other claims on the private sector were 100% risk-weighted.

24. See Blundell-Wignall, A. and P.E. Atkinson, “The Subprime Crisis and Regulatory Reform”, in Lessons from The Financial Turmoil of 2007 and 2008, Reserve bank of Australia, 2008, for a critique of Basel II, and related issues.

25. Such “dynamic provisioning” was introduced by the Bank of Spain in June 2000 and has served to mitigate the damage to the banking system during the current crisis.

26. For discussion, see Diane M. Ring, “One Nation Among many: Policy Implications of Cross-Border Tax Arbitrage”, *Boston College Law Review*, vol.44, 2002.

27. Samuel Eddins, “Tax Arbitrage Feedback Theory”, *SSRN 1356159*, March 2009.

28. Tax havens offer low or zero tax rates in combination with a lack of transparency and effective exchange of information, and in some cases, very light regulation, which encourages regulatory arbitrage. Non-tax reasons for using such jurisdictions to create SPVs include circumventing restrictions on transfers of shares and using equity structures not permitted in home countries. These would not have played an important role, however, with fixed interest structured products which accounted for most of the financing at the heart of the crisis.

29. Paul van den Noord, “Tax incentives and house price volatility in the euro area: theory and evidence”, OECD Economics *Department Working Paper* 356, May 2003.

30. Institutions taking insured deposits are charged a premium, whose cost can be reflected in lower interest rates or higher service costs to depositors. Premia can be used to build a fund to provide a financial cushion to cover payouts should they be necessary. Guarantees may also require fees although this is not always the case.

31. See S. Schich*, Financial Market Trends*, OECD, Paris, April 2009.

32. The OECD Committee on Financial Markets in April 2008 concluded that deposit insurance schemes with low coverage ceilings, co-insurance arrangements and/or lengthy compensation periods are not helpful in instilling confidence and avoiding runs. In addition to the extensions of coverage that have taken place in the course of dealing with the current crisis, work is under way in some countries to speed up the compensation process.

33. In the case of the countries, much of the actual funding was provided by multilateral financial institutions, including the IMF, while for LTCM the Federal Reserve Bank of New York put heavy pressure on large creditors to provide support without participating financially itself.

34. In UBS for example, the management of the IB was able to resist the imposition of a hard limit on IB illiquid assets and a freeze on the IB balance sheet.

35. For example Macquarie Group in Australia, which has a banking license, uses a listed non-operating parent, an operating banking arm and an operating securities arm (with a large set of listed and unlisted securities businesses). General Electric also uses a version of this.

III. Phasing Out Emergency Measures

This chapter describes the time frame in which emergency measures will be phased out and the issues it will be necessary to face when the economic situation stabilises. It outlines the priorities of roll-back measures as well as the broad sequence in which they should occur. It also discusses ways to strengthen corporate governance.

A. The timeline for phasing out emergency measures

The timeline for phasing out emergency measures needs to be aligned with progress in financial market reform being undertaken by governments and coordinated by the FSB, so that the incentive structure in place after the crisis is better and more effective than the one which led to the crisis. It is not too early to consider the issues that will have to be faced once the economic situation stabilises. Among them:

- **Huge budget deficits**, (see Table III.8). These will have to be corrected as economies recover.
- **Seriously deteriorated public debt positions** (Table III.9). This will imply continuing debt servicing obligations over the long term and, for some countries, potential debt management problems.
- **Large amounts of outstanding government and central bank loans**, reflecting the direct support that has been provided to the credit markets (Table III.8). These should be re-intermediated into the financial system.

Table III.8. **General government fiscal positions**

	2007	2008	2009	2010
	(per cent of nominal GDP)			
United States				
Financial balance	-2.9	-5.8	-10.2	-11.9
Gross financial liabilities	62.9	71.9	88.1	100.0
Japan				
Financial balance	-2.5	-2.6	-6.8	-8.4
Gross financial liabilities	167.1	172.1	186.2	197.3
Euro area				
Financial balance	-0.7	-1.8	-5.4	-7.0
Gross financial liabilities	71.2	71.0	77.7	84.4
OECD				
Financial balance	-1.4	-3.0	-7.2	-8.7
Gross financial liabilities	74.5	78.8	90.6	99.9

Source: OECD, OECD Interim Economic Outlook, March 2009

- **Extensive outstanding guarantees**. Some of these will be equivalent to public debt. Others will be contingent liabilities on balance sheets and will have to be unwound.
- **Partly nationalised banking systems** in some countries, with full public ownership or significant shareholdings that make the government the controlling shareholder. Implicit guarantees in financial markets are pervasive.
- **Concerns about future pensions.** Where public pensions are to be tax-financed, long-standing challenges will be aggravated by the large increase in public indebtedness given the claim on tax receipts of larger debt servicing. Assets of private pension schemes have fallen drastically where they have been invested in equities or real estate, leading to funding shortfalls. In addition, support from private employers has come under pressure given weakness of profitability.[1] This will pose actuarial challenges, and public confidence will need reinforcement if people are to remain willing to trust these plans.
- **The impact of the crisis on the insurance industry.** Stable funding methods allow most insurance companies to avoid dependence on short-term wholesale market funding. In addition, while accounting rules require securities to be marked to market if available for sale or trade, the share of assets subject to these requirements is much smaller than for banks. This may have sheltered the industry from having to disclose the extent of its problems. It is notable in this regard that AIG's crisis was triggered by an investment banking division and not by its insurance operations.
- **Competition effects.** Many of the bailout operations for banks have been firm-specific and adversely affect the competitive environment. Such measures can have negative long-term consequences, even if they are not formally inconsistent with established national and EU competition policies or WTO rules.
- **Demands for support** from the auto industry, and risks of state subsidies expanding to other sectors. This can also

spur protectionism in trade and possible breaches in international agreements.

Table III.9. **Policy responses to the crisis: Financial sector rescue efforts**
(Headline support for the financial sector and up-front financing need, in per cent of GDP, as of February 2009)

	Capital injection **(A)**	Purchase of assets and lending by Treasury **(B)**	Central bank supp. prov. with Treasury backing **(C)**	Liq. provision & other supp. by central bank (a) **(D)**	Guarantees (b) **(E)**	**TOTAL A+B+C +D+E**	Up-front govt. financing (c)
OECD members							
Australia	0	0.7	0	0	n.a.	0.7	0.7
Austria	5.3	0	0	0	30	35.3	5.3
Belgium	4.7	0	0	0	26.2	30.9	4.7
Canada	0	8.8	0	1.6	11.7	22	8.8
France	1.2	1.3	0	0	16.4	19	1.5(d)
Germany	3.7	0.4	0	0	17.6	21.7	3.7
Greece	2.1	3.3	0	0	6.2	11.6	5.4
Hungary	1.1	0	0	4	1.1	6.2	1.1
Ireland	5.3	0	0	0	257	263	5.3
Italy	1.3	0	0	2.5	0	3.8	1.3(e)
Japan	2.4	6.7	0	0	3.9	12.9	0.2(f)
Netherlands	3.4	2.8	0	0	33.7	39.8	6.2
Norway	0	13.8	0	0	0	13.8	13.8
Poland	0.4	0	0	0	3.2	3.6	0.4
Portugal	2.4	0	0	0	12	14.4	2.4
South Korea	2.5	1.2	0	0	10.6	14.3	0.2(g)
Spain	0	4.6	0	0	18.3	22.8	4.6
Sweden	2.1	5.3	0	15.3	47.3	70	5.8(h)
Switzerland	1.1	0	0	10.9	0	12.1	1.1
Turkey	0	0	0	0.2	0	0.2	0
United Kingdom	3.5	13.8	12.9	0	17.4	47.5	19.8(i)
United States	4	6	1.1	31.3	31.3	73.7	6.3(j)

	Capital injection **(A)**	Purchase of assets and lending by Treasury **(B)**	Central bank supp. prov. with Treasury backing **(C)**	Liq. provision & other supp. by central bank (a) **(D)**	Guarantees (b) **(E)**	**TOTAL A+B+C +D+E**	Up-front govt. financing (c)
Non-OECD G20 members							
Argentina	0	0.9	0	0	0	0.9	0.0(k)
Brazil	0	0	0	1.5	0	1.5	0
China	0.5	0	0	0	0	0.5	0.0(l)
India	0	0	0	5.6	0	5.6	0
Indonesia(m)	0	0	0	0	0.1	0.1	0.1
Russia	0.1	0.4	2.9	3.2	0.5	7.1	0.6(n)
Saudi Arabia	0.6	0.6	0	8.2	n.a.	9.4	1.2
G-20 average(o)	1.9	3.3	1	9.3	12.4	27.9	3.3

Notes:

a) This table includes operations of new special facilities designed to address the current crisis and does not include the operations of the regular liquidity facilities provided by central banks. Outstanding amts. under the latter have increased a lot, and their maturity has been lengthened recently (incl. ECB)

b) Excludes deposit insurance provided by deposit insurance agencies.

c) This includes components of A, B and C that require up-front government outlays.

d) Support to the country's strategic companies is recorded under (B); of which EUR14 bn will be financed by a state-owned bank, Caisse des Dépôts et Consignations, not requiring up-front Treasury financing.

e) The amount in Column D corresponds to the temporary swap of government securities held by the Bank of Italy for assets held by Italian banks. This operation is unrelated to the conduct of monetary policy which is the responsibility of the ECB.

f) Budget provides JPY 900 bn to support capital injection by a special corp. and lending and purchase of comm. paper by financing institutions of the BoJ.

g) KRW 35.25 tn support for recapitalisation and purchase of assets needs up-front financing of KRW 2.3 tn.

h) Some capital injection (SEK50 bn) will be undertaken by the Stabilisation Fund.

i) Costs to nationalise Northern Rock and Bradford & Bingley recorded under (B), entail no up-front financing.

j) Some purchase of assets and lending is undertaken by the Fed, and entails no immediate govt. financing. Up-front financing is USD 900 bn (6.3% of GDP), consisting of TARP (700 bn) and GSE support (200 bn). Guarantees on housing GSEs are excluded.

k) Direct lending to the agric. and manuf. sectors and consumer loans are likely to be financed through ANSES, and won't require up-front Treasury financing.

l) Capital injection is mostly financed by Central Huijin Fund, and would not require up-front Treasury financing.

m Extensive intervention plans that are difficult to quantify have also been introduced recently.

n) Asset purchase will be financed from National Wealth Fund; and the govt. will inject RUB 200 bn to deposit insurance fund financed from the budget.

o) PPP GDP weights.

Source: IMF (2009), *The State of Public Finances: Outlook and Medium-Term Policies After the 2008 Crisis*, IMF Fiscal Affairs Department, 6 March; based on FAD-MCM database on public interventions as cited therein.

B. Rollback measures in the financial sector

With regards to the financial sector, a number of key elements must be in place before withdrawing the aspects of public involvement that might be damaging in the longer run. The following are key priorities in the broad sequence in which they might occur.

1. Establishing crisis and failed institution resolution mechanisms

While governments in the United States, the UK and Europe have made very large commitments of public funds to backstop deposit insurance and support the recapitalisation of banks, the Geithner plan in March 2009 in the US and the Asset Protection Scheme in the UK are the first significant initiatives to address the second key element of a solution to a solvency crisis (remove bad assets from banks' balance sheets – or neutralise their impact). This is important, for as long as bank portfolios are contaminated by large but uncertain amounts of likely future losses (that will sooner or later have to be recognised), new capital injections will be less effective in resolving bank insolvency problems. A systematic approach to resolve the crisis should involve a number of complementary steps.

Effective government-sponsored asset relief schemes are essential. One such approach is the asset management corporations (AMC) buying mechanism (as in the Geithner Public Private Investment Partnership – PPIP). Toxic asset values are hard to determine. An advantage of the AMC approach is that the process itself helps to create a market, permitting better price discovery and using existing asset manager skills to do so. As the private sector is also putting up capital to invest (e.g. *'distressed asset' hedge funds and private equity group partners) the approach also helps reduce risks to taxpayers. Such buyer funds will buy non-performing loans and asset-backed and mortgage-backed securities (ABS, MBS) with conforming structures (rated securities with* *standard credit event definitions and settlement procedures) if they can do so at a discount to hold-to-maturity values. Banks, on the other hand, may have an incentive to sell these assets if the price is sufficiently above current market valuations (allowing for altered accounting rules), essentially 'trading off' underlying collateral values of mortgages, etc, versus their current earnings and capital needs. In time, this process will increase the likelihood that taxpayers profit from the transaction (the government and co-investor having bought assets at a discount to long-run values). A working market in which the government can demonstrate profitable sales can help to facilitate unwinding all government loans, guarantees etc. over the longer run.*

Depending on the response to the PPIP by private groups, the US government may need to mobilise additional public funds and guarantees in order to support purchases of impaired assets, particularly on the securities side. But overall, the US approach is sound because: it shares the risks of buying toxic assets between the taxpayers and investors; it creates buyer demand and prevents dumping of assets (as off-balance sheet conduits are consolidated) that would prolong the crisis phase; and it is an open-market approach.

In the UK, the government is introducing a broad-ranging insurance scheme to deal with impaired assets – protection against future credit losses on certain assets in exchange for a fee. A first loss remains with the institution, and the scheme covers 90% of the credit losses exceeding this amount. This puts a floor to the banks' exposure to losses associated with these assets. The aim is to enable the core part of banks' commercial business to make loans and attract deposits and investments. The fees will be satisfied through the issuance of non-voting ordinary shares (boosting core Tier 1 capital). One 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 Swiss have opted for a publicly funded AMC approach to deal with particular institution toxic assets.

- Each approach has advantages and disadvantages with respect to timing, taxpayer risks and level playing field considerations. A bigger global effort to deal with toxic assets would be helpful, particularly in the case of governments in jurisdictions that have not yet done so.

- With capital injection buffers, many banks will begin to operate more normally. Government divestment of shareholdings could then proceed in line with progress on regulatory and other reforms.
- Some complex structured products cannot be part of the PPIP process for dealing with bad assets. They are too complex and have non-conforming structures involving exotic OTC derivatives (*e.g.* designed for tax arbitrage, as discussed in section II). As the buying process for marketable products proceeds, there should be realistic accounting and recognition of losses related to genuinely toxic products, to provide an honest and transparent picture of balance sheets to potential investors, creditors and counterparties. This would occur after the above asset buying programme has progressed and has had a good opportunity to help banks.
- It is not clear the extent to which the US regulators' stress tests will have taken into account the PPIP process. Some US banks may have to raise more capital that hitherto has been the case, but this should be manageable for most of the larger banks. In cases where this still results in some banks that cannot operate independently, for lack of capital, corrective action can be taken, with regulators either injecting new capital or taking control to protect creditors. This would hopefully be a small part of the banking system.
- For any such banks in the US, or failed banks in other jurisdictions, standard procedures should follow. Following an inventory of assets and operations, the bad assets can then be separated from the good ones (or segregated). These assets, or whatever collateral can be obtained to replace them (and any government holdings in the institutions), can then be disposed of over time with a view to recovering as much for taxpayers as possible. The operations of the Resolution Trust Corporation (RTCM) in the United States following the Savings and Loan crisis 20 years ago, and Scandinavian management of banking

crises around the same time, provide useful templates for these cases.

- Where what remains of the good assets and the liabilities has little (possibly negative) net worth, capital in the form of common equity, which in the first instance may come from explicit funding for deposit insurance or other guarantees, should be injected to bring net worth to zero. It should then be increased to a sufficient positive value that renewed operations in the market place or arm's length disposals to sound institutions are viable. In many cases, conversion of preference shares and subordinated debt into common equity would be a good start to this process.
- Such a mechanism, assuming "forbearance" is avoided, would address problems as they arise. The capital injections, *i.e.* over and above drawings from any available deposit insurance fund, would represent the up-front cost to taxpayers. Ultimate costs would likely be lower than these since: (i) at least something should be recovered from the separated bad assets; (ii) arm's length disposals should eventually be possible at prices that reflect any financial support beyond what was necessary to bring net worth to zero; and (iii) viable state-owned banks constitute assets with positive value.

2. Establishing a revised public sector liquidity support function

A further useful precondition for beginning to phase out government involvement would be substantial progress with best practice and market-based liquidity support mechanisms being designed in forums such as central banks, the BIS and the FSB. This would put in place a liquidity safety net to reinforce confidence and reduce the risk of future liquidity crises. Such a function would:

- Increase the size and composition of its balance sheet in times of strain in a predictable manner.
- Contain international coordination elements that can deal with cross-border issues.

- Seek to minimise moral hazard issues, via coordination with prudential policy reforms, such as (a) countercyclical capital rules; and (b) a requirement that institutions to be considered for public support in the future will include only those subject to full prudential supervision.

3. Keeping viable recapitalised banks operating

The immediate priority is to unfreeze the credit markets, get the money and credit systems functioning normally again and provide support for the real economy. Therefore, every effort should be made to encourage viable banks to keep operating even where they have become dependent on government support. Given government control and commitment to adequate capitalisation, such banks should be able to operate without excessive risk aversion. As conditions return to normal in financial markets, and economic recovery gets underway, the process of withdrawing the various supports and preparing the return of financial institutions to full private ownership and control should begin. However, this should not be done so precipitously as to risk the progress that has been made. An interim option would be to organise any banks under regulators' control as limited liability companies, so they can operate on a commercial basis in accordance with national laws, as the temporary measures necessitated by the crisis are progressively unwound.

4. Withdrawing emergency liquidity and official lending support

It will be important to redistribute the funding risk between the public and private sector balance sheets, as well-functioning financial institutions emerge, and as the ability to tap directly into existing pools of savings (for example sovereign wealth funds (SWFs) and pension funds) increases. Direct lending from central banks and governments as part of liquidity support to banking systems and more generally to support selected non-banks is inconsistent with a good competitive framework, both in financial markets and in the wider economy and needs to be withdrawn.

Direct official lending to non-banks should be re-intermediated to well-capitalised banks or other private lenders. As central bank support for non-banks shrinks, liquidity in the banking system should be reduced. Central bank direct support for individual banks will be replaced by the above-mentioned counter-cyclical open market and liquidity support operations process.

To avoid threatening the economy, it is desirable that current recipients of support move voluntarily from public support to the market rather than face a withdrawal of support that could prove premature. This requires that market support be available, whether in the form of bank credit (including the revised public liquidity function above), or other capital market instruments from appropriate sources of capital. It also calls for the full withdrawal of any subsidy element in official support that makes this preferable to recourse to the markets. The first of these will emerge as progress is made with the whole range of issues discussed elsewhere in this report. The second cannot go faster than that, and in any case should not be rushed.

If beneficiaries seem slow to respond to opportunities as they become available in the markets, progressively tighter terms and conditions on continued official support – until they contain a penalty element – should be persuasive.

5. Unwinding guarantees that distort risk assessment and competition

Government guarantees backed by taxpayers are less transparent and more difficult to evaluate than official lending support but raise issues similar to those concerning liquidity measures. For bank debt instruments, these guarantees distort competition by increasing the cost of borrowing for debt instruments that are close substitutes for bank debt and for bank debt not meeting eligibility criteria. They also distort the pricing and assessment of risk. A private secondary market is already emerging for this debt. As sunset dates for the guarantees approach, the terms and conditions will move towards those prevailing in the market, giving beneficiaries strong incentives to adjust. Like lending facilities, they should not be precipitously withdrawn. However, the extension issue is almost certain to arise in some cases, and increasingly penal terms and conditions should be built in to give beneficiaries a strong incentive to look for market alternatives. Where beneficiaries are financial institutions, it is essential that any guarantees be aligned with the more general framework regarding deposit insurance, with guarantees explicit and appropriately priced or credibly non-existent.

Where required, the redesign of deposit insurance will have to be determined in line with prudential reform, including: identification of which institutions will continue to benefit (presumably those subject to full prudential supervision); decisions on the extent to which wholesale depositors are included, and on levels of insurance for depositors (presumably set at levels that are credible in the event of future firm failures).

C. Fostering corporate structures for stability and competition[2]

The financial sector is different from other sectors because of its role in intermediating credit to the real economy – bank failures have negative externalities for firms and individuals due to the strong interconnectedness of finance, and competitors benefit from preventing systemically important bank failures (the Lehman failure demonstrates this). The interface between competition and stability is therefore complex, with the latter taking priority in crises. But as we move through the crisis towards phasing out emergency measures, including divestment of government investments in banks, it will be important to foster corporate structures that enhance both stability and competition. To the extent that this can be pursued, even as additional support must be provided, the credibility of policy measures will be increased.

1. Care in the promotion of mergers and design of aid

Mergers in which financial institutions with stronger balance sheets are combined with weaker financial institutions can be problematic for both stability and competition.[3] Such mergers can create new or larger systemically important institutions that may lead to moral hazard and stability issues later. Positive adjustment strategies that enhance stability with least distortive effects should be supported:

- Open-market bad asset purchase mechanisms (discussed above) facilitate stability with fewer distortive effects on competition.

- Where mergers are needed, possible preference for a foreign acquisition of a weak domestic bank over a domestic acquisition can mitigate creation of market power.[4]
- Selling segments of failed firms can enhance competition.
- Where feasible, nationalisations may be preferable to mega-mergers, because they create less market power, provide a clearer solvency guarantee and can facilitate a more competitive market structure upon re-privatisation. However, nationalisations are prone to excessive government direction over operational decisions of financial institutions and can burden a government's balance sheet.

Keeping aid to the minimum necessary for stability goals and conditioned on structural reforms is most conducive to better competitive outcomes.[5]

2. Competitive mergers and competition policy

Measures that increase competition can help to restore lending to the real economy, including in the near term when it is needed to support economic stability objectives.

- In countries with a large and diverse banking sector, mergers between unimpaired well-capitalised smaller and regional banks can create players that will take up the lending opportunities not being undertaken by banks in crisis. This will also promote competition with large conglomerates in the future, and possibly reduce the risk that some institutions will achieve market shares that raise systemic concerns.
- Reducing regulatory barriers to entry in banking, both in formal regulation and unnecessary restrictions on competition can foster the above process in a more general way.[6]
- Increasing the availability of fine-grained credit-rating information for SMEs and consumers will facilitate transparency and make available the information needed by existing competitors and new entrants to take up new lending opportunities.
- Ensuring that switching costs are limited, for example by implementing a regime that reduces the non-pecuniary costs for customers to switch financial institutions (*e.g.* by

implementing "switching packs") can foster the growth of more competitive institutions.

3. Conglomerate structures that foster transparency and simplify regulatory/supervisory measures

The advantages of the non-operating holding company (NOHC) structures (which entail legal separation of the parent and affiliates) discussed above warrant efforts to encourage their more widespread use by complex financial firms in the exit strategy phase. They enhance transparency and provide a simple way of protecting a commercial bank's balance sheet from affiliates (including securities firm affiliates), thereby reducing contagion risk in the future and facilitating the job of regulators.

If transparency via an NOHC structure is thought not to be sufficient, firewall regulations can also be used to limit contagion risk between subsidiaries of a financial conglomerate. These would complement reforms to capital regulation discussed earlier.

4. Full applicability of competition policy rules

During the crisis, emergency measures have taken precedence over competition rules. Markets have failed to function and there is a lack of price and granular credit rating information. This has required off-market information sharing with governments and the firms involved to the exclusion of others, creating market distortions and the risk of collusion and price fixing. A prerequisite for government divestment of ownerships stakes, loans and guarantees should address the interface between regulators and competition authorities by:

- Specifying clear transparent rules for when stability policies take precedence over competition policy, and when the latter will apply again.
- Promoting consistency over time between the market for financial services in a region and regulatory jurisdictions. This may involve greater regulatory coordination or international regulatory forums, such as colleges proposed by the FSB, to address both cross-border regulatory issues and to avoid competitive distortions arising from regulatory action in one region for firms competing in broader markets.[7]

D. Strengthening corporate governance

Many firms that have received public funds or are owned by governments are already subject to special conditions on governance and remuneration. During such periods, they should be run as close as possible to the OECD Guidelines to ensure appropriate governance.[8] Before phasing out emergency measures, it is incumbent upon governments and authorities to improve rules and guidance for the governance of financial firms in general, both to enhance risk control and to redress other weaknesses that contributed to the present crisis. Since the OECD Principles of Corporate Governance have not been properly implemented by a number of financial firms in the past, there is also a need for improved monitoring and peer review processes. The OECD Steering Group on Corporate Governance examined the implementation issues at its meeting in April 2009, and some of its basic recommendations follow.

1. Independent and competent directors

- Strengthening the *fit and proper person test* and extending it to cover more institutions. All too often *fit and proper* has been assessed in terms only of fraud and history of bankruptcy. There is a compelling case for the criteria to be expanded to technical and professional competence, including general governance and risk management skills. The test might also consider the case for independence and objectivity.
- Extending fit and proper powers to a more controversial area: **term limit** on board membership for **independent** directors without a direct stake in the company. Age *per se* is not the issue here, but rather length of time on the board, especially under the same CEO or chair.[9]
- Requiring formal separation of the role of the CEO and the Chair in banks, **except in special circumstances** (*e.g.* in the case of small companies, or where the founder of the company has a large shareholding, etc).[10]

2. Risk officer role

In the post-Enron years it appears that there has been a strong focus on internal controls for the purpose of financial reporting, together with having the internal and external auditors report to the Audit committee. Risk management in financial institutions deserves the same emphasis.

- All financial firms should require a Chief Risk Officer, responsible for risk management, with direct access to the board (not necessarily a Risk Committee but probably not the Audit Committee).
- The employment conditions of the chief risk officer may require some built-in protections balancing the need for independence from management and access to information.
- This role would be akin to an ombudsman – not replacing the CEO role as risk manager, but drawing the board's attention to issues they should be concerned with.

3. Fiduciary responsibility of directors

The complexity of some corporate groups has been identified in both governance and risk control issues during the crisis. To the extent that this issue cannot be adequately addressed by policies to separate and simplify the activities of affiliates in complex groups (see above), in some jurisdictions there may be a need to clarify the fiduciary duty of directors.

- Some groups might require fiduciary duties of directors to be more closely tied to that board and company.[11]
- These duties will need to strike the right balance between greater involvement with the firm and separation from management and other operational activities.

4. Remuneration

It is difficult to be very precise about executive remuneration. Reformed and strengthened boards would improve governance, especially if it was clear that the duties of directors were extended to overseeing sources of risk and compatibility with the institution's financial strategy. This would make the link between risk management and compensation policies clear and transparent. Where possible, tax incentives could also help to encourage a greater use of compensation linked to longer-run performance.

E. Privatising recapitalised banks

The long-term goal should be to return institutions that have been recapitalised to full private ownership. Especially where levels of public ownership or similar involvement are high, the long-term health of the financial system will depend on the way this is done. The readiness of individual firms in terms of viability will differ. Government involvement may promote a strong desire for exit due to expensive fees and dividends to the government and restrictions on executive compensation. However allowing the process to be driven by individual firms will make it more difficult to avoid competitive distortions. Speed is less important than getting it right.[12] Some priorities include the following.

1. Pools of long-term capital for equity

OECD countries should aim for much higher equity bases and less leverage in the financial system than have been typical of the years that led up to the current crisis. This requires tapping pools of saving rather than investments based on increased leverage. Investors of accumulated saving pools include pension funds, university endowments, sovereign wealth funds, some private equity funds, and even private individuals.[13] Existing banks should be avoided, as sales to banks provide no new capital to the system as a whole. Enterprises likely to be users of bank credit should also be regarded with caution.

Where privatisation programmes are large, experience suggests that they can put strains on available sources of equity capital. Efforts to move quickly can lead to the use of leverage to augment what is available. This is dangerous, as equity that is financed by borrowing is only an apparent increase in equity for the system. In the event of financial strains, the structure can be very fragile. A test for potential credible long-term owners is that their own leverage should be modest at most.

2. A good competitive environment.

Where large parts of the system must be privatised, the process will be a major determinant of market structure and the competitive environment once it is complete. As noted earlier, banks should be reorganised or restructured before privatisation to minimise dominant market positions and encourage effective competition, and mega-mergers can lead to particular systemic difficulties. A clear framework to assure level competition should be in place and all privatisations should be guided by it.

3. Aligning deposit insurance regimes, no too-big-to-fail.

Many types of financial institutions may ultimately require public support and, when returned to a market environment, they may be subject to different regimes. At privatisation, their status *vis-à-vis* deposit insurance and guarantee systems should be clear and credible. Either they should be explicitly covered by schemes that are transparently priced, as described above, or *caveat emptor*, with creditors assuming full risks, should apply. To avoid the problem of implicit guarantees, any financial business not covered by explicit schemes should be small enough that the possibility of allowing them to fail will be credible.

F. Getting privatisation right[14]

When the crisis has passed, many governments will hold partial or controlling stakes in financial firms, most or all of which should be divested. In many cases these may consist of minor holdings, which can easily be disposed of in an IPO, using pre-emption rights of existing shareholders, or simply sold in organised stock markets. But in others, the amounts may be large enough to warrant some strategic thinking about how to proceed. The large wave of privatisations of state-owned enterprises which took place during the 1990s and early years of this century, has provided valuable experience of different approaches.

Governments contemplating the re-privatisation of financial institutions face an important choice at the beginning of the process. They may quickly remove these activities from the public balance sheets by selling them in their entirety to existing financial institutions (*i.e.* a trade sale). Or they may continue operating them on a commercial basis through a period of sequenced or partial privatisation. Their choice will be guided by market conditions, including the appropriate sequencing if many institutions or countries are involved. An important second consideration is the size of the entities concerned and the government's ownership share.

Government owners need to decide the extent of reform needed for the governance of financial institutions prior to the sell-off. If a trade sale to other banks or financial institutions is the preferred privatisation method, the government holds a controlling stake, and disposal is expected to be quick, then the need for new governance mechanisms may be limited to those applying to the new owner in the context of overall reform policies for the sector. In terms of restructuring, the best course of action is for the government to limit it to issues where it holds a demonstrated comparative advantage. If the sale process is competitive, the price mechanism should identify the private buyer best suited to undertake necessary changes after privatisation.

If governments choose to retain ownership in the financial institutions for a period, while letting them continue to operate in the market, then they need to change corporate governance arrangements in accordance with the best practices laid down in the OECD Guidelines on Corporate Governance of State-Owned Enterprises and the OECD Principles of Corporate Governance. The actual act of changing corporate governance arrangements is in most cases best performed by one agency operating with a necessary degree of autonomy within the central administration.

In the recent experience of bank privatisations three priority areas for governance measures generally stand out: putting in place new risk control systems; new management; and new boards with some of the above-mentioned reforms. To facilitate the privatisation process itself, it may also sometimes be necessary to divest state-owned enterprises of some of their subsidiaries or other corporate assets.

Governments should not privatise in the absence of an adequate regulatory framework. This includes anti-trust regulation to ensure a healthy degree of competition wherever economically feasible and specialised regulation where an element of monopoly is likely to persist. Importantly, these regulatory functions need to be separated from the state's ownership role. An independent competition regulator has an important role to prevent the formation of excessively large financial conglomerates, even at the expense of lower sales proceeds.

In the context of bank re-privatisation a case has been made for targeting privatisation at preferred groups of long-term or friendly investors. If such targeted strategies are pursued, then it is often more efficient to work through pre-qualification followed by bidding among the selected candidates than allowing the targeting to interfere with the selection of individual buyers. Full disclosure should be made of the criteria according to which a preference for certain shareholders is developed and the objectives they are expected to pursue following privatisation.

Timely attention should be given to the issue of post-privatisation corporate governance – especially in the case of a gradual privatisation process. Of crucial importance is safeguarding board independence so as to enable directors to protect minority shareholders, including against further privatisation measures that might be at the expense of their interests (*e.g.* dilution by directly introducing new large shareholders).

Some governments may wish to retain a degree of control over re-privatised banks. The OECD Principles of Corporate Governance do not discourage mechanisms of disproportionate control, provided the non-state shareholders are fully informed of its nature and scope. However, careful consideration must be given to the choice of instruments. Veto rights such as golden shares are generally not recommended. They are inherently less transparent than fully disclosed shareholder agreements or voting right differentiation established through corporate bylaws.

G. Maximising recovery from bad assets

Where governments have moved to separate bad assets from good ones on financial firms' balance sheets, they will face the problem of dealing with the bad assets or whatever collateral was available to support them. Their objective should be to recover as much as possible to offset the costs of managing the crisis. Governments are in a position to approach the task with a medium to longer-term timeframe, avoiding fire-sales that involve large discounts in illiquid markets. Experience suggests that a professional approach to this task often yields returns that are significantly better than appear likely in the midst of the crisis.

To the degree that non-performing assets are predominantly mortgages, governments' longer time horizons would put them in a better position to explore the scope for restructuring products and selling them to more natural holders off the public balance sheet, than banks facing an immediate need to rebuild capital. Where this promises a better eventual outcome than foreclosure and sale, it will be in everyone's interest to proceed in this way. This holds out the promise of breaking the vicious cycle of foreclosure, forced sale by borrower or bank, more downward pressure on prices and further deterioration in bank asset quality.

H. Reinforcing pension arrangements

Pension arrangements, already a major long-term policy concern in many countries with ageing populations, are suffering serious damage during the current turmoil. They will require serious attention once the economic situation has stabilised.[15]

Assets in private pension plans, which have become an important component of diversified retirement systems in many OECD countries, fell by nearly 23%, or around USD 5.4 trillion, between the end of 2007 and December 2008. They have likely fallen further since then.

Where these assets fund defined benefit plans, in which benefits are linked to individual wages, or annuities, this decline adversely affects the adequacy of plans' funding. This puts financial pressure on the sponsors of the plan. In some cases, where the sponsor of the plan faces retrenchment or bankruptcy, it can impinge on the plans' solvency.

Where older workers or retirees have defined contribution plans, in which pensions depend on asset values in individual accounts, this decline may imply important losses in permanent income. Younger workers with defined contribution plans may suffer less damage. They have many years to wait for recovery, and most of their contributions to the plans lie in the future and are not affected by recent losses. However, their plans often depend on employer contributions as well as their own, both of which may be adversely affected by the widespread distress that economies are now experiencing. Furthermore, confidence in plans that leave people so exposed to market developments is likely to be hurt.

Public pension benefits, usually taxpayer funded on a pay-as-you-go basis, are not directly affected in the sense that political commitments to them remain generally intact. However, the fiscal challenges that these commitments pose as populations age will be made more daunting as unemployment increases and public indebtedness and future debt servicing costs rise as a consequence of the crisis. Furthermore, to the extent that private pensions are impaired, public pensions must bear more weight in diversified retirement systems. This may affect the political context in which the fiscal challenges are addressed. It is notable, in this regard, that in countries where substantial reliance is placed on private pension arrangements public pensions replace relatively low shares of pre-retirement incomes (Table III.10).

The core of any long-term strategy to assure retirement incomes in ageing populations will be more saving, at both public and private levels. But other measures may be required, especially given the damage to pension funds caused by the current turmoil. The OECD Insurance and Private Pension Committee has issued guidance on priorities going forward:

- **Avoid funding crisis management initiatives through Public Pension Reserve Funds.** Where such funds are not ring-fenced with governance structures independent of government, there may be a temptation to fund crisis measures from these pools to inject capital into banks and to support fiscal spending programs. This would exacerbate pressure on future funding of liabilities and undermine confidence in pension arrangements. Such policies may reinforce the incentive to save privately, with little net benefits for crisis management.

Table III.10. **Private pension assets and public pension system's gross replacement rate, 2007**

Country	**Private pension assets** (as a percentage of GDP)	**Gross replacement rate from public pension system** (as a percentage of final salary)
Countries with large private pension assets		
Switzerland	151.9	35.8
Netherlands	149.1	31.3
Iceland	147.4	9.2
Denmark	140.6	25.0
United States	124.0	41.2
Australia	119.5	17.4
Canada	103.5	43.9
United Kingdom	96.4	30.8
Ireland	93.6	32.5
Finland	78.1	63.4
Sweden	57.4	37.8
Norway	54.5	59.3
Others		
Portugal	26.0	54.1
Japan	20.0	34.4
Austria	18.8	80.1
Germany	17.9	39.9
Belgium	14.4	40.4
Mexico	12.4	0.0
Poland	12.2	27.1
Spain	12.1	81.2
New Zealand	11.1	39.7
Hungary	10.9	50.7
Korea	7.9	66.8
France	6.9	51.2
Czech Republic	4.7	49.1
Slovak Republic	4.2	24.4
Italy	3.6	67.9
Turkey	1.9	72.5
Luxembourg	1.0	88.3
Greece	0.0	95.7

Note: Public pension system refers to pay-as-you-go financed (PAYG) pension plans. Pay-as-you-go pension plan replacement rates refer to the year 2004 and are defined as the ratio of an individual's – or a given population's – (average) pension to his or her average income over a given period, in this case, the final salary before retirement..

Data for Luxembourg refer to the year 2006.

Source: *OECD Global Pension Statistics*, OECD (2007). *Pensions at a Glance: Public Policies Across OECD Countries*, OECD, Paris. And OECD estimates.

- **Strengthen confidence in private pension systems.** Concern about market risk may lead to retreat from private systems and arrangements, and to pressure to compensate by making public pensions more generous. The best approach over the longer term is to rely on a diversified system, with both public and private sources of income and a mix of pay-as-you-go and asset backed funding. Governments should articulate the case for avoiding panic and taking a long-term view.

- **Any forbearance over funding should be temporary.** Losses on investments in pension plans may force many companies to increase their contributions. Since contribution levels are often already high following the losses of 2000-02, this will add to the stress many companies are facing as the economic situation deteriorates. Some countries (*e.g.* Canada, Ireland and the Netherlands) have already provided relief by allowing various means of deferring the return to adequate funding levels. It is important that any such forbearance be temporary, as otherwise the security of pension benefits will be impaired. Since confidence in private pension schemes is likely to be influenced by their funding levels, this forbearance should be withdrawn as rapidly as is feasible.

- ***Reconsider statutory performance requirements.*** In some countries (*e.g.* Belgium and Switzerland) pension funds must guarantee minimum returns. In the current environment, such requirements could encourage imprudent portfolio management designed to achieve unrealistic goals. Countries should make these requirements more flexible during difficult market conditions or, even better, replace them with market-based benchmarks.

- ***Strengthen pension fund governance.*** Reform has been warranted since before the current crisis, but is all the more important now given the funding and confidence issues that pension arrangements are likely to face. More effective monitoring of investment risks, performance and balance sheets is needed. Pension boards should have greater expertise and knowledge of financial management issues and they should include more independent experts.

- ***Consolidate small pension funds.*** Small pension funds often have weak governance arrangements, and they are expensive to manage and supervise. In some cases, consolidation would help to achieve a more efficient balance between scale and governance.

- ***Reconsider regulations that aggravate the economic cycle.*** In some countries (Denmark, Sweden, Finland, Netherlands) regulations designed to protect participants of designed benefit plans can force asset sales on falling markets, locking in losses and driving prices down further. Mark-to-market accounting and the practice of linking minimum funding levels to investment risk may have reinforced this effect. Corrective measures such as increasing contributions and lowering benefits, while necessary to restore funding levels, also have negative macroeconomic implications. As with capital adequacy requirements for banks, ways should be sought to introduce funding regulations that are more counter-cyclical in their impact.

- **Promote hybrid pension arrangements to reduce risk.** Wider funding gaps and higher contribution requirements are likely to reinforce the existing trend to closure of defined benefit plans. Insolvency guarantee funds will also be active in taking over pension funds sponsored by bankrupt companies. The extent to which regulation reinforces these trends should be reviewed, and ways to promote hybrid arrangements that retain a component of defined benefit features should be sought in order to better spread risk. For example: indexation features where solvency positions permit; altering target returns for defined contribution schemes to the lifetime of individuals rather than current year returns, etc.

- **Reform mandatory and default arrangements in defined contribution systems.** Defined contribution plans should be designed to integrate accumulation and retirement stages in a coherent way. Often, default arrangements for asset allocation or requirements to convert accumulated capital into an annuity are built in. As regards allocation default options, which usually involve reduced exposure to equities as a person approaches retirement, their design should take account of the extent of choice in the payout stage, the generosity of the public pension system and the level of contributions. As regards conversion, a key issue is how to minimise the timing risk of the purchase of an annuity. Making the conversion mandatory may make sense where public pensions are low. But forced conversion is inconsistent with principles of free choice and can impose a heavy penalty in poor market conditions such as are now prevailing. Greater flexibility in the timing of the annuity purchase is necessary.

- **Strengthen financial education programs for pensions.** The rapid growth of defined contribution plans in many countries means that individuals face more of the risk in, and assume more of the responsibility for, assuring their own long-term financial well-being. They are likely to make better decisions, and contribute to better overall functioning of financial markets, if they are well educated and informed about issues relating to management of personal finances.

Notes

1. For example, US companies cutting 401(k) plans in recent months include Federal Express, General Motors, Ford, Motorola, Resorts International, Vail Resorts and Station Casinos.
2. The OECD Competition Committee conducted a series of roundtables on competition and the financial crisis on 17 and 18 February 2009, aimed at examining safeguards to protect competition as emergency measures are implemented for financial stability purposes.
3. Future mega-mergers may occur among non-financial firms in which one is a failing firm.
4. While international mergers raise potentially complex questions over distribution of assets in case of insolvency, they can restrict increases in market power.
5. See Commission Communication of 5 December on The recapitalisation of financial institutions in the current financial crisis: limitation of aid to the minimum necessary and safeguards against undue distortion of competition (OJ C 10, 15.1.2009 p.2).
6. In order to promote rigor in this review process, governments can use pro-competitive regulatory guidance, such as that contained in the OECD's *Competition Assessment Toolkit* (*www.oecd.org/competition/toolkit*).
7. In Europe for example there is a single market for goods and services whereas financial regulation is carried out on a national basis.
8. See *OECD Guidelines on Corporate Governance of State Owned Enterprises*, OECD Paris, 2005.
9. Research in the US indicated that the weighted average director tenure at the end of 2007 for financial institutions that disappeared was 11.2 years but 9.2 years for those that survived the first phase of the crisis. The former was associated with long CEO/Chair tenure. In the UK, the code sets a limit of nine years if the director is to be considered independent while in Netherlands and France it is 12 years.
10. Indeed, a number of US banks have already moved in this direction. It was already common in a number of other countries.

The only question is whether it should be made mandatory by financial market regulation.

11. Such as has been introduced in Australia and South Africa.

12. Some best practices are summarised in OECD, “Privatisation in the 21st Century: Recent Experiences in OECD Countries*”,* a report by the *OECD Working Group on Privatisation and Corporate Governance of State-Owned Assets*, forthcoming.

13. In many instances, these pools of long-term capital can only be channelled into equity through international capital flows. This underscores the importance of open markets for international investment during the exit phase.

14. The recommendations in this section are based on OECD (2009), “Privatisation in the 21st Century: Recent Experiences in OECD Countries”, a best practice report released by the Working Group on Privatisation and Corporate Governance of State-Owned Assets.

15. For in-depth discussion, see OECD, *OECD Private Pensions Outlook 2008*, Paris, 2009.

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The Financial Crisis

REFORM AND EXIT STRATEGIES

The financial crisis left major banks crippled by toxic assets and short of capital, while lenders became less willing to finance business and private projects. The immediate and potential impacts on the banking system and the real economy led governments to intervene massively.

These interventions helped to avoid systemic collapse and stabilise the global financial system. This book analyses the steps policy makers now have to take to devise exit strategies from bailout programmes and emergency measures. The agenda includes reform of financial governance to ensure a healthier balance between risk and reward, and restoring public confidence in financial markets.

The challenges are enormous, but if governments fail to meet them, their exit strategies could lead to the next crisis.

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