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Risk, reward and responsibility:

the financial sector and society

December 2009

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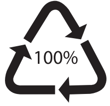

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Contents

		Page
Executive summary		3
Chapter 1	The role and risks of the financial sector	5
Chapter 2	Reducing the risks of the financial sector	11
Chapter 3	Reducing the burden on society of financial sector failures	19
Chapter 4	Ensuring the financial sector makes a fair contribution	33
Chapter 5	Next steps	41

Executive summary

A strong and competitive financial sector is essential to a productive modern economy and financial services make a significant contribution to the UK economy in particular. Banks and other financial institutions play a key role supplying businesses, large and small, with the financing necessary to maintain growth and productivity. The financial sector also provides consumers with ways of managing their finances over their lifetime and generates broader benefits to the economy. But as we have seen, when banks fail it can have a high cost.

Following the failure of Lehman Brothers in September 2008, governments around the world acted decisively to protect retail depositors, maintain financial stability, and enable banks to continue lending to the economy. Without such action the consequences of the financial crisis would have been far worse. It was essential that governments stepped in to support the financial sector – but that has placed a significant burden on taxpayers.

The crisis has called into question the balance of risks, rewards and responsibilities between society and the financial sector. In the UK we have made progress towards addressing this balance through regulatory reform and efforts to improve financial institutions' corporate governance and risk management, and have delivered agreement on further reform at an international level under our G20 presidency. European leaders and finance ministers have also taken action to respond to the crisis.

The Government's July paper *Reforming financial markets*[1] set out a package of long-term regulatory reforms that will strengthen the financial system for the future. G20 Finance Ministers and leaders have committed to implementing higher regulatory and supervisory standards to ensure greater cooperation, improve consistency and guard against excessive risks. In particular, the G20 agreed to expand the Financial Stability Board and strengthen its mandate to promote financial stability, and advise on and oversee the implementation of internationally agreed standards. In Europe there is a consensus that the framework for cross-border financial services urgently needs reform. The UK welcomes the European Council's agreement on the need for greater harmonisation of regulation and better enforcement of European Union (EU) legislation and standards by national supervisors.

Policymakers internationally now need to consider whether to go further to address the balance of risks, rewards and responsibilities. The distribution of costs and benefits in the financial sector has not always been appropriate. There is a case for increasing the costs of risk-taking to banks and their shareholders and reducing those borne by taxpayers. Given the global impact that modern financial crises can have, it is essential that we consider this issue at the international level. Furthermore, our response must recognise the crucial role that financial services play in our economy and allow the sector to contribute efficiently to economic growth. It should reflect the fact that different institutions pose very different types and levels of risk to the system.

The Government's first response must be and has been to ensure that losses in individual institutions are borne by shareholders and other creditors in an orderly way without triggering a systemic crisis. This can limit the circumstances in which any government intervention is necessary. The expectation that governments may intervene to support individual firms or the wider financial sector can generate moral hazard and encourage excessive risk-taking. Markets only operate efficiently where there is a credible threat of failure. Ideally the need for

[1] *Reforming financial markets,* HM Treasury, July 2009.

government intervention would be reduced to zero and it would be ensured that any firm could be allowed to fail. But in practice there may always be a risk that the potential costs to the wider economy of a systemic crisis will be sufficiently great that government intervention is appropriate.

At the November G20 Finance Ministers meeting in St Andrews, the Prime Minister highlighted these issues saying "there is a real and understandable concern about the fairness of the balance of risks and rewards for taxpayers, citizens, shareholders and bank employees…and it cannot be acceptable that the benefits of success in this sector are reaped by the few but the costs of its failure are borne by all of us". He emphasised that any solution will need to be:

- Global – some options could realistically only be implemented at a global level, while others would require international agreement and coordination on key principles to be effective;
- Non-distortionary – we must avoid measures that would damage liquidity, drive inefficient allocation of capital or lead to widespread avoidance;
- Stability enhancing – actions must support and not undermine the regulatory action already being taken to enhance the stability of the international financial system and the global economy. This is likely to mean any option would take several years to implement; and
- Fair and measured – financial services must be able to continue to contribute to economic growth and any additional costs should be distributed fairly across the sector. A thorough assessment of the impact of measures on the financial sector must be conducted prior to implementation.

The G20 has asked the International Monetary Fund (IMF) to prepare a report on the range of options that countries have adopted or are considering for the financial sector to make a fair and substantial contribution to the costs of government interventions to repair the banking system. This paper is intended to inform that review and to contribute to the wider international debate on these issues.

- Chapter 1 discusses the role of the financial sector, its importance, the risks it poses, and the impact of financial market failures.
- Chapter 2 outlines the actions taken to date to enhance the resilience and stability of financial markets and reduce the impact on the wider economy of financial market failures.
- Chapter 3 considers the options for going further including ways in which the financial sector might contribute to the potential cost of any remaining risks which would otherwise be borne by the taxpayer. These include contingent capital, capital insurance, systemic risk levies and resolution funds.
- Chapter 4 considers the case for a financial transaction tax as a means of increasing the contribution made by the financial sector to broader social objectives.
- Chapter 5 outlines how these issues will be taken forward both domestically and internationally.

1 The role and risks of the financial sector

1.1 Modern economies cannot operate efficiently without a well functioning financial system. Access to finance is key to ensuring an efficient allocation of resources in the economy and it supports productivity, growth and overall standards of living. But by their nature, the vital intermediation services that financial markets provide to the economy involve taking risks. Most of the time, these risks are appropriate and facilitate the smooth functioning of the economy. But, as the recent financial crisis has shown, events can sometimes give rise to excessive risk-taking, creating vulnerabilities for the system and the broader economy. These risks and the impact they can have are discussed in this chapter.

1.2 To reduce the probability of these risks materialising, the financial sector is regulated. Prior to the financial crisis, in addition to major failures of financial institutions' corporate governance, risk management and remuneration policies, there were serious weaknesses in financial regulation. Regulators and central banks did not take sufficient account of the excessive risks being taken by some firms, and did not adequately understand the extent of system-wide risk. In addition, global regulatory standards failed to respond to major changes in financial markets, which increased their complexity and contributed to system-wide risk. The UK Government and governments internationally have acknowledged and are addressing these shortcomings. Progress in strengthening financial regulation and in driving improvements to financial institutions' corporate governance and risk management is outlined in Chapter 2.

1.3 Yet regulation cannot completely eliminate the possibility of future crises without imposing such significant costs on the financial system that it would become inefficient; nor would it be prudent for governments to assume that risks have been entirely eliminated given the existence of policy uncertainty. As a result, we need to consider how to meet more fairly the costs of systemic failure.

1.4 The objective of any policy measure should be to ensure that the costs of financial intermediation better reflect the true extent of the risks involved, not only to the firms taking the risks but also to the rest of the financial sector and the wider economy. This might be achieved by putting in place more formalised insurance arrangements whereby the sector contributes more fully, either before or after the event, to the costs of any intervention. Such options would need to be internationally coordinated. These options are discussed in Chapter 3.

The role of the banks

1.5 A number of studies show that the efficiency of the financial system is critically important to determining productivity and economic growth.[1] At the heart of this system are banks. Banks make "liquidity transformation" possible, allowing depositors immediate access to their funds while providing finance or loans to firms and individuals often over a longer time horizon. Banks manage this transformation by pooling and investing customers' funds while monitoring borrowers so that the funds are repaid on schedule and returns are maximized. A complex financial system has now emerged around this process – including mechanisms which, for

[1] *Finance and Growth: Theory, Evidence and Mechanisms*, R. Levine, 2004.

example, spread risk more widely, reduce transaction costs and provide a wider range of savings and investment opportunities.

1.6 The financial sector also generates broader benefits to the economy. Well-functioning financial markets are an essential underpinning for effective monetary and fiscal policy, helping to minimise economic and social costs when economies experience shocks. Studies also suggest that well-functioning retail banks have a disproportionately positive impact on lower-income individuals, by creating more equal access to capital.[2]

1.7 With many world-class institutions locating themselves in the City of London, the financial sector brings benefits both to the UK economy and to Europe. Six hundred overseas financial institutions operate in the UK, 420 of them European. London manages 50 per cent of the world's sovereign wealth fund assets and 80 per cent of low-carbon trading under the EU emissions trading scheme.

1.8 Moreover, as a recent report prepared by a group of financial services leaders, co-chaired by Sir Win Bischoff and the Chancellor of the Exchequer ("the Bischoff group") shows, London is far from being the only financial centre in the UK.[3] For example, Edinburgh is an internationally recognised centre for asset management and insurance; Leeds, together with neighbouring cities, is an important domestic centre for finance-based professional services; and the south-west of England is a region increasingly developing strength in financial services, with insurance, mortgage, client service and back-office providers based throughout the region.

Risk-taking by banks

1.9 Inevitably, the recent financial crisis has brought attention to the risk-taking activities of the financial sector. But it should be recognised that taking risks is fundamental to the financial markets' role in the economy. Finance is essentially a trade in promises to repay in the future. By its nature, this is risky because at the date when the promise matures there may be insufficient resources for repayment. In the absence of risk, the many benefits that the financial sector delivers would be foregone – enterprise would not be able to flourish and our overall standards of living would be a fraction of what we enjoy today.

1.10 The most fundamental risk arises from the mismatch in liquidity between a bank's assets and liabilities, which leaves them vulnerable to sudden withdrawals of funds. It is the responsibility of bank executives to ensure this risk is properly addressed in order to safeguard depositor and other creditors' funds. But as the financial crisis has demonstrated, the mechanism of market discipline is not always adequate to deliver this. Moreover, banks cannot always know in detail how potential borrowers intend to use a loan or, once a loan is made, monitor the use in "real time". This leaves them exposed to default risk.

1.11 It is even more difficult for shareholders to observe all of the risks being taken by bank executives and so judge whether their capital is being employed sensibly. Similarly, senior management cannot always effectively monitor the risks employees are taking when engaged in particularly complex or opaque activities. More fundamentally, the existence of limited liability for shareholders, and the fact that employee compensation generally cannot be negative, means that shareholders and employees may face an asymmetric payoff structure; where taking risks can result in very large returns, but the downside is limited, or zero.

1.12 While these effects should in principle be reflected in the cost of capital, in practice problems of asymmetric information may mean this is not always the case. Furthermore, if economic agents expect the state to support failing systemic institutions, this may discourage

[2] *Rethinking banking regulation*, JR Barth, G Caprio and R Levine, 2006.

[3] *UK international financial services – the future*, HM Treasury, May 2009 (available from www.hm-treasury.gov.uk).

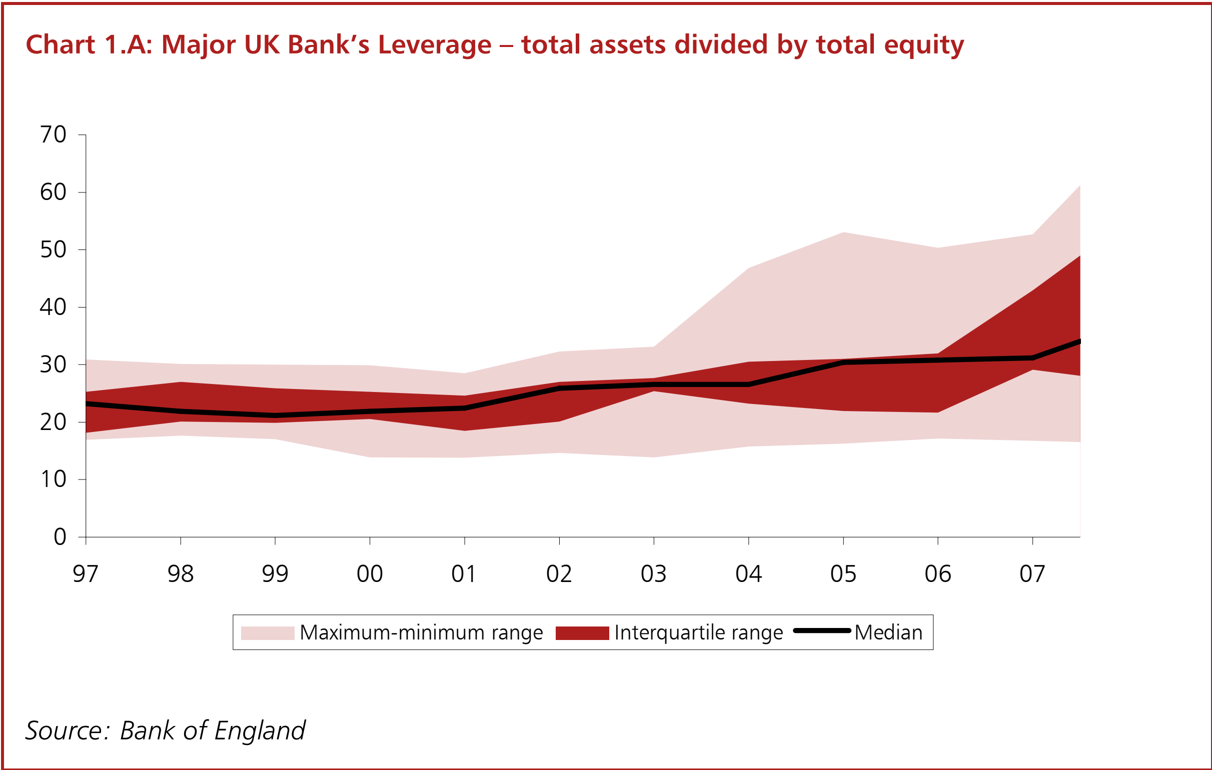
shareholders and creditors from exercising appropriate vigilance and may encourage excessive risk-taking. Financial markets can only operate competitively if firms that do not manage risk appropriately face the possibility of failure.

1.13 Because financial markets are highly interconnected and firms are exposed to common risks, the impact of shocks can rapidly spread across many institutions. For instance, when a bank needs to liquidate a large amount of assets quickly this can depress prices leading to further losses elsewhere. This can threaten the solvency of the entire financial system and in turn adversely affect the wider economy through self-reinforcing downward spirals.

1.14 Given the potential costs of financial instability, banks' activities are regulated. Banks are required to hold capital as the first line of defence against losses to encourage the owners to monitor risks. They are also subject to liquidity regulation to enhance their resilience to liquidity shocks. As an additional safeguard, formalised arrangements for state-organised support have been put in place. Central banks offer lender of last resort facilities and many governments, including the UK, have arranged formal deposit insurance to reassure depositors that their savings are protected up to a certain level. However, all such regulations and interventions by the authorities create their own distortions and the regulated and insured adjust their behaviour accordingly.

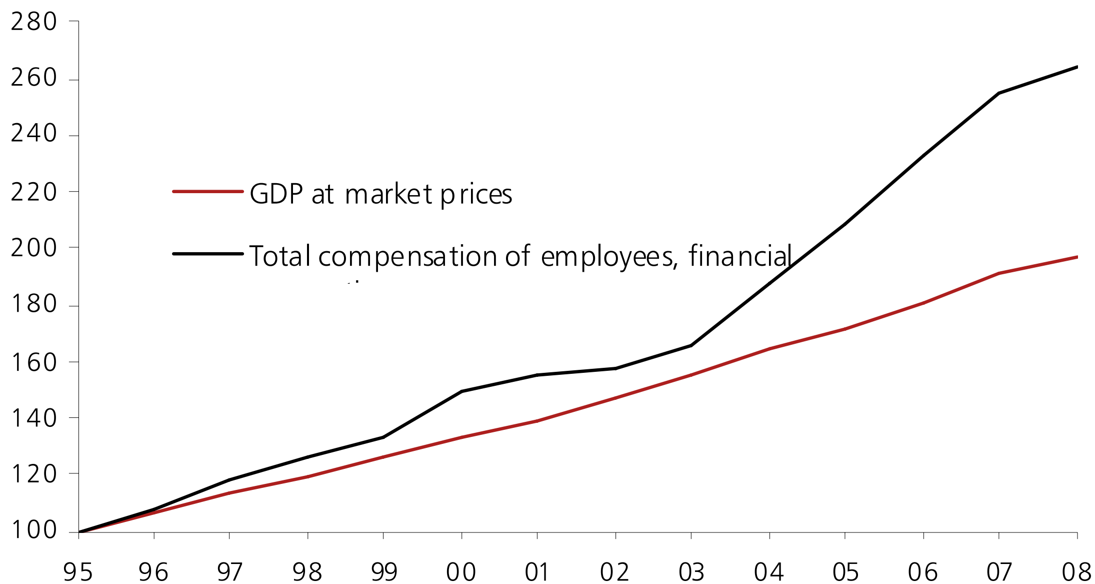
1.15 The recent global banking crisis has highlighted the potential consequences of these market failures. Prior to the crisis the level and quality of bank capital was lower and trading risks taken were larger than ever before, as shown in Chart 1.A. The result was a period during which financial sector revenues, profits and remuneration rose sharply, and much faster than GDP or trade, as illustrated in Chart 1.B. The financial crisis showed that some of these revenue streams, and the financial instruments upon which they were based, entailed greater risks and were less stable than had previously been assumed.

Chart 1.A: Major UK Bank's Leverage – total assets divided by total equity



Source: Bank of England

Chart 1.B: Financial sector Remuneration index, 1995 = 100



Source: Office of National Statistics and HM Treasury

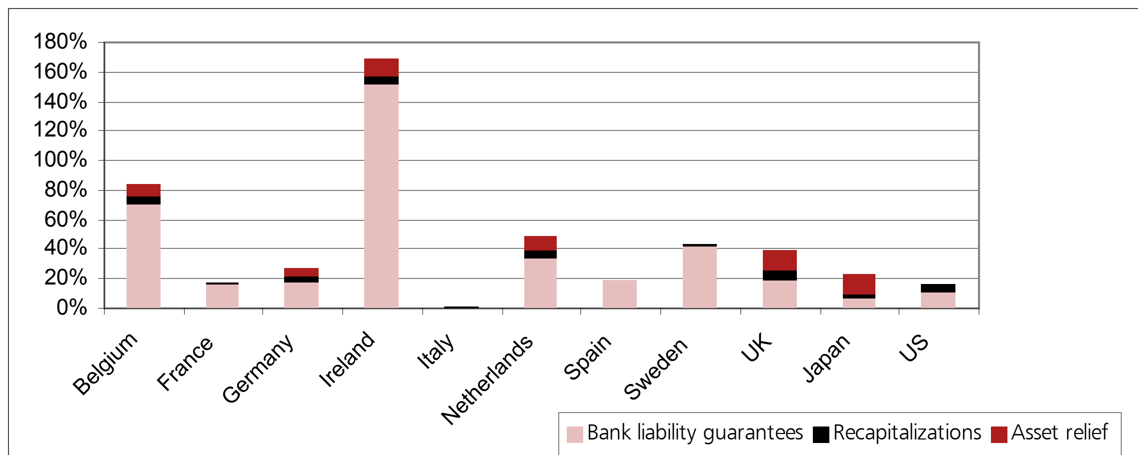
1.16 As the Great Depression, the Asia crisis and the recent global banking crisis have shown, acute periods of financial stress can materialise rapidly and result in losses so large that much of the capital in the banking system is at risk. Moreover, the usual mitigating responses are less available when these issues arise. For example, banks' ability to raise additional capital can be constrained. A more attractive alternative for bank shareholders may be to reduce lending which creates further negative consequences for the economy. In these circumstances the less costly outcome for society as a whole may be for the state to recapitalise the banking system; as the UK Government and a number of other governments worldwide did from October 2008.

The impact of the financial crisis

1.17 The global financial crisis has resulted in the worst economic downturn in 60 years. Following the failure of Lehman Brothers in September 2008, it was essential that governments around the world took bold and decisive action to stabilise the financial system and avert an even deeper economic downturn. Central banks have expanded the supply of liquidity to banks, governments have provided funds to recapitalise weak institutions and have guaranteed banks' liabilities. Through these emergency interventions, authorities managed to contain the panic spreading through the system. Targeted measures to address impaired assets on individual banks' balance sheets complemented these actions, freeing up capital to support lending to the economy.

1.18 Recent months have brought an improvement in economic and financial market conditions, suggesting government intervention is working. But the financial crisis has imposed direct and indirect costs on taxpayers and society. The G20 governments were required to make fiscal commitments of over $7.4 trillion to stabilise the system (Chart 1.C summarises the support provided). Central banks have provided a further $4.4 trillion of liquidity and other forms of support.

Chart 1.C: Financial sector interventions as % of GDP



Source: European Commission, IMF and HM Treasury

1.19 The ultimate cost of these interventions is expected to be a small fraction of the initial commitments and, in some cases, interventions could ultimately bring a positive return. Even so, recouping costs could take several years.

1.20 Moreover, despite policymakers' swift actions, it has only been possible to insulate society partially from the broader consequences of the financial crisis. Many countries have experienced a deterioration in their public finances over the last year, as automatic stabilisers have responded to the economic downturn. And beyond these cyclical developments, it is possible that the financial crisis may leave a more lasting imprint on the global economy. A number of recent studies have suggested that financial crises have been associated with persistent output losses, although there remains a degree of variation between episodes.[4]

1.21 In addition to the direct and indirect costs imposed on taxpayers, government intervention may worsen the incentives for banks and other investors to contain and manage risks if investors believe that they will be bailed-out again next time. Taking these factors into account, it is in the public interest to identify and address the sources of systemic risks so that a better balance can be achieved between the benefits that the financial sector brings to society and the potential costs involved with a systemic crisis.

1.22 Part of the solution is an overhaul of the financial regulation regime to mitigate systemic risks. Progress on this agenda, domestically and internationally, is discussed further in the next chapter.

[4] For example, recent analysis by the OECD suggests that financial crises have been associated with an average adjustment to trend output of up to 4½ per cent. Using an alternative methodology, IMF estimates point to a medium-term output loss of around 10 per cent, though there remains substantial variation between episodes with output losses ranging from -26 per cent to +6 per cent for the middle 50 per cent of cases. See *Sustaining the Recovery*, IMF World Economic Outlook October 2009 and *The Effect of Financial Crises on Potential Output: New Empirical Evidence from OECD Countries*, OECD Working Paper 699, May 2009.

2 Reducing the risks of the financial sector

2.1 The UK acted decisively in response to the global financial crisis in order to protect retail depositors, maintain financial stability and enable banks to continue lending to the economy. The Government is now pursuing an ambitious reform agenda at domestic, European and international levels to help prevent and contain future crises. The Government's July paper *Reforming financial markets* set out a package of long-term regulatory reforms that will strengthen the financial system for the future.[1]

2.2 A consensus has emerged through the G20 in support of a far-reaching package of regulatory reforms to strengthen internationally agreed regulatory standards and improve arrangements for cross-border cooperation, ensuring much greater regulatory consistency and systematic coordination between countries. The UK has been at the forefront of the international regulatory reform process through its chairmanship of the G20 and membership of key bodies such as the Financial Stability Board.

2.3 Similarly, the EU has taken swift action to strengthen the supervision of cross-border institutions, to better identify systemic risks emerging in European economies, and to improve the management of cross-border failures. The UK Government strongly supports this agenda and is working closely with EU partners to take it forward. It will be important that the EU continues to take a leading role in discussions in international standard setting bodies. When standards are implemented through EU legislation the Government will work to ensure that proposals are proportionate and that a thorough impact assessment is conducted.

2.4 Throughout the crisis the UK Government has acted in a non-discriminatory manner, including when implementing support schemes and resolutions. It continues to support open markets and the EU's state aid framework and believes that protectionism is an inappropriate response to the crisis.

2.5 The Government has set the following objectives for reform:

- strengthening the institutional framework for financial stability;
- reducing the risk of firm failure;
- reducing the impact of firm failure where this does occur; and
- enhancing regulatory focus on monitoring and mitigating systemic risk.

Strengthening the institutional framework for financial stability

2.6 The Government has taken important steps towards reducing the risks posed by the financial sector through improving the institutional framework for financial stability. The Financial Services Bill currently before Parliament will establish a statutory Council for Financial Stability, with a responsibility for monitoring and coordinating the authorities' action on systemic risk and financial stability. A further provision in the Bill confers on the Financial Services Authority (FSA) an explicit objective for financial stability, as part of which the FSA should have regard to the

[1] *Reforming financial markets,* HM Treasury, July 2009.

impact of stability enhancing measures on growth and the economic and fiscal costs of instability. This is in addition to the statutory financial stability objective created for the Bank of England in the Banking Act 2009. To support the FSA's strengthened approach to regulation, the Bill also enhances the FSA's disciplinary and regulatory powers, including those related to information gathering and short selling practices.

2.7 The Government welcomes the complementary steps the EU is taking to strengthen the institutional arrangements for cross-border financial stability. The Ecofin Council on 2 December 2009 agreed to establish a new European Systemic Risk Board (ESRB). This Board, made up mainly of national supervisors and central banks, will provide analysis and early warnings to Member States of potential risks to their economies. These warnings will carry weight and recipients will be required to respond to the recommendations of the ESRB.

Reducing the risk of firm failure

2.8 One key element of enhanced financial stability is reducing the probability of individual financial institutions failing. The Government's approach is based on measures to:

- strengthen corporate governance and remuneration practices;
- enhance prudential regulation and supervision, with a particular focus on systemically significant firms; and
- require firms to set out actions that may be taken to aid recovery in a stress situation as an element of recovery and resolution plans ("RRPs", so-called 'living wills').

Corporate governance and remuneration

2.9 The Government has made significant progress in driving improvements to financial institutions' corporate governance and risk management. This will help reduce the incentives for excessive risk-taking by banks related to their remuneration practices.

2.10 Domestically, the reform agenda is being taken forward through the FSA Code of Practice on remuneration, Sir David Walker's review of the corporate governance of financial firms and the Financial Services Bill. The Walker review, published on 26 November 2009, includes detailed recommendations on the composition and capabilities of boards and their risk oversight functions, measures to improve shareholder engagement and strict structural requirements on remuneration.

2.11 The Financial Services Bill includes measures that will require the FSA to make rules that ensure that remuneration policies of authorised persons are consistent with effective risk management and in line with Financial Stability Board standards. The Bill will also provide the Government with the powers necessary to implement Sir David Walker's recommendations on the disclosure of remuneration.

2.12 Internationally, Financial Stability Board standards agreed at the Pittsburgh G20 summit include requirements for deferral, clawback and disclosure of remuneration. If remuneration policies are inconsistent with the maintenance of a sound capital base, these standards require that total variable remuneration is limited by reference to a ratio on total net revenues. The standards will be deployed by national regulators with oversight from the Financial Stability Board. Commitments to remuneration agreements have been secured from a number of major UK banks, foreign banks that operate in the UK as subsidiaries and EU banks that operate in the UK as branches.

2.13 Both of these issues – corporate governance and remuneration – are examples of the significant responsibilities that fall on the managers, owners, and counterparties of financial firms. Regulation by public authorities is clearly a vital element in the appropriate apportionment of risk, reward and responsibility in the financial sector. But in efficiently-functioning markets, market discipline should also operate to ensure market participants are exercising appropriate control over their activities and not building up excessive risks.

Prudential regulation and supervision

2.14 In October 2008, the Chancellor asked Lord Turner to conduct a fundamental review of financial regulation in the UK, building on the work the FSA had already embarked upon to improve its supervisory processes after the failure of Northern Rock. Lord Turner's report[2] was published in March this year, and as set out in *Reforming financial markets*, the Government is supporting the FSA in implementing the recommendations domestically and internationally, including through the Financial Services Bill.

2.15 The EU also taking action to strengthen supervision and establish a European System of Financial Supervision. The 2 December 2009 Ecofin agreed to establish three European Supervisory Authorities. The new European Supervisory Authorities will have an important rulemaking function, play a key role in establishing a single European rulebook, and have a strong enforcement function. They will also have a role in settling disputes and in ensuring crisis coordination, provided such roles do not impinge on the fiscal responsibilities of Member States. These proposals should substantially improve supervision and regulation in the EU. Cross-border businesses in particular will benefit from greater consistency and quality, and consumers will have greater protections.

2.16 Lord Turner's review recognised that strengthened internationally agreed regulatory capital standards are essential to ensure that individual firms, and the financial system as a whole, are more resilient to shocks and to constrain the build up of risks in the system. The crisis has also revealed the central role that liquidity shocks can have in financial crises. Strong internationally consistent standards of liquidity regulation are therefore equally important.

2.17 In Pittsburgh G20 leaders endorsed a comprehensive package of reforms agreed by the oversight body of the Basel Committee aimed at strengthening international standards of capital and liquidity regulation. These include raising both the quantity and quality of regulatory capital, substantial increases in the capital banks are required to hold against trading book assets, introducing a leverage ratio as a regulatory backstop to supplement risk based regulatory capital requirements, developing tools to mitigate pro-cyclicality and introducing minimum quantitative global standards for liquidity regulation. Within the EU these changes will be delivered through a series of consequential amendments to the Capital Requirements Directive.

2.18 Domestically, the FSA published in October final rules to significantly strengthen liquidity requirements for firms[3]. This new approach offers a much tighter and realistic definition of liquid assets and sets out a robust quantitative framework to test the adequacy of banks' liquidity provisions. The policy statement also introduces more granular reporting requirements, enhanced systems and control arrangements; and self-sufficiency for UK branches and subsidiaries of foreign groups, if home-host cooperation is not possible.

2.19 The Basel Committee is also taking forward work to consider the role in regulatory capital requirements of contingent capital instruments, which can convert into common equity during stress, and assessing the merits of a capital surcharge to help mitigate the risks posed by

[2] The Turner Review *A regulatory response to the global banking crisis*, FSA, March 2009

[3] *Strengthening liquidity standards*, FSA, PS09/16, October 2009.

systemically important financial institutions. These proposals are discussed in more detail in Chapter 3.

Recovery and resolution plans ('recovery' element)

2.20 RRPs, for which the Government is legislating in the Financial Services Bill, will play a central role in reducing both the probability and the impact of firm failure, as described in more detail below. By outlining credible action a firm could take to assist recovery in times of stress, and contributing to improved firm management, these plans are a key tool for reducing the risk of financial firms failing.

Reducing the impact of firm failure

2.21 The Government is also undertaking ongoing action to mitigate the impact of firm failures on depositors, the wider economy and public finances, and thus ensure that firms can be allowed to fail without systemic consequences. The Government's approach to reducing the impact of firm failure includes four important elements:

- enhancing the Financial Services Compensation Scheme (FSCS) to improve protection of depositors;
- improving resolution arrangements for banks and other deposit-taking firms;
- making changes to the insolvency arrangements for investment firms to respond to the issues raised globally by the failure of Lehman Brothers; and
- requiring firms to outline how resolution options could be applied by the authorities as a component of their RRPs.

2.22 The European Commission is also embarking on a series of reforms to reduce the impacts of cross-border failures, including development of a regulatory framework for stabilising and controlling the systemic impact of a failing cross-border bank in the EU. The Commission is consulting with Member States on a number of potential policy responses for crisis management. This is focusing on developing a common toolkit for intervening early to manage bank failure; how to finance bank resolutions; and how to wind up failed banks.

Financial Services Compensation Scheme

2.23 The FSCS has been one of the important tools for reducing the impact of firm failures during the financial crisis, through its contribution to the protection of depositors and maintenance of financial stability. Changes made by the FSA and measures included in the Banking Act 2009 have contributed to an enhanced legal and operational framework through which the scheme compensates claimants. The Financial Services Bill also includes a provision for the FSCS to act on behalf of other schemes or authorities in delivering compensation to customers of financial services firms.

2.24 Following changes to the EU Deposit Guarantee Schemes Directive, there is likely to be a revised EU-wide limit on compensation for retail deposit insurance of €100,000 with effect from 31 December 2010 (subject to any Commission impact statement submitted to the European Parliament and the Council by the end of 2009). Member states would then fully compensate eligible depositors up to €100,000, or the sterling equivalent in the UK. The Government believes that the Directive needs to be strengthened to provide for the more effective operation of deposit guarantee schemes, for example to test the preparedness of schemes, and to provide for faster payments and a single point of contact for cross-border depositors.

2.25 Chapter 3 further discusses the role of deposit insurance in ensuring financial sector firms bear the costs of failures.

Resolution arrangements for firms

2.26 The Banking Act 2009 put in place a special resolution regime (SRR) providing the authorities with tools to deal with banks and building societies that are failing. The Bank of England is the lead resolution authority, responsible for the operation of the primary resolution tools. The FSA is responsible for the decision to put a bank or building society into the SRR. The Treasury is responsible for decisions involving temporary public ownership, public funds, compliance with international obligations, and the wider public interest.

2.27 The SRR was used in the successful resolution of the Dunfermline Building Society, and is widely recognised, in Europe and internationally, as a leading model for overcoming the practical and legal difficulties associated with bank resolution. Preparation and maintenance of RRPs by firms will assist the authorities in planning and implementing effective resolutions using the SRR.

Investment firm insolvency arrangements

2.28 The Banking Act 2009 included powers to introduce a regime for effective insolvency arrangements for investment banks, and the Government will shortly be publishing a set of detailed policy proposals designed to reduce the impact of the failure of a major investment firm.

Recovery and resolution plans ('resolution' element)

2.29 RRPs are an important tool for reducing the risk and the impact of firm failure. These plans - which will be required to be drawn up under FSA rules - will have to outline credible actions a firm could take to support recovery in a stress situation, as well as providing information and analysis to enable the authorities to decide how they would apply resolution options. They will help firms and the authorities identify any ex ante action that may be needed to facilitate orderly resolution, in which capital holders and unsecured creditors are not sheltered from loss.

2.30 RRPs will make an important contribution to tackling the moral hazard associated with systemically significant firms (see Box 2.A), manifested in distortions to firms' risk appetites and the competition landscape. They should also improve firm management by making managers aware of the risks they run in their business and providing regulatory incentives for firms to limit the systemic risk they pose. An FSA pilot project on RRPs involving a small number of large UK banks is currently underway to an ambitious timetable and will contribute to the development of UK and international policy in this area on its completion in mid-2010.

2.31 The Government is leading the way internationally in implementing RRPs, and is working with the Financial Stability Board and international partners in addressing both the "recovery" and "resolution" elements of RRPs. The UK is committed to international cooperation, in line with the commitment made at G20 summits in St Andrews and Pittsburgh that major financial institutions with cross-border crisis management groups should develop internationally-consistent RRPs by the end of 2010.

Managing systemic risk

2.32 A distinguishing feature of the financial crisis is that the whole global financial system came to be at risk. In the run-up to the crisis authorities around the world failed to take sufficient account of the systemic risks posed by the complex interconnections across financial markets or of the tendencies for risks to financial stability to build as a result of excessive risk-taking by market participants during economic upswings. Building on the conclusions of the Turner Review, *Reforming financial markets* set out a package of reforms to deliver an enhanced regulatory and supervisory focus on systemic risk, including:

- an enhanced regulatory and supervisory focus on systemic risk by the FSA;
- improving the functioning of systemically important wholesale financial markets; and
- addressing financial markets pro-cyclicality.

Box 2.A: Managing the risks posed by systemically significant firms

The challenges associated with firm failure are especially significant in the case of large, complex and interconnected firms, particularly those that operate on a cross-border basis, whose failure would pose significant risks to financial stability. Action is needed to minimise excessive risk-taking, reduce the systemic risk posed by such firms, and mitigate the disruption caused in the event that they reach a point of failure. To address these risks, the Government proposed in its paper *Reforming financial markets*:

- systemically significant firms should, consistent with risk based regulatory approaches, be subject to more regulation. This would involve, for example making capital requirements on a firm dependent not only on the riskiness of its activities, and therefore the probability of the firm's failure, but also on the degree of damage to the wider financial system that its failure would cause. The objective, therefore, would be to reduce the probability of a systemic firm failure.
- resolution plans should be proportionate to the size and complexity of the firm in question, and should include an assessment of how difficult it would be to resolve. The quality of a resolution plan should have a direct bearing on the FSA's overall assessment of the prudential risks borne by the firm, including, if necessary, by feeding into regulatory capital requirements, liquidity requirements or both.

These reforms aim both to reduce the likelihood that large and interconnected firms fail with systemic consequences and to increase the probability that, if such a firm does reach the point of failure, the authorities can manage the failure in a way that minimises costs on the wider economy or the taxpayer. The authorities already have resolution tools in relation to deposit-taking firms and financial holding companies, and are developing a new special administration regime for investment firms, both under powers taken in the Banking Act 2009.

Addressing the risks posed by large and interconnected firms is a key priority identified by the G20. The Financial Stability Board, in conjunction with the Basel Committee, is taking forward work to develop by October 2010 possible measures to address "too big to fail" problems associated with systemically important financial institutions. This includes consideration of the merits of more intensive supervision and specific additional capital, liquidity, and other prudential requirements, as well as improvements to contingency planning processes.

2.33 The Government is working closely with the Bank of England and the FSA on policies to manage and mitigate systemic risk and welcomes the recent discussion papers from both institutions which are important contributions to the policy debate on these issues[4].

[4] Turner Review Conference Discussion Paper *A regulatory response to the global banking crisis: systemically important banks and assessing the cumulative impact*, DP 09/4, FSA October 2009; and Bank of England Discussion paper *The Role of Macroprudential Policy,* November 2009.

Regulatory and supervisory focus on systemic risk

2.34 The FSA is increasing its focus on understanding the nature of the relationships and networks between firms and identifying systemic vulnerabilities. As discussed above, the Government is taking steps to strengthen the powers and objectives of the FSA to increase its system-wide focus alongside its firm-by-firm supervision of individual institutions, through the Financial Services Bill.

Wholesale market functioning

2.35 The global financial crisis has demonstrated how wholesale financial markets can transmit shocks to otherwise unaffected firms and the economy. An international consensus has emerged that there is a need to improve the functioning and resilience of systemically important wholesale financial markets, in particular securitization and derivatives markets. This includes steps being taken forward internationally to strengthen market infrastructures, for example through more effective disclosure and encouraging greater use of central counterparties (CCPs) in derivatives markets, which can help to improve the management of counterparty risk.

2.36 In 2008, the Chancellor called for an EU clearing directive to create high prudential and operational standards for CCPs. It will be important for these standards to be established globally through work undertaken in 2010 by the Committee on Payment and Settlement Systems and the International Organisation of Securities Commissions. The standards would then be incorporated into a clearing directive. With greater use of CPPs comes more concentration of risk and as such impacts back on financial firms and corporates. Therefore the Commission should undertake a detailed technical consultation and impact assessment to ensure the standards will operate as intended.

Financial markets pro-cyclicality

2.37 In the run-up to the financial crisis authorities around the world failed to recognise sufficiently the threats to financial stability posed by the build up of risk-taking and leverage in financial markets during the economic upturn. An international consensus has emerged that a comprehensive, internationally-consistent package of policies is needed to dampen excessive risk-taking in the financial sector, which can amplify an economic upturn, and to ensure that banks are more resilient to economic shocks to prevent the financial system amplifying an economic downturn. The Government supports the work by the Basel Committee to develop regulatory tools that will encourage banks to build counter-cyclical buffers of resources in good times and to introduce a leverage ratio as a supplement to risk-weighted capital requirements.

2.38 The Government believes that these objectives can be achieved in part through the implementation of appropriate rules-based regulatory mechanisms agreed internationally. However, given the tendency of financial markets to innovate and evolve, the Government believes that rules-based mechanisms are unlikely to be enough on their own to constrain the inherent pro-cyclicality of financial markets. Authorities will also need to be able to make judgments about how risks are evolving over time and to respond with discretion.

2.39 The new Council for Financial Stability will play an important role in coordinating the work of the UK regulatory authorities in responding to the challenges of managing systemic risk. Given the global nature of financial markets, international coordination is also vital, including through the IMF, Financial Stability Board early warning exercise and the European Systemic Risk Board.

3 Reducing the burden on society of financial sector failures

3.1 Although tougher regulation will reduce the probability and cost of financial sector failures, the possibility of future crises requiring government intervention cannot be entirely eliminated. Systemic financial crises have been an intermittent but pervasive feature of financial systems throughout recorded economic history.

3.2 A key question is therefore how to ensure that any costs of government intervention are distributed more fairly across those in the financial sector who benefit, reflecting the risks and rewards associated with financial intermediation. This should mean ensuring that the costs of bank failure fall primarily to banks and bank investors, rather than taxpayers.

3.3 This chapter considers options for ensuring banks meet the immediate costs of interventions to prevent systemic failure. Chapter 4 considers the possibility of ensuring the financial sector makes a fair contribution to society more broadly, perhaps through a financial transaction tax which is globally implemented and coordinated.

Considerations and trade-offs in assessing policy options

3.4 There are several key considerations in assessing policy options for meeting the costs of interventions to protect financial stability:

- policy should be designed to minimise moral hazard. Financial institutions should not be encouraged to take increased risks in the belief that they will be supported if things go wrong, therefore jeopardising future financial stability (see Box 3.A);
- private investors should bear costs ahead of the public sector. If the private sector – investors, management, creditors – know that they rather than taxpayers will bear losses in the event of bank failure, this will maximise market discipline on the institutions. Government should only intervene in the last resort, and then only where necessary to maintain stability;
- there should be a fair distribution of risks and costs. Any fee or charge should be fairly distributed between financial institutions and there may be a case for institutions with greater systemic impact to pay more (see Box 3.F);
- action should be internationally coordinated. Given the global nature of many financial services markets, it will be important to secure international agreement on the timing and type of framework to adopt, to minimise competitive distortions. In the EU, any proposals would need to be consistent with state aid rules; and
- measures should not jeopardise the economic recovery or financial stability. Introducing additional costs to the banks could impair their ability to rebuild capital and liquidity buffers, and lower their capacity for lending to the real economy. The impact of measures on the financial sector must be assessed thoroughly prior to implementation. It is essential to consider not only the impact of individual measures but also the cumulative impact of all proposals in train and proposed. The timing of any measures would therefore need to be considered carefully.

Policy approach to meeting the cost of financial sector failure

3.5 Policy options for addressing the immediate costs of individual and systemic bank failure fall into two broad categories:

- the funds and resources can be provided by the private sector for each individual bank. Examples include contingent liquidity credit lines or contingent capital; or
- banks and bank investors can draw on collective resources, often with government support, in return for an appropriate fee. In various systemic crises internationally, the authorities have provided emergency liquidity, deposit guarantees and capital injections. Further proposals for state-provided systemic protection include bolstered liquidity insurance, capital insurance and a systemic risk levy or resolution funds. Over time the costs of these facilities could be levied from the financial sector pre- or post-intervention.

3.6 It could be argued that private solutions should be the only ones available. As discussed in Chapter 1, however, in a systemic crisis the costs to society of allowing failure or of forcing end-investors to bear losses can be so high that governments are forced to act, in which case ultimately some portion of the costs will fall to taxpayers. As a consequence, there have been a number of proposals internationally on ways to help meet the costs of crises, in particular to ensure that the risks of the financial sector are better reflected in the costs paid by the sector itself.

3.7 The policy options to manage the impact of individual and systemic failure can be split into four main types:

- Liquidity: banks need adequate liquidity, including at times of idiosyncratic stresses as well as systemic crises. Banks should in general seek liquidity from market sources. In exceptional circumstances, however, the central bank can also provide Emergency Liquidity Assistance (ELA) support to individual firms in difficulty. In the current systemic crisis, the range and type of liquidity provision has necessarily been widened significantly;
- Depositors and other creditors: given the possibility of flight of deposit-holders and bank runs, deposit insurance paid for collectively by banks has been in place for some time in many countries. In the UK, depositor protection is provided by the FSCS. In the recent crisis, deposit guarantees in some countries were significantly extended to maintain depositor confidence. FSCS coverage for depositors rose from £35,000 to £50,000 on 7 October 2008. Moreover, the impact of government support in almost all countries was in effect to provide a considerable degree of protection to unsecured creditors (generally wholesale lenders rather than retail depositors);
- Capital: bank capital, primarily in the form of common equity, provides banks with a buffer to absorb losses and protect creditors. In the recent crisis there has been a shortfall in the amount and quality of capital held by banks. Capital can be provided privately through increased core capital levels and contingent capital instruments or publicly through government-provided capital insurance or recapitalisation; and
- General resolution funds or systemic crisis levies: the costs of covering systemic crises and restoring financial stability following a crisis could be met via levies raised from banks and other systemically important firms. These could be collected in advance and paid into a resolution fund or levied following a crisis to pay for costs actually incurred in supporting or resolving banks.

Box 3.A: Moral hazard

The huge costs to the financial system and wider economy of systemic crises may leave governments with little choice but to intervene to stabilise individual financial institutions and the wider financial markets. However, if this creates the expectation that government support will be available in the event of future crises, this can generate moral hazard, encouraging risky behaviours which increase the likelihood of crises. Different types of intervention by the authorities will have different implications for moral hazard.

Deposit insurance, which is only triggered when a financial institution has failed, probably has a limited direct impact on the risk appetite of financial institutions' management and shareholders, but it does reduce the incentives for depositors to monitor banks' risk-taking behaviours. It may also mean that riskier banks are able to attract retail funding by offering higher returns on deposits.

Emergency liquidity assistance by the central bank, provided it is extended only to firms facing liquidity problems (rather than firms which are insolvent) and it is offered at a penalty rate, should not be a significant contributor to moral hazard. That said, in practice, it is often difficult to distinguish between banks with insufficient liquidity from those which are prospectively insolvent, as counterparty concerns about solvency are often the cause of a bank's loss of access to funding. A bank may be apparently solvent at the time support is provided but become insolvent later.

Provision of capital by the authorities to ensure that institutions in difficulty do not fail is likely to be a more significant cause of moral hazard. While shareholders will bear some losses as a result of government capital injections as their shareholdings will be diluted, their losses would be far greater if the firm were allowed to fail. Moreover, other creditors will in general avoid any losses.

One potential manifestation of this is the "too big to fail" problem, arising from the expectation that certain firms will be supported if they get into difficulties. Moral hazard may increase the willingness of market participants to lend to large and interconnected financial institutions, reducing their cost of capital compared with their smaller competitors. Not only might this encourage excessive risk-taking by such firms, it also potentially has significant distorting effects on competition and market structure.

Perhaps of most significance from the perspective of creating moral hazard is the support offered to the financial sector as a whole in periods of financial instability. While the overriding objective of these actions is to minimise the impact of a potentially systemic crisis on the wider economy, the impact on market participants is inevitably also cushioned. Such actions create a presumption that the official sector will take whatever action is necessary to bail out the financial sector as a whole in bad times encouraging the markets collectively to take more risk and extend more credit in good times.

This highlights the crucial importance of making policy more symmetric across the cycle, including through regulation aimed at constraining excessive risk-taking by financial institutions in good times; and at ensuring that financial institutions individually, and as a sector, have sufficient buffers of capital and liquidity to cope with shocks. A robust state aid framework, including tough restructuring requirements if a financial institution needs to access state aid, may also act as an incentive to manage risks effectively.

3.8 Some of these options are already in place in the UK, while others are recent proposals made by international policymakers or academics. Implementation of any of these options would need to be a medium-term objective, given the importance of international coordination, and of ensuring that the economic recovery is not jeopardised by measures that impose an unsustainable burden on banks.

3.9 For any option with an element of direct public intervention in the case of a crisis, for example deposit insurance or a systemic risk levy, a key policy consideration is whether or not the fee paid by the financial sector for this support is raised ahead of the crisis, or paid after the crisis. This has different implications for policy design issues such as moral hazard or distributional fairness. Box 3.B sets out some of the considerations on pre-funding or post-funding which apply to all measures which are provided for collectively with public support.

Liquidity provision

3.10 Banks have privately-provided contingent credit lines and liquidity facilities to meet their operating requirements and the liquidity ratios determined by regulators. In systemic crises however, the scale and scope of liquidity required by the banking system far outstrips that which can be provided through such private sector arrangements. The recent crisis has also shown that privately-held contingent credit lines can be unreliable, and there should therefore be a greater focus on holding high-quality assets. It is expected that the FSA's tightening of liquidity regulations will enable a greater degree of self-insurance by banks although this would be to levels that would still be unlikely to meet all liquidity needs in a global systemic crisis.

3.11 In consequence, central banks can and do provide market-wide liquidity facilities designed to reduce the cost of disruptions to the liquidity and payments services provided by commercial banks. Central banks can also in exceptional circumstances provide emergency liquidity assistance to individual firms in difficulty to prevent a loss of confidence spreading through the financial system as a whole. In all operations, central banks balance the provision of liquidity insurance against the costs of creating incentives for banks to take greater risks in managing the liquidity of their own balance sheets. Moreover, it is not part of a central bank's role to take on credit risk arising from the provision of liquidity insurance. Central banks therefore insist on taking high-quality collateral, charge penal rates and insist on robust prudent risk controls in both market-wide liquidity insurance facilities, and in any emergency liquidity support for individual institutions.

3.12 The practice of the central bank providing last-resort lending in times of crisis to banks which face liquidity problems but are fundamentally solvent is a well-established tradition back to the 19th century, with the classic lender-of-last-resort doctrine outlined by Walter Bagehot in 1873.[1]

3.13 While basic elements of that doctrine may still hold, the recent crisis has seen an unprecedented requirement for central banks to extend enormously the provision of liquidity. Central banks responded to market conditions by adjusting their liquidity frameworks, in many cases through a combination of longer-maturity lending to a broader range of institutions against a wider set of collateral. Measures have also been taken to try to remove the stigma for banks accessing liquidity facilities which can cause panics or a self-fulfilling lack of confidence in solvent institutions. Specific actions by the UK authorities to bolster liquidity in the crisis include the Bank of England's long-term repos against a wide range of collateral and Special Liquidity Scheme, and the UK Government's Credit Guarantee Scheme.

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[1] *Lombard Street, a Description of the Money Market*, Walter Bagehot, 1873.

Box 3.B: Pre-funding or post-funding for financial sector contributions

Provision for the costs of financial failure can be through a fee or levy paid either before or after a failure. There are several considerations:

- fairness. In a post-funding model, it is more difficult to avoid penalising stronger, less risk-taking banks for systemic crisis. The shareholders in a bank which goes out of business after taking excessive risks would not make any contribution to dealing with the systemic cost. Upfront fees are therefore likely to be fairer and more efficient than a post-hoc imposition of fees. For financial failure where the levy or fee paid beforehand was clearly insufficient to meet the costs of the crisis, however, there may be arguments on distributional fairness grounds for a retrospective levy;
- moral hazard. Moral hazard for the investors and creditors of the bank may be exacerbated by the existence of a fund which might explicitly provide support for debt-holders. However the current crisis demonstrates that this moral hazard already exists to some extent as governments have shown that that they are prepared to provide support. Pre-funding could actually reduce moral hazard if the insurance fee or levy is linked to behaviour (that is, objectively riskier behaviour would require a higher fee) or if it is clear that intervention will not necessarily prevent individual firm failure;
- procyclicality. A problem of post-funding is that contributions are likely to be sought when the financial sector as a whole is likely to be weak, which exacerbates procyclicality (that is, it amplifies the upturns and downturns of the economic cycle). An appropriately designed pre-funding regime might in contrast help to mitigate procyclicality;
- delay in recouping costs. Post-funding is likely to mean that funds may only be recouped a long time after the initial failure, meaning that government might need to fund the costs in the interim, which would have financial and distributional implications;
- peer pressure. An argument for post-funding is that it would give strong or prudent banks an incentive to inform the weak bank or regulator when their competitors were being imprudent, and stronger banks could take action to pressure weaker banks to improve (although the evidence that this happens in practice may be mixed). Peer pressure could to some extent also be exerted with pre-funded levies, although the incentives to do so may be weaker; and
- international co-ordination. In a pre-funding model, international coordination is particularly important in order to prevent firms moving operations to avoid such costs. Any scheme would also need to be compatible with the UK Government's obligations under EU state aid rules.

3.14 The Bank of England now has new, permanent liquidity facilities, the Discount Window Facility, introduced last year to allow it to lend to banks against a wide range of collateral; and regular long term repos against high-quality private-sector securities are also being established as part of the permanent framework. These market-wide facilities are designed to provide liquidity insurance to the banking system, and are not intended for firms facing fundamental problems of solvency or viability.

3.15 There may be a case for an upfront liquidity charge either instead of, or in addition to a penal rate of lending. Perotti and Suarez (2009), for example, have proposed a mandatory charge levied, ideally internationally, on all institutions with access to safety net guarantees in exchange for emergency capital (alongside emergency liquidity) during systemic crises.[2] UK banks already pay a charge for access to central bank facilities (including liquidity insurance) through the cash-ratio deposits required by the Bank of England.

3.16 There would, however, be a range of implementation challenges and risks with bringing in further upfront charges for liquidity insurance that would require investigation by the authorities. A key issue would be how to set the premium for the liquidity insurance. Perotti and Suarez propose that the charge could be proportional to a bank's short-term wholesale liabilities, weighted by the bank's maturity mismatch. One proposed way to set premia of this kind would be for a limited amount of insurance to be provided by the private sector, which would set a market price.[3] The premia would also need to comply with the state aid framework.

Depositor insurance

3.17 One of the first deposit insurance schemes in modern times was the US Federal Deposit Insurance Corporation (FDIC) which was established in 1933. In the UK, depositor insurance is provided by the FSCS, which was established in 2001 in succession to a number of compensation schemes which existed under the legislation which preceded the Financial Services and Markets Act 2000 (FSMA). These included the Deposit Protection Fund established under the Banking Act 1979.

3.18 Initially, deposit protection in the UK was intended to protect those depositors who were least able to bear a loss, and to provide substantial but not complete cover. More recently, the main policy rationale has been to prevent bank runs and systematic instability, as banks are necessarily fragile and a loss of confidence by some depositors can lead to a withdrawal by all depositors and a bank-run.[4] The construction of deposit insurance schemes should aim to minimise the moral hazard involved in giving protection, by ensuring that deposit schemes are limited and funded as much as possible by the banks themselves, rather than by governments. Full deposit insurance should only be used temporarily in very exceptional circumstances.

3.19 In the event of the default of a bank or other UK authorised deposit-taking firm, the FSCS will pay compensation to eligible depositors up to the compensation limit (currently 100 per cent of the first £50,000 or €50,000, whichever is the greater). If the FSCS pays compensation to a depositor, it will take over the depositor's claim on the failed bank and will make recoveries in the winding-up. These recoveries (which will be shared with the depositor if the deposit exceeds the compensation limit) are used to reduce the FSCS's costs. The remaining costs (which include interest on any loans the FSCS takes out to fund compensation payments) are financed by levies on the financial services industry, primarily on banks and other deposit-taking firms. These levies are distributed among the relevant firms in proportion to their share of total deposits.

[2] *Liquidity Insurance for Systemic Crises,* Enrico Perotti (University of Amsterdam) Javier Suarez (CEMFI), February 2009

[3] Charles Goodhart suggests this methodology in *Liquidity Management*, paper prepared for the Federal Reserve Bank of Kansas City Symposium at Jackson Hole, August.2009. This is adapted from the process set out in *Restoring Financial Stability: How to Repair a Failed System*, Chapter 13 by Viral V. Acharya, Lasse Pedersen, Thomas Philippon and Matthew Richardson.

[4] A "fragility" model of deposit-based banking and the impact on liquidity is outlined in *Liquidity Risk, Liquidity Creation, and Financial Fragility: A Theory of Banking*, Douglas W. Diamond and Raghuram G. Rajan, Journal of Political Economy, 2001.

3.20 The arguments for pre-funding set out in Box 3.B are relevant to FSCS deposit insurance funding. Box 3.C sets out some of the changes which the Government is making to the FSCS and enable it to contribute more flexibly to the costs of the resolution of failing banks, including potentially moving to pre-funding.

Box 3.C: FSCS funding

The Banking Act 2009 made certain changes to the legal framework for the FSCS to enable it to contribute more flexibly to the costs of resolving failing banks:

- providing for the FSCS to contribute towards the costs of a bank resolution under the Banking Act 2009 up to a limit equal to the net costs that the FSCS would have incurred in paying compensation if the bank had been in default;
- providing for the possible introduction of pre-funding for the FSCS. At present, the FSCS is funded on an essentially pay-as-you-go basis; levies are collected to meet costs that have been incurred or can be reasonably anticipated. Pre-funding would allow for levies to be raised to build up contingency funds in advance. The Government has made clear, however, that pre-funding would not be introduced before 2012; and
- allowing the Treasury to make loans to the FSCS from the National Loans Fund. This simplifies the making of Government loans to the FSCS and makes clear that the Government will ensure that the FSCS has sufficient funds to meet its statutory responsibilities.

Bank capital

3.21 Bank capital serves as a buffer to absorb unexpected losses arising from the issuer's business risks as well as to fund ongoing activities of the firm. The main purposes of capital are to absorb losses while the firm is a going concern, that is, while the firm is solvent, and in a gone-concern scenario, protecting depositors when the firm is being wound up. Chapter 2 sets out work in train to increase bank capital and improve the capital quality through regulatory reform.

Contingent capital or private capital insurance

3.22 The Basel Committee is considering how to reform global capital standards and banks are likely to have to significantly strengthen the quality of capital that they hold. The Government believes that the focus of regulatory capital requirements should be on capital that can absorb losses on a going concern basis, typically common equity. More equity will enhance the resilience of banks to shocks. However, if equity is insufficient to absorb losses, banks may have to try to raise more. In a systemic crisis the cost of raising new capital could be prohibitively high, so that banks may find it difficult to raise new capital when they need it most.

3.23 Contingent capital held by the private sector is an emerging idea to address this potential issue and supplement common equity in times of crisis. This could provide higher quality capital than existing subordinated debt and hybrids and ensure the bank capital structure is more effective at loss absorbing and burden sharing among investors. See Box 3.D for an overview of various proposals for contingent capital or capital insurance.

3.24 In the recent crisis existing subordinated debt and hybrid capital largely failed in its original objective of bearing losses. Going-concern capital instruments often failed to bear losses because banks felt unable to cancel coupon payments or not call at call-dates (even though it was more expensive to refinance), in part for fear of a negative investor reaction as well as due

to the legal complexity of the instruments. Gone-concern capital such as Lower Tier 2 has often failed to bear losses in systemic banks as governments have been forced to step in to prevent insolvency in part to prevent further systemic impacts on debt-holders such as insurance companies. CRD 2, the first in a series of forthcoming packages amending the Capital Requirements Directive, sets out criteria for the eligibility of hybrid capital instruments as original own funds of credit institutions. It also provides a limit structure for the inclusion of hybrid capital instruments in own funds.

Box 3.D: Academic proposals for contingent capital or capital insurance

Debt-for-Equity Swap - *Raviv (2004)*[1]

The proposal is for debt that pays its holder a fixed income unless the value of the bank's capital ratio falls below a predetermined threshold (based on a regulatory measurement). In this event, the debt is automatically converted to the bank's common equity according to a predetermined conversion ratio (the principal amount may change upon conversion).

Contingent capital certificates - *Flannery (2009)*[2]

Similar to the above, contingent capital certificates are debt that pays a fixed payment to its holders but converts into common stock when triggered by some measure of crisis. In contrast to the above this would be a market-based measure, with conversion occurring if the issuer's equity price fell below some pre-specified value. The converted debt would buy shares at the market price of common equity on the day of the conversion rather than at a predetermined price.

Capital Insurance - *Kashyap, Rajan and Stein* (2008)[3]

Under this proposal, the insurer would receive a premium for agreeing to provide an amount of capital to the bank in case of systemic crisis. The insurer would be required to hold the full insured amount, to be released back to the insurer once the policy matures. The policy would pay out upon the occurrence of a 'banking systemic event', for which the trigger would be some measure of aggregate write-offs of major financial institutions over a year-long period. Long-term policies would be hard to price and therefore a number of overlapping short-term policies maturing at different dates are proposed.

Tradable Insurance Credits - *Caballero, Kurlat* (2009)[4]

The central bank would issue tradable insurance credits, which would allow holders to attach a central bank guarantee to assets on their balance sheet during a systemic crisis. A threshold level or trigger for systemic panic would be determined by the central bank. An attached tradable insurance credit is simply a central bank backed Credit Default Swap (CDS).

[1] *Bank Stability and Market Discipline: Debt-for-Equity Swap versus Subordinated Notes*. Raviv, Alon. 2004.

[2] *Contingent Tools Can Fill Capital Gaps*, Mark Flannery, American Banker; 2009, Vol. 174 Issue 117.

[3] *Rethinking Capital Regulation* Kashyap, Rajan, Stein, paper prepared for Federal Reserve Bank of Kansas City symposium on "Maintaining Stability in a Changing Financial System", Jackson Hole, Wyoming, August, 2008

[4] *The "Surprising" Origin and Nature of Financial Crises: A Macroeconomic Policy Proposal*, Ricardo J. Caballero and Pablo Kurlat, August 2009

3.25 Contingent capital is a type of subordinated debt that automatically converts into equity when a certain stress-related trigger is breached, meaning that private investors provide an automatic boost to loss-absorbing capital at the time when it is most needed. This need not mean actual cash transferring to the bank, but rather a change in the existing liabilities. The UK has taken a leading position in this area with the first major bank issue of a contingent capital instrument by Lloyds Banking Group (LBG). See Box 3.E for an overview of contingent capital in LBG and Royal Bank of Scotland (RBS).

3.26 LBG's instrument appears to have been well received by investors exchanging subordinated debt or hybrids. This does not, however, represent a final position on contingent capital instruments, having been designed for a specific exchange rather than for new issuance. There is further work to be done to identify the extent to which instruments of this type could be a part of future capital structures. This instrument, however, offers a useful initial step.

3.27 Together with the FSA and the Bank of England, the Treasury is exploring the extent to which there is potential for similar instruments to be used across UK banks and internationally. A key determinant in this will be the extent to which future regulatory structures permit contingent capital. The Authorities are exploring the merits of different types of structure for example around the type of trigger, trigger levels, maturity of the instrument and the conversion price as well as investigating associated risks and issues.

3.28 Contingent instruments may also play a role in the mutual sector, which is an important part of the UK financial system. The Building Societies Experts Group are investigating new avenues for core capital raising in building societies, including the use of contingent instruments, to help reinforce the long-term stability of the mutual sector. As part of the proposed merger of Yorkshire and Chelsea building societies, the firms have announced their intention to exchange sub-debt from Chelsea building society into contingent capital in the merged entity.

Box 3.E: Contingent Capital and Capital Insurance in Lloyds Banking Group (LBG) and Royal Bank of Scotland (RBS)

Contingent Capital LBG

LBG's issue of a contingent capital instrument as part of its recent capital-raising exercise was the first major bank issue of contingent equity worldwide. LBG offered investors in non-core Tier 1 instruments an exchange into a contingent equity instrument (termed an 'Enhanced Capital Note') which acts as subordinated debt until LBG's published Core Tier 1 ratio falls below 5 per cent, at which point the instrument is converted into equity at a pre-determined price. This instrument is therefore more useful in providing loss absorbency in difficult times. The instrument has been well-received by the market with the size of the offer being increased, giving LBG £7.5bn of equity in a stress case provided by the private sector. In case of a severe stress scenario, this would provide funds that would therefore not need to be put in by the Government.

Contingent capital / capital Insurance provided by government in RBS

Part of the support package for RBS announced in November is a form of government-owned capital insurance. The Government has committed to take up to £8 billion of equity should RBS' Core Tier 1 ratio fall to 5 per cent, and in turn receives an annual fee of 4 per cent. This can be seen as unfunded contingent equity held by Government. This is useful in giving the Treasury a fee for an element of the risk insurance it supplies to RBS.

3.29 A key issue with the wider use of these types of instrument for new issuance will be whether there is a sufficient investor base, and whether investors are able to assess the risk inherent in these instruments. Investors will in essence have sold an option, even if the chance of the option being called is low. This risk may ultimately not be appropriate for many fixed-income investors such as insurance funds which have in the past invested in subordinated debt and hybrid capital instruments. The systemic stability consequences of many investors holding instruments which trigger in times of stress will also need consideration. Investors may also require different compensation for increased risk, which may make future bank capital fundamentally more expensive. The impact and extent of this needs to be further explored.

3.30 An alternative to contingent capital that has been proposed is **private capital insurance**. Banks essentially face an insurance problem: when faced with a shortage of capital, rather than having to raise new capital at a high market cost it may be more efficient if banks were delivered capital at a pre-agreed (lower) price through an insurance policy. Unfunded privately-provided capital insurance, however, where investors are not required to provide the funds until the contingent event occurs, is unlikely to be appropriate in managing systemic risk, since the insurance arrangements might need to pay out to several banks at the same time. It is likely that a call on unfunded commitments held by investors will come at a time of financial distress, which could then leave the investors in difficulties and create systemic instability.

3.31 The Government is further discussing with international partners the role for such instruments within future regulatory capital structure including the Basel Committee's proposals to strengthen the quality of bank capital.

Government-provided capital insurance

3.32 Another option to meet the costs of systemic crises proposed by some commentators is that the Government could offer a capital insurance scheme. This would set out an explicit arrangement to deliver capital to banks in times of a systemic crisis in return for an up-front fee. Trigger levels, fees and the equity conversion price would all be set in advance.

3.33 Such a scheme would provide greater certainty for market participants about the circumstances and limits of government intervention, while also ensuring government receives an up-front fee for implicit support. There would, however, also be a number of disadvantages. Depending on the equity conversion price, any pay-out on the insurance would either require significant dilution of existing shareholders with the associated negative market signals, or would mean significant taxpayer value transferred to shareholders. There would also be moral hazard resulting from reduced loss-sharing across subordinated debt and hybrid capital, unless the regime could ensure that all non-equity capital converts to equity ahead of any government injection (not possible currently with the vast majority of subordinated debt and hybrid instruments). A capital insurance scheme would also potentially distort competition unless enacted on a wider scale, and any scheme would need to be compatible with the Government's obligations under EU state aid rules.

3.34 Under an explicit capital insurance scheme the Government would also lose flexibility in how it responds to specific institutions or system-wide crises. In general government-provided capital insurance would seem to be less useful and less flexible than a wider systemic levy or resolution fund, an option outlined below, although capital insurance could be an element of any wider solution.

Systemic risk levies and resolution funds

3.35 Even with measures in place to protect liquidity, deposits and capital, it is impossible to eliminate entirely the risk that the cost of stabilisation measures may have to be met out of exchequer funds. There is therefore a case for ensuring that in future the financial sector itself meets these residual costs to a greater degree.

3.36 One approach to ensure any residual exchequer costs are covered by the industry might be through a systemic risk levy or resolution fund. The levy might be charged on either a pre- or post-funded basis. It could be weighted towards financial firms, which because of their size or the nature of their business, were a potential source of significant risk to the stability of the financial system. The levy would not fund insurance for any individual firm but rather would support intervention, if needed, to stabilise the system as a whole. The proceeds of a pre-funded levy could either be used to reduce government debt or held in a separate fund (in practice these two options would not be very different as the fund would most likely be held in government securities).

Box 3.F: Measuring systemic significance

A key challenge in designing and implementing policy instruments that are targeted at systemically important financial institutions is measuring ex ante the degree to which the failure of a particular firm poses a systemic risk. Systemic risk is dependent not only on the firm's size but also on other factors such as the degree of interconnectedness with the rest of the financial system, the quality of market infrastructure supporting the financial system as a whole and the prevailing circumstances at the time.

In April 2009 the G20 called on the IMF and Financial Stability Board to produce guidelines to help national authorities assess the extent to which a financial institution, market, or an instrument is systemically important. The IMF, Financial Stability Board and the Bank for International Settlements published a paper in November 2009 setting out their initial considerations on this topic. Broadly, they defined systemic risk as the risk of disruption to financial services imposing significant external costs on other parts of the financial system and on the real economy.

They outlined three main principles they consider to be useful in identifying the systemic importance of a market and institution:

- size (the volume of financial services provided by that part of the financial system);
- substitutability (the extent to which other parts of the financial system can provide the same services in the event of a failure of a firm or financial market; and
- interconnectedness (linkages with other parts of the financial system).

A range of other factors will also be relevant, including the degree of leverage of the firm and the size of its holdings of illiquid assets. Policy makers also need to consider the quality of the pre and post crisis resolution frameworks in their assessment of systemic risk. Related to this, the complexity of a firm's structure and other factors relevant to the ease with which a firm can be resolved by the authorities, including the quality of a firm's recovery and resolution plan will also need to be taken into account.

A key question is whether to categorise firms in a binary way (either systemic or non-systemic) or through a sliding scale based on the degree to which a firm is systemic. The Swiss Government has taken the former approach, imposing significantly tougher prudential regulatory requirements on its two largest banks. However, as the FSA argued in a recent discussion paper, there are in principle strong arguments for the latter approach.[1] Identifying firms as either systemic or not could increase the dangers of moral hazard and create distortions at the boundary between systemic and non-systemic banks. Both quantitative and qualitative information could be used to inform the calibration of a scale of systemic importance, but to be credible such an approach would likely need to rely to a significant extent on quantitative analysis.

[1] *A regulatory response to the global banking crisis*, FSA Discussion Paper 09/2, March 2009

3.37 A "systemic risk scheme" would have a wider scope than a deposit-guarantee scheme in that contributions would be sought from all systemically important firms rather than just retail deposit-takers and wider coverage in that it would fund the costs of restoring financial stability more broadly rather than just the costs of compensating retail depositors. Funds could be used towards the recapitalisation of failing or failed banks, to cover the cost of other guarantees to creditors, or potentially other costs from resolution.

3.38 A key consideration in designing any systemic levy or general resolution fund would be how to assess systemic significance, and how to reflect that in any levy. The impact and cost of the failure of large financial institutions is generally proportionally greater than that of small firms (as there is a non-linear relationship between impact and size). See Box 3.F on the issues around measuring systemic significance.

3.39 The principle, practicalities and impact of such a levy would need to be explored further. Because the levy would not be conceived as an "insurance premium" payable by individual firms for the protection of their own position and because there could be discretion on when and how any funds were deployed, this may avoid some of the moral hazard problems typical of insurance schemes. It would in any case be feasible to design the levy in such a way as to mitigate moral hazard and influence firms' actions, such as linking the levy in some way to firms' behaviour so as to discourage excessive risk-taking.

3.40 In principle, a well-designed levy could achieve two objectives. It would both raise funds to cover the costs of restoring financial stability and, to the extent that the levy accurately reflected both systemic risk and institution-specific risk and charged for individual institutions' contribution to those risks, it would embed incentives that would reduce the probability that such costs would ever materialise. For these reasons, as well as those set out above, a pre-funded, rather than a "survivor pays" approach appears more attractive in principle, if the levy was properly weighted to the risk of each institution. The level at which to pitch any levy, however, and the question of how to reflect the relative systemic significance of different firms would both require considerable further analysis.

3.41 There are a series of operational issues that would need to be investigated further in the design of any systemic levy or resolution fund, for example:

- would the fund be pre-funded, post-funded or a combination of both?
- would any fund or levy apply only to banks, or more widely to all types of large or complex financial institutions?
- how would the assessment be made of when and how a fund should be used?
- would the fund would be administered by the Treasury or by a separate body? If any fund was ring-fenced, this would need to be managed carefully with strict controls to ensure financial discipline.

3.42 The impact of any additional levy on the financial sector would also need to be carefully considered and the economic and financial stability impact would need to be assessed as part of setting an appropriate levy. Given that financial crises requiring direct government intervention are relatively rare in developed economies, a fund would have to be built up over an extended period. When financial crises do occur, however, they can be exceptionally costly to the public finances, and therefore the fund may ultimately need to be quite large.

3.43 As set out earlier, any action on systemic levies or resolution funds would require international coordination given the potential competitive distortions. However, it would also be important that national fiscal authorities maintained appropriate control of resources. Consideration could therefore be given to establishing an internationally agreed framework and core principles for resolution funds operated at a national level. A debate has been started on these issues in the European Union, as well as in the United States, and this should feed into the wider G20 discussion on options for the financial sector to make a fair and substantial contribution to the costs of government interventions to repair the banking system.
See Box 3.G for an outline of some international proposals for resolution funds.

Box 3.G: International schemes

About a hundred countries have deposit guarantee schemes. Given the costs of the current crisis, many governments are considering how to introduce more efficient pricing structures that cover a larger proportion of the expected costs of bank failures or incorporate incentives to minimise the moral hazard introduced by the guarantees (e.g. through risk-based pricing that accounts for the systemic importance of each bank).

Sweden: Introducing a Financial Stability Fund

Alongside its deposit guarantee fund, the Swedish Government is creating a pre-funded special stability fund to address future financial crises. Banks and other credit institutions will contribute directly into the fund, which will be topped up from separate government guarantee schemes. The scheme will only charge half of the fixed fee in 2009/10 to take account of current financial difficulties. The Government has indicated that it will seek to introduce a "risk-differentiated" fee in 2011. The authorities hope that the fund size will rise to 2.5 per cent of GDP in 15 years. By imposing a levy on all assets, rather than just the insured ones, the Swedish Financial Stability Fund can cover a wider range of systemic contingencies.

Denmark: Framework for winding up distressed banks

In October 2008, the Government and the Danish Bankers Association agreed on a set of measures to maintain financial stability. A state-owned agency will wind down any banks that fall below the thresholds of regulatory capital. The scheme is integrated with the deposit guarantee scheme that will reimburse depositors and creditors of such banks. The Danish scheme covers all banks that contribute the "insurance premium" to fund the state's bank resolution agency. The state guarantee scheme covers any losses while the government keeps any unused funds. The IMF notes that, as shareholders get no bailout, they have incentives to seek private sector solutions to the resolution of troubled banks.

EU: Options for a resolution fund

Recognising the difficulties linked to cross border financial operations in the EU, the European Commission has been asked to consider how the private sector could contribute to financial resolution measures and to examine the possibility of a fund to respond to significant financial crises affecting the EU system. It has been suggested that such a fund could support co-ordination, burden sharing and crisis support measures across borders at short notice and that the costs of each crisis could be shared among the affected Member States or by the whole union should the crisis be systemic.

US: Replenishing the resolution fund and repricing the fee

For all the advantages of the FDIC deposit insurance fund, recent pressures on its balance underline the difficulties of judging the size of such funds and the importance of risk based premia. As part of a longer-term solution, the US Congress is currently debating two pieces of draft legislation. Both are closely aligned on the need to extend FDIC's resolution regime with an improved mechanism for winding down or breaking up systemically important financial firms. There is also consensus that any resolution fund should be funded with risk-based levies on large financial institutions. Riskier firms will pay more and the fees will be countercyclical so as not to deepen financial crisis. There is less agreement on whether the fund should be pre or post funded.

3.44 The existence of a systemic resolution fund would not diminish the case for reinforcing the core financial strength of individual firms through better-calibrated capital and liquidity requirements, more effective risk management and better overall governance arrangements. These measures should significantly reduce the probability that firms get into difficulty. The objective of any systemic fund would be to ensure that, if the stability of the financial system does nevertheless come under threat, the cost of dealing with the problem has been substantially internalised by the financial sector through a charge on financial intermediation over an extended period of years, as well as, to the extent possible, providing appropriate incentives against excessively risky behaviour.

4 Ensuring the financial sector makes a fair contribution

4.1 As outlined in Chapter 1, the financial sector plays a pivotal role in the economy, both in supporting economic growth by ensuring an efficient allocation of resources, and also as a significant sector of the economy in its own right. The UK's financial sector contributes around 8 per cent of UK output, employs one million people and also contributes to the UK balance of payments, with a trade surplus of £38bn in 2008. Maintaining an efficient and competitive UK financial services industry is therefore vital.

4.2 This chapter considers the potential for additional taxation of the financial sector to ensure the sector makes a fair contribution to society and broader social objectives.

Contributing to the public finances

4.3 In the UK, the Government's approach to taxing the financial sector has hitherto been broadly the same as the approach taken to the taxation of other business sectors. This includes taxation of profits through Corporation Tax, and payroll taxes (PAYE and National Insurance Contributions). The UK also has a tax in place on transactions in UK equities (Stamp Duty and Stamp Duty Reserve Tax), although this is not exclusive to the financial sector. Through these channels the financial sector has made a significant contribution to the public finances in recent years. Over the past nine years, the UK financial sector has contributed over £250bn through Corporation Tax, Income Tax and National Insurance Contributions alone.

4.4 Given the importance the Government attaches to tackling the remuneration practices that have contributed to excessive risk taking by the banking industry, the 2009 Pre-Budget Report announced an additional bank payroll tax where bank and building society employees are awarded discretionary bonuses above £25,000 in the period from the Pre-Budget Report to 5 April 2010. This tax will encourage banks to consider their capital position and to make appropriate risk adjustments when settling the level of bonus payments above £25,000.

4.5 More broadly, a number of arguments have been advanced to this end. For example, some have suggested that given the costs of the recent crisis the financial sector should contribute more than the tax currently paid to suppport broader social objectives. Others have suggested it might be possible to design an additional tax on the financial sector in such a way as to correct what might be considered excessively risky or destabilising activities that may have negative externalities. Alternatively, if elements of the financial services industry were shown to be generating supernormal returns to executives or shareholders – economic rents – because of the existence of market failures, then there may be a case for increasing taxation on these returns[1]. Finally, the global nature of the financial services industry and the mobility of its activities might suggest that a more internationally co-ordinated approach would help ensure the sector makes a fair contribution through tax, irrespective of where firms are located or where the activity takes place.

[1] See *Fixing Bankers' Pay* Lucian Bebchuk.The Economists Voice, November 2009 on incentive problems and bankers' pay.

4.6 There can be no doubt that there have been market failures in the financial system. The rising level of bank revenues reflects in part greater leverage and excessive risk-taking through investment in assets that were often opaque to shareholders and counterparties. These practices were encouraged by remuneration packages where rewards were directly linked to short term returns and in some cases were clearly inconsistent with prudent risk management.[2] And at the height of the crisis there was the risk of a serious coordination failure between institutions and markets that required internationally co-ordinated intervention to resolve.

4.7 When there are market failures then the market outcome will not be to the full benefit to all in society. Policy intervention may therefore be needed to address market failures and correct distortion. Any policy instrument should as far as possible address the source of the failure but without encouraging behaviour that would either undermine the objective or create adverse unintended consequences. One possible lever to deliver these objectives is taxation.

4.8 As set out in Chapter 1, enormous fiscal support has been extended to financial systems around the world at the cost of temporarily high fiscal deficits and debt to GDP levels. Consolidation of fiscal accounts as economies and financial systems recover will therefore be necessary as countries exit from these extraordinary measures. It is right that the financial sector should make a significant contribution to this.

4.9 To date, the level of taxation that has been placed on the financial services industry has been a matter for individual governments, taking into account a variety of factors, including domestic fiscal and expenditure policy and the role of the sector in the local economy and society. This must of course remain the case – taxation policy goes to the heart of national sovereignty. But because of the highly internationally mobile nature of the financial sector, there is a case for considering a more internationally coordinated approach to some elements of financial services taxation.

Proposals for a financial transaction tax

4.10 A financial transaction tax is one proposal that has been put forward as a potential method of ensuring that the global financial services sector makes a fair contribution. One argument for taxing certain transactions is that some financial activities have little or even negative social value and therefore ought to be taxed. This has been proposed by Paul Krugman as a tax on speculators[3] and Adair Turner as a tax on socially useless activities[4]. Another is that the revenues raised from a transaction tax could potentially be very large, although the tax would need to be designed to introduce minimal economic distortions.

4.11 In the past, financial transaction taxes have been discussed in the context of foreign exchange markets but the debate has since changed to other dimensions of finance (see Box 4.A). Concerns have been expressed at the rapid growth of some financial markets, particularly complex instruments with elaborate networks of counterparties, such as the growth of international over-the-counter derivatives illustrated in Chart 4.A. In the five years to mid-2008 the notional amount of contracts outstanding had increased four times to $683 trillion.[5] Some of these contracts serve perfectly useful functions, but there are financial stability concerns around the rapid expansion of others. For example, the notional value of credit default swaps outstanding increased by nine times to their peak at the end of 2007.

[2] At the G20 Leaders Summit in Pittsburgh, it was noted that "Excessive compensation in the financial sector has both reflected and encouraged excessive risk taking."

[3] *Taxing the Speculators*, Paul Krugan, New York Times 27 November 2009

[4] *Responding to the financial crisis: challenging assumptions*, Adair Turner, speech to the British Embassy, Paris 30 November 2009.

[5] See IMF's Global Financial Stability Report, October, 2009 and the Bank for International Settlements, Quarterly Review, December, 2009.

Box 4.A: Financial transactions tax

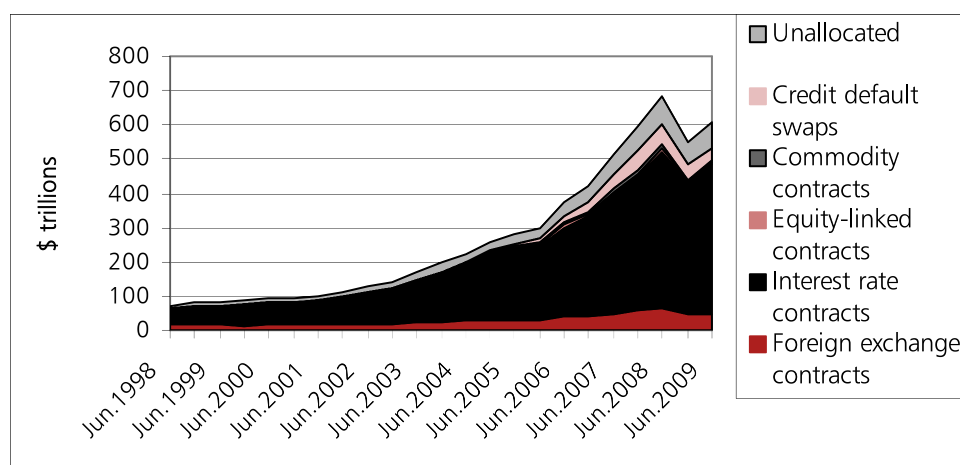
James Tobin's original proposal for a transaction tax was to tax foreign exchange transactions[6]. The purpose of the tax was to tackle excessive exchange rate fluctuation and speculation on currency flows, as Tobin felt that short-term movements in capital flows could severely limit the ability of governments and central banks to follow appropriate domestic policies for their economies.

However, the recent crisis has shown that there is considerable risk inherent in other financial markets. In some of these markets trading volumes have also grown enormously compared to the value of underlying assets. As set out above, instability may result from these markets due to the complex nature of counterparty networks and a lack of transparency, and the transmission of financial shocks through the system[7].

Recent attention has therefore focused on a broader tax on financial transactions – potentially, this would include trading in a wide range of instruments, currently traded both on and off-exchange.

For a broad based financial transaction tax, a wide range of derivative markets need to be included. In addition, spot markets, given their close links to derivatives trading, would also need to be covered by the scope of a transaction tax. Under the current market structure, a financial transaction tax that only caught off-exchange products would include interest rate futures, but not swaps or options; and it would include standard foreign exchange trading but exclude futures and options. Nor would it cover some of the financial instruments that have attracted most attention during the crisis, such as Credit Default Swaps. A tax on exchange-traded products alone would clearly have the potential to drive trading off exchange, at a time when regulators are trying to encourage the reverse. This suggests that a financial transaction tax would have to be non-discriminatory between on and off-exchange trading.

Chart 4.A: Amounts outstanding of over-the-counter derivatives by instrument



Source: Bank for International Settlements, Quarterly Review, December 2009

[6] *A Proposal for International Monetary Reform*, James Tobin. Eastern Economic Journal, Volume 4 July/October 1978

[7] Some commentators go further and suggest that there may be a point beyond which high volumes of trading activity in themselves can result in negative returns – see for example *Responding to the financial crisis: challenging assumptions*, Adair Turner, speech to the British Embassy, Paris 30 November 2009.

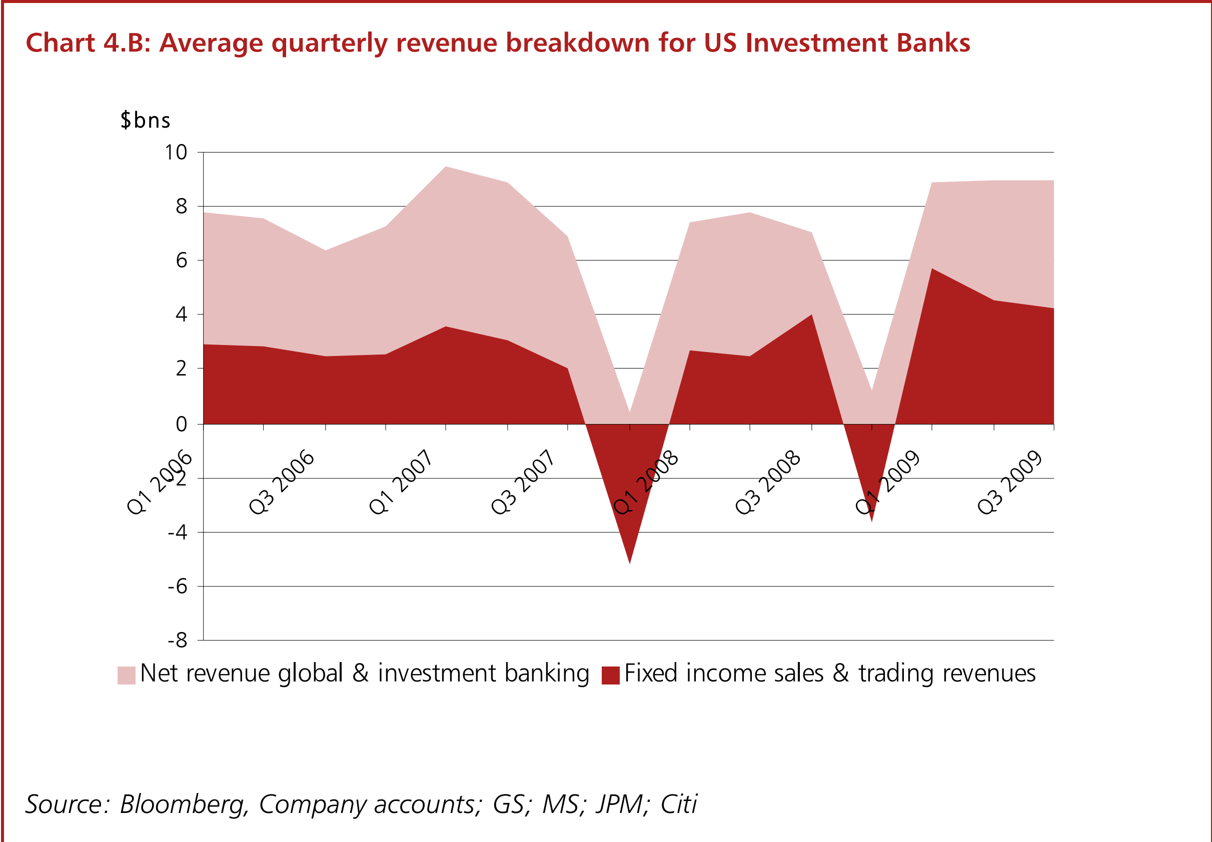
4.12 High volumes of transactions in financial markets may not in themselves be undesirable; indeed, high trading volumes can reflect liquid markets, with low transaction costs, which may have wider economic benefits. However, some regulators and commentators have questioned the economic benefit of the increase in trading volumes over recent years.

4.13 It is certainly clear from the recent crisis that in some markets, high levels of liquidity proved to be temporary. These markets have often been associated with a lack of transparency and complex networks of counterparties. These markets may have played an important role in transmitting financial shocks through the system.

4.14 Furthermore, rising levels of compensation in banks have occurred at a time of greater leverage and a higher proportion of trading assets as a share of total assets. This greater relative share of trading assets has contributed to volatility of banks' revenue streams, as Chart 4.B shows. This implies greater risk in the financial sector, the outcome of which has ultimately had expensive consequences for fiscal accounts.

4.15 As set out in the Prime Minister's speech to G20 finance ministers at St Andrews, a financial transaction tax would need to follow four key principles: implemented at a global level; minimal distortionary impact; ensure financial stability; and be fair and measured.

Chart 4.B: Average quarterly revenue breakdown for US Investment Banks



Source: Bloomberg, Company accounts; GS; MS; JPM; Citi

Implemented at a global level

4.16 As the financial crisis has demonstrated, financial services are extremely globalised, with extraordinary mobility in revenues, profits and people. Attention is rightly focused on the economics of large global imbalances, but the net figures mask an even greater increase in the gross flows between countries. In the five years between 2002 and 2007 the total capital inflows to the US, Japan, Euro area and UK together increased from $1.5trillion to $1.7trillion. This is equivalent to an increase in the share of GDP from 6.8% to 21.3%. While international capital flows are essential for international development and extending prosperity and opportunity, the nature of the gross flows can have important consequences in transmitting

financial shocks. The globalised nature of the financial sector brings real benefits but it means that in order to avoid regulatory and taxation arbitrage a co-ordinated, international approach on key issues is required.

4.17 In such a context, proposals for a financial transaction tax must have the commitment of all the major international financial centres in order to work. Non-compliance from any major centre is likely to mean not only the decline of activity in other centres, but also the erosion of the tax base as firms arrange their business activities to avoid the charge on transactions.

4.18 Such coordination may now be more likely. It has been argued that taxable activities would relocate offshore from major centres. In the past, weak international coordination and the existence of non-compliant jurisdictions would have made this a significant risk. However the G20's concerted action over the last year on tax havens and non-complaint jurisdictions demonstrates that such international coordination is both feasible and enforceable.

4.19 In addition to global coverage, to help protect against avoidance a financial transaction tax will need to have as broad a base as is possible without impeding wider economic activity. An important factor here is the speed at which financial markets innovate. Over recent years the use of derivative instruments has increased exponentially. A financial transaction tax will need to be designed so that it can keep abreast of market developments that might otherwise facilitate avoidance of the charge.

Minimal distortionary impact

4.20 The desirability of introducing a financial transactions tax depends not just on its revenue raising potential but also on its economic impact. As highlighted above, some commentators have focused on a financial transaction tax as a means of raising revenue, rather than a tool to change market behaviour. If revenue raising is the objective of the tax, it would still needed to be designed in such a way that it introduces a minimum of distortion.

4.21 Other commentators have argued that a financial transactions tax would be economically beneficial through its impact on reducing short term, high volume transactions which these commentators consider to be economically undesirable. The Warwick Commission report *In praise of unlevel playing fields* has argued that banks currently invest more than is socially optimal in high turnover activities, creating negative social externalities that should be tackled through the tax system - perhaps through a transaction tax. Others have suggested that such short term trading is beneficial, in terms of enhancing liquidity, and therefore reducing volatility and price distortions[8]. However, some commentators have questioned the economic benefit of the increase in trading volumes over recent years. Adair Turner for example has argued that "the fact that market liquidity has an economic value does not mean that more market liquidty, supported by more speculation, is limitlessly beneficial in all markets"[9]. If there is indeed negligible economic value to additional volumes of trading beyond a certain point, then it may be the case that a financial transaction tax may not have the extent of negative economic impact that some have feared.

4.22 If influencing market behaviour is the objective of the tax, a vital first step would be to assess the economic and therefore social value of the type of activity affected. If a financial transaction tax is to be aimed at reducing activity that is economically undesirable, perhaps because it contributes to financial instability, it would make sense for it to be aimed at those transactions that create the greatest distortions, such as off balance sheet transactions. These transactions have been cited by some commentators as having played a contributory role in the recent crisis. However, they may also be the most difficult items to tax.

[8] *The Role of Transaction Costs for Financial Volatility: Evidence from the Paris Bourse*, Journal of the European Economic Association, 4 (4), pp 862-890, Harald Hau, 2006.

[9] ***Responding to the financial crisis: challenging assumptions***, Adair Turner, speech to the British Embassy, Paris 30 November 2009.

4.23 Any new taxes could through adjustments to relative prices introduce further distortions elsewhere. This second distortion may turn out to be more detrimental than the original externality the tax had been designed to fix. Therefore any design proposal would need to be subject to a rigorous analysis of costs and benefits, carefully balancing public and market interests.

4.24 The incidence of a financial transaction tax must also be considered. Generally speaking, increasing the tax burden on the financial sector must either impact on its shareholders, its employees or its customers. If a transaction tax is to be targeted at the financial sector because of specific characteristics of that sector, then it needs to be clearly ascertained that the incidence of the tax will not in practice fall on end users of financial services within the economy at large.

4.25 Full analysis of the potential economic implications of introducing a transaction tax will help determine the desirability of such a tax, the level at which it should be set if it were introduced and the likely consequences. Clearly a very low rate would have much less distortionary impact than a higher rate while still potentially raising a significant amount of finance.

Enhance financial stability

4.26 Across the globe national governments have put in place a series of significant interventions, often supported by substantial contributions from their taxpayers, aimed at achieving financial stability after the recent crisis. It is vital that a financial transaction tax contributes to continued stability in financial markets.

4.27 In particular, it is important to reach an appropriate balance between the contribution the financial sector makes through taxation and the capital it has available to protect against future losses. Financial institutions have taken action to improve their capital positions during the financial crisis and capital requirements are being reformed (as outlined in Chapter 2). Additional capital helps to reduce the need for Government intervention and the chance that a firm will fail – additional charges must be introduced only at a level and a time that can be absorbed without undermining financial institutions' ability to hold sufficient capital. Any transaction tax would need to be carefully calibrated, as will enhanced capital requirements, and should complement the regulatory toolkit.

Fair and measured

4.28 As set out above, proposals for a successful transaction tax will need to be developed with both economic and competitiveness impacts in mind, to ensure the ongoing adequate capitalisation of the sector and its capacity to support broader economic growth and recovery. Understandably, given the central role of the financial sector in the crisis, many observers feel the financial sector should be made to pay a substantial contribution towards the costs of economic and broader social recovery. However, any new transaction tax proposal also needs to reflect that the sector must be able to fulfil its functions in the broader economy.

4.29 It would therefore be vital to ensure that any transaction tax was set at a rate that was appropriate to the specific circumstances of the sector at this time. If the tax rate were set too high, there would be a risk of dampening activity in certain markets at a time when our national and the global economy are so dependent on the real and sustainable revival of the financial sector as a whole; set too low, and there is a risk that the objectives and rationale behind the tax (be they revenue-raising, financial stability or otherwise) are not satisfied.

Implementation and design issues

4.30 As well as considering the economic impact of a financial transaction tax, there are some significant issues to explore regarding its design and implementation. Key points include:

- Identifying the tax base: as discussed above, to protect against avoidance a financial transactions tax would ideally have as broad a base as possible, including over-the-counter transactions;
- Establishing a means of tracking transactions in order to implement the tax, given financial transactions are currently recorded through a range of exchanges and other systems;
- Setting a rate, or rates, to ensure the introduction of a financial transaction tax does not have a negative economic impact, given the different margins on particular types of transactions;
- Determining a means for allocating revenue raised, given the international nature of many financial transactions; and
- Defining a method for monitoring and ensuring compliance, and determining action that should be taken in the event of avoidance or evasion.

4.31 As outlined in this chapter, there remain areas for further work on both the economic impact of a financial transaction tax, and how such a tax could be successfully implemented. It will be important that the IMF addresses these points in its report for the G20. Further details on next steps through the IMF and other channels are set out in Chapter 5.

5 Next steps

5.1 In order to avert future financial crises, countries across the globe are working together to achieve a strengthened global financial system. As the Prime Minister made clear during his speech at the G20 Finance Ministers meeting in St Andrews in November, any new policy measures taken to address risk and reward in the financial sector must be implemented internationally and consider the relationship between the financial sector and wider society.

5.2 The modern financial sector is a global industry that is both mobile and fast paced. This needs to be recognised in any policy assessment to ensure that measures on both the regulatory and tax side prevent arbitrage and avoidance.

5.3 In assessing the options, the UK will also ensure that policies respect the following principles:

- Global – some measures can only be implemented at a global level, while others require agreement and coordination on the principles as a minimum to be effective;
- Non-distortionary – Damaging reductions in liquidity and inefficient allocation of capital must be avoided and the possibility of avoidance minimised.
- Stability enhancing – Proposals must support and not undermine the regulatory action already being taken to enhance the stability of the international financial system and the global economy. This is likely to mean any option could not be implemented for several years.
- Fair and measured – financial services must be able to continue to contribute to economic growth and any additional costs should be distributed fairly across the sector. A thorough assessment of the impact of measures on the financial sector must be conducted prior to implementation.

5.4 In order to deliver an agreement internationally, the UK will use its membership and participation in a wide range of groups to assess all possible policy measures. A number of international organisations, including the IMF, the Financial Stability Board, and the EU have expertise which will inform the growing debate around these significant issues.

International Monetary Fund

5.5 The IMF is the global financial institution tasked with fostering international monetary cooperation, securing financial stability, and supporting sustainable economic growth. The IMF's broad membership and macro-economic expertise allows it to offer a multilateral perspective to the consideration of policy options.

5.6 At the Pittsburgh Summit the G20 asked the IMF to prepare a report on the different options countries have adopted or are considering as to how the financial sector could make a fair and substantial contribution toward paying for any burdens associated with government intervention to repair the banking system.

5.7 The St Andrews G20 communiqué reiterated the call for this work and the G20 will examine the results next year, with a preliminary report due in April and the final report due in June 2010.

Financial Stability Board

5.8 At the Pittsburgh Summit, G20 leaders also called on the Financial Stability Board to propose by the end of October 2010 possible measures to address the "too big to fail" problems associated with systemically important financial institutions. This will include consideration of the merits of more intensive supervision and specific additional capital, liquidity, and other prudential requirements, as well as improvements to contingency planning processes.

5.9 The Financial Stability Board will identify a coherent package of measures to reduce the likelihood and impact of failure. It will be important to develop policy tools that can be agreed internationally and implemented consistently across countries. Given the interdependencies between the policy objectives of the IMF and the Financial Stability Board close cooperation will be vital. The Financial Stability Board will present an interim report to the next G20 Summit in June 2010 in Canada. The final report and policy recommendations will be made in October 2010.

European Union

5.10 As the world's largest market for financial services, with over 30% of the wholesale financial services industry in 2008, the involvement of the EU will be an important part of taking forward this work. Work is already underway to learn the lessons of the crisis and to strengthen the EU's resilience against cross-border crises and to improve Europe's crisis management capacity and the UK is playing a full part in taking this work forwards. The Government will be responding to a European Commission consultation on crisis management in January 2010.

5.11 The October European Council invited the European Commission "to examine innovative financing at a global level". The UK encourages the Commission to use this mandate to contribute further to the international debate on these issues including closely working with the IMF and to consider as part of its work the four options set out by the Prime Minister at St Andrews – contingent capital, systemic risk levies, resolution funds and financial transaction taxes. The 10-11 December European Council will represent a timely opportunity for the EU to emphasise its support for the IMF's review and more widely to stress the importance of renewing the economic and social contract between financial institutions and the societies they serve.

Other international working groups

5.12 Related research is also taking place outside of the principal international institutions. One such group is the Taskforce on International Financial Transactions for Development which was established in Paris in October. The Taskforce has been set up to examine the feasibility of currency and financial transaction levies or voluntary contributions in relation to development financing. Participation currently includes Austria, Belgium, Brazil, Chile, France, Germany, Japan, Norway, Senegal, Spain and the UK. The Taskforce has appointed a group of legal, economic and development experts to assess the technical feasibility and options available for using transaction taxes and/or voluntary contributions.

5.13 The Taskforce will produce its findings on these issues in spring 2010 for Ministers from the participating countries to consider.

Looking forward

5.14 The UK is committed to ensuring a better balance of risks, rewards and responsibilities between the financial sector and society as a whole. This paper is intended as a contribution to the growing international debate on these important issues. The Government looks forward to considering the results of the various workstreams underway with its international partners.

5.15 In the meantime and ahead of the IMF report in April 2010, the UK will continue to work closely with international partners, the FSA and the Bank of England, and to engage with the financial sector to ensure that the recovery from the crisis is strong, sustainable and fair.

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