I. Beyond the rescue: exiting intensive care and finishing the reforms

Three years after the onset of the crisis, expectations for recovery and reform are high but patience is wearing thin. Policymakers face a daunting legacy: the side effects of the ongoing financial and macroeconomic support measures, combined with the unresolved vulnerabilities of the financial sector, threaten to short-circuit the recovery; and the full suite of reforms necessary to improve the resilience of the financial system has yet to be completed.

When the transatlantic financial crisis began nearly three years ago, policymakers responded with emergency room treatment and strong medicine: large doses of direct support to the financial system, low interest rates, vastly expanded central bank balance sheets and massive fiscal stimulus. But such powerful measures have strong side effects, and their dangers are beginning to become apparent.

Here are the worst problems arising now from the continued use of the extraordinary programmes: Direct support is delaying vital post-crisis adjustment and runs the risk of creating zombie financial and non-financial firms. Low interest rates at the centre of the global economy are discouraging needed reductions in leverage, thereby adding to the distortions in the financial system and creating problems elsewhere. The sustained bloat in their balance sheets means that central banks still dominate some segments of financial markets, thereby distorting the pricing of some important bonds and loans, discouraging necessary market-making by private individuals and institutions, and increasing moral hazard by making it clear that there is a buyer of last resort for some instruments. And the fiscal stimulus is spawning high and growing government debt that, in a number of countries, is now clearly on an unsustainable path.

The time has come to ask when and how these powerful measures can be phased out. We cannot ignore the fact that the cumulating side effects themselves pose a danger that, at the very least, implies exiting sooner than may be comfortable for many. That said, exit from a number of these measures is hindered by the state of the financial sector and the macroeconomic outlook, which are fragile in many parts of the industrial world and make policy tightening risky.

On the reform front, work is proceeding apace. Detailed and wide-ranging proposals are taking aim at the multifarious causes of the crisis and at the effects of threats that could yet develop. Such reforms will make the next crisis less likely and, when it does come, less severe. But as we argued a year ago, success requires that everyone contribute.[1] Regulators need to

[1] BIS, *79th Annual Report*, June 2009, Chapter VII.

reform their approach to the safety of the financial system's three essential elements: instruments, markets and institutions. They must establish a macroprudential framework to promote the stability of the financial system as a whole, over and above the soundness of each of its components. Fiscal authorities must work to maintain long-term sustainability, ensuring that their policies absorb rather than amplify shocks by building reserves in good times that will be available for response in the bad times. And central banks must confront booms in asset prices and credit as being the threat to stable prices and growth that they are. The programme for reform on all these fronts – regulatory, fiscal and monetary – must be put in place and seen through to completion.

The first part of this introductory chapter briefly outlines the extraordinary policy measures undertaken during the crisis and discusses the risks arising from the now prolonged administering of that medicine, which primarily addressed symptoms. In the subsequent parts, we examine the underlying causes of the crisis, survey the work that is under way to reform the financial system and consider what still needs to be done.

In the emergency room: initial responses to the crisis

As the crisis intensified with the collapse of Lehman Brothers, authorities implemented an escalating series of emergency measures aimed at shoring up their financial systems and the real economy. These were essentially emergency room treatments, which meant that consideration of any side effects would have to wait.

Depending on the structure of their economies and financial systems, policymakers chose varying measures, including: guarantees of bank assets and liabilities aimed at averting potential bank runs; direct lending from fiscal authorities and central banks, as well as from international financial institutions, to allow rollover and prevent default; capital injections to ward off insolvency; nationalisations to allow failed institutions to continue to serve their customers; removal of low-quality loans from private sector balance sheets and support of prices of assets for which liquid markets had disappeared, and thereby ballooning of central bank balance sheets; and supervisors' public certification of the capital adequacy of large banks. A comprehensive list of the actions taken would include dozens of specific programmes in virtually every advanced economy and many emerging market economies as well.[2]

Unprecedented macroeconomic policies accompanied the large array of direct actions to support the financial system. The extremely accommodative monetary and fiscal policies put in place were a reaction to the consequences of the crisis. In the United States, Europe and Japan, public deficits are now in excess of 5% of GDP and policy rates are near zero. And as the conventional monetary easing ran its course, central banks in a number of core countries

[2] Details discussed in BIS, *79th Annual Report*, June 2009, and in Chapters II and VI of the present Annual Report.

shifted their focus from prices to quantities. Over the past two years, the total quantity of assets owned by those central banks about doubled and remains at or near that bloated level.

Intensive care: the problem of dangerous side effects

The emergency policies were essential at the time and have been largely successful in meeting their short-term objectives. Many of them are still in effect today, however – three years after the onset of the crisis. To put it bluntly, the combination of remaining vulnerabilities in the financial system and the side effects of such a long period of intensive care threaten to send the patient into relapse.

The crisis has left the global macroeconomic situation far worse than it was three years ago. In Europe and the United States, unemployment is high and demand prospects are poor. Support programmes for markets and institutions have created a dependency from which the financial system may have a hard time withdrawing without a continuation of very easy monetary policy. And some banks and banking systems remain highly leveraged and still appear to be on life support.

The Greek sovereign debt crisis shows just how fragile the financial system still is. In mid-May, the escalating difficulties surrounding Greece's creditworthiness resulted in funding problems for a number of banks, especially in Europe, reminiscent of those following the collapse of Lehman. These funding difficulties reflected not only the new problem of sovereign debt but also the lingering doubts about the quality of commercial bank balance sheets. In reaction to these difficulties, the ECB moved into new territory and announced it would buy sovereign bonds. And as with the earlier crisis, central banks opened emergency swap lines to address some of the funding problems.

Leverage remains high in the non-financial sectors of many countries at the centre of the crisis. As discussed in Chapter II, households in these economies have started to reduce their leverage. But including the large increases by the public sector, debt levels of the non-financial sector have risen substantially since 2007; they are expected to be higher by 20–40% of GDP by the end of 2010 in France, Germany, Spain, the United Kingdom and the United States. Not only does the continued high leverage imply fragility of private and public sector balance sheets, which will take years to resolve, but it also severely limits the scope for fiscal policy intervention if another bailout – public or private – is needed.

Indeed, the events coming out of Greece highlight the possibility that highly indebted governments may not be able to act as buyer of last resort to save banks in a crisis. That is, in late 2008 and early 2009, governments provided the backstop when banks began to fail. But if the debt of the government itself becomes unmarketable, any future bailout of the banking system would have to rely on external help.

The Greek sovereign debt crisis may have delayed any monetary tightening, but the longer that policy rates in the major advanced economies

remain low, the larger will be the distortions they create, both domestically and internationally. As discussed in Chapter III, a prolonged period of exceptionally low real interest rates alters investment decisions, postpones the recognition of losses, increases risk-taking in the ensuing search for yield, and encourages high levels of borrowing. Our recent experience with exactly those consequences a mere five years ago should make us extremely wary this time around. True, the current environment is very different from what it was in the first half of the past decade, but the 2007–09 crisis suggests that the financial binges promoted by such low policy rates – booms in asset prices and credit, the underpricing of risk and the like – ultimately have devastating effects.

For those economies that are growing strongly and require higher policy rates, the low interest rates at the centre of the global financial system are unhelpful, to say the least – the interest differentials induce capital movements. As discussed in Chapters III and IV, those flows put pressure on exchange rates, encourage credit booms and asset price bubbles, and destabilise the economy when interest rate differentials normalise and cause the flows to reverse.

Vast fiscal outlays to support aggregate demand in the wake of the 2007–09 crisis – combined with past promises on health care, pension and social security payments – have sent public debt in many industrial countries rocketing on an unsustainable trajectory. As discussed in Chapter V, ageing populations are beginning to place large burdens on the public finances of most advanced economies. Events during the first half of this year show that it may already be too late for some countries to protect or quickly restore their standing in the debt markets on their own. But in any case, sizeable fiscal consolidation is needed urgently in a number of industrial countries and generally in two forms: cuts to rein in current deficits, and convincing action to ensure that deficits will not surge in the future.

Fiscal consolidation is even more pressing for those countries that entered the crisis with high debts that were a result both of fiscal profligacy and of low potential growth arising from a lack of international competitiveness. Adjustment to the former is straightforward even if painful to implement. But for countries in a currency union with their major trading partners, devaluation is not an option, so improvements in competitiveness can come only through higher productivity or lower nominal wages. As the long history of sovereign debt crises has shown, when investors lose their confidence in a country's ability to service its debt and become unwilling to hold it, rescue packages, bailouts and even debt restructuring for the sovereign remain the only options.

Diagnosis: identifying the causes of the crisis

The adage of every good doctor must be: treat the symptoms of the disease, but never forget its causes. And what is true for medical illness is also true for a financial and economic crisis: policymakers must address its symptoms and at the same time press ahead with reforms aimed at its causes so as

to reduce systemic financial risk as soon as possible. Therefore, to better evaluate how far along we are with these reforms, we first briefly summarise the causes of the crisis. The causes are all surely interrelated, but for ease of exposition we divide them into two broad categories: microeconomic and macroeconomic.[3]

Microeconomic causes

The microeconomic causes fall into three areas: flawed incentives; failures of risk measurement and management; and weaknesses in regulation and supervision. Jointly, these shortcomings allowed the entire financial industry to book profits too early, too easily and without proper risk adjustment.

The crisis revealed distorted incentives for consumers and investors, financial sector employees, and rating agencies alike. Consumers and investors failed to watch out for themselves, borrowing heavily and investing in overly complex and opaque products. Managers of financial firms, encouraged by compensation schemes keyed to short-term returns and business volumes, increased leverage and accumulated huge amounts of risk. Rating agencies, overwhelmed by the avalanche of complex structured products yet unable to resist the profits from taking on the business, failed to correctly evaluate the probability that borrowers would repay.

Measuring, pricing and managing risk all require modern statistical tools, which are based largely on historical experience. Even for data series with a long history, the belief that the world evolves slowly but permanently meant downweighting the importance of the more distant past and its upheavals. So, the long but more recent period of relative stability created the perception that risk had permanently fallen. The result was a willingness to buy and sell risk very cheaply. But as we have learned at great social cost, those ubiquitous statistical methods are especially bad at assessing large-scale, infrequent events. They perform worst when we need them most.

Inadequate governance of risk management created additional problems.[4] Risk managers have the very unpopular job of telling traders to stop making money. A lack of support from top management sidelined the risk managers.

Finally, the regulatory system was too indulgent and, for some activities, too easily evaded altogether. Overreliance by regulators and supervisors on market discipline (including the discipline supposedly imposed by credit rating agencies) led to what can only be characterised as an extremely light touch in some countries at the core of the global financial system. And when even that light touch proved too much to bear, financial institutions found it easy to shift selected activities outside the regulatory perimeter. As a result, by fighting the wrong battles or not fighting at all, weak regulators and supervisors allowed the build-up of enormous risk.

[3] The following section summarises material in BIS, *79th Annual Report*, June 2009, Chapter I.

[4] Counterparty Risk Management Policy Group, *Containing systemic risk: the road to reform*, Report of the CRMPG III, 6 August 2008.

Macroeconomic causes

The macroeconomic causes fall into two broad categories: problems associated with the build-up of imbalances in international claims, and difficulties created by the long period of low real interest rates.

Persistent and large current account surpluses and deficits generated net capital flows from capital-poor emerging market countries to capital-rich industrial economies for most of the decade preceding the crisis. The varying opinions on the origin of these flows and the resulting build-up of cross-country claims – excessive domestic demand in some major advanced economies; a savings glut; a dearth of investment opportunities; demand for international, low-risk assets for portfolio diversification; or the building-up of war chests by emerging market economies – are secondary. The point, rather, is that the symbiotic relationship between export-led growth in one set of countries and leverage-led growth in another generated the large gross flows and huge stocks of claims by residents of the exporting countries on the residents of the importing countries. Those flows and claims contributed to the mispricing of assets and to the global spread of the crisis.

The second set of macroeconomic causes stemmed from the protracted period of low real policy rates and low real long-term interest rates that began in 2001. Those low rates had a number of important effects. Among them was the boom in credit to households in many advanced economies, which fuelled some clearly unsustainable run-ups in housing prices. Another was the search for yield, which drove institutional investors to take on significant additional risk even when it would achieve only modestly higher returns.

Addressing the causes of the crisis

If the financial system is to have a more stable foundation, the causes of the global financial crisis must guide the design of reforms we put in place. So, to write effective prescriptions, it is crucial that we draw the correct conclusions from the causes. One might deduce from the crisis that certain activities, like securitisation or over-the-counter trading, and certain financial instruments, like collateralised debt obligations or credit default swaps, should be banned in order to prevent another meltdown. But even if we could do it, fighting the last war would not win the next one. Instead, we must take a flexible and forward-looking approach that addresses the externalities that allowed the specific activities to inflict systemic damage. Rather than attempt the impossible task of eliminating crises, we must seek to reduce both their likelihood and their severity.

As discussed in last year's Annual Report, building a more resilient financial system requires us to address the risks arising from two types of externalities in that system: one is joint failures stemming from common exposures (institutions are all exposed to the same risk) and interlinkages (institutions are inextricably tied together), and the other is procyclicality.[5] The next two

[5] BIS, *79th Annual Report*, June 2009, Chapter VII.

Progress of financial system reform

Reducing the probability of institution failure	Reducing spillovers and procyclicality			Macro policies
	Institutions	Markets	Instruments	
	Reforms (in progress)			
Manage balance sheet size, composition and riskiness: Improve quantity and quality of capital Impose minimum liquidity requirements Improve risk coverage Impose leverage limits	Make systemically important financial institutions (SIFIs) safer: Limit scope and extent of activities Impose systemic capital and liquidity charges	Move over-the-counter (OTC) products to central counterparties Improve transparency of trading, including through increased use of trade repositories		
Improve governance and incentives: Strengthen risk management Improve compensation practices Improve supervisory and regulatory standards	Limit spillovers if a SIFI fails: Adopt cross-border supervision Develop cross-border crisis management and resolution Make banks' liability holders bear the costs of resolution, even for SIFIs			
	Put all SIFIs within the regulatory perimeter			
Enhance market discipline: Expand disclosure, including of securitisation exposures Harmonise accounting standards across countries Strengthen oversight of credit rating agencies	Reduce procyclicality of the financial system: Impose cyclical capital buffers Implement through-the-cycle margins and haircuts Use other instruments, including loan-to-value ratios and limits to currency mismatch			
	Unfinished business			
	Keep regulatory perimeter impermeable for SIFIs	Move OTC products to exchanges or electronic platforms	Registration and risk ratings	Integrating financial stability concerns in policy framework

Table I.1

sections summarise the major reforms required to address those externalities (see also Table I.1) and provide an overview of how they fit together.

Prescription: reducing the risks of common exposures and interlinkages

New and better rules for reducing systemic risk arising from common exposures and interlinkages operate on two fronts: reducing the risk that an individual institution will fail and reducing the chance of a system-wide breakdown.

Reducing the chance of an individual failure

The probability that a financial institution will fail can be reduced with a variety of tools that: (i) affect the size, composition and riskiness of the balance sheet; (ii) improve the governance of the institution and the incentives of its executives; and (iii) enhance market discipline. In combination and properly implemented, these should reduce risk-taking, increase the ability of institutions to absorb losses and make failure less likely.

With the first set of goals in mind, the Basel Committee on Banking Supervision (BCBS) has recommended four types of balance sheet measures, all of which should lead banks to hold capital and liquidity that better reflect their risk exposures.[6]

The first BCBS balance sheet proposal improves the quantity and quality of capital at banks so that they can better withstand unexpected declines in the value of their assets.

The second guards against illiquidity by limiting both the extent of maturity transformation at banks (borrowing short to lend long) and their reliance on wholesale funding. It is worth emphasising the obvious: the more maturity transformation a bank undertakes, the less liquid it is. And as the most recent crisis showed, liquidity is at least as important as capital during times of stress, especially for banks funding themselves in international markets or operating across a variety of jurisdictions.

The third proposal improves risk coverage with respect to counterparty credit exposures arising from derivatives, repurchase agreements, securities lending and complex securitisation activities.

The fourth complements complex, risk-weighted capital requirements with a supplementary backstop – a limit on the leverage ratio. Because leverage amplifies losses as well as profits, it increases the risk of failure in bad times.[7]

[6] In December 2009, the BCBS published two major papers outlining proposals to strengthen capital and liquidity regulation. These included a set of measures to raise the quality, consistency and transparency of the capital base (*Strengthening the resilience of the banking sector* and *International framework for liquidity risk measurement, standards and monitoring*, Consultative Documents, 17 December 2009). Similarly, the IASB has proposed a more forward-looking provisioning approach (International Accounting Standards Board, *Financial instruments: amortised cost and impairment*, Exposure draft ED/2009/12, November 2009).

[7] Our discussion focuses on banks, but efforts to reduce the probability of failure involve other types of financial institutions as well. One example is the global framework devised by international insurance supervisors, Solvency II, which has already been applied in the European Union.

Some jurisdictions – including Switzerland and, more recently, Ireland – have begun to impose more stringent capital requirements and leverage ratios on their banks.[8] Authorities in the United Kingdom and the United States have essentially done the same thing through their stress-testing procedures. In a trend that reinforces those efforts, the anticipation of such requirements in combination with investor demands has already led many institutions to make significant adjustments to their capital base.

The second set of tools aimed at reducing the risk of failure for individual institutions address governance and managerial incentives. National supervisors in many countries have increased their monitoring to ensure better risk management at financial institutions. Numerous measures create special bank resolution regimes (including living wills). A hoped-for side effect of the measures is that management will be more aware of the risks inside their own firms.[9] Related efforts, which attempt to better align compensation structures with prudent risk-taking, will reduce the perverse incentives that drive managers to increase short-term profits without regard to the long-term risks imposed on the firm and the system.[10]

In addition, the BCBS is preparing frameworks to improve supervisory standards, valuation methods, liquidity arrangements and stress testing. Improved adherence to international supervisory and regulatory standards is most certainly a first step. In January 2010, the FSB published a framework on this topic that is currently being implemented. It contains three main elements: leading by example; FSB peer reviews; and promoting global adherence to international financial standards.

The third set of tools seek to increase transparency to enhance market discipline. For example, the enhancements to the Basel II regulatory framework published by the BCBS in July 2009 address weaknesses in the disclosure of securitisation exposures at banks.[11] Other measures include those sought by the IASB and the Financial Accounting Standards Board to increase the international harmonisation of accounting standards; implementation of regulation proposed by the International Organization of Securities Commissions (IOSCO) to address the need for stronger standards

[8] In November 2008, Switzerland's banking regulator introduced cyclical capital buffers and liquidity ratios for the two largest Swiss banks. The capital requirements, to be implemented by 2013, are 50–100% above those set in Pillar 1 of the Basel II standard. In March 2010, Ireland's financial regulator announced that, by the end of 2010, banks in Ireland will be required to hold capital amounting to 8% of core Tier 1 capital, and capital of the highest quality – equity – must account for 7 percentage points of that amount. Further amounts, specific to each institution, are to be added in the calculation of future loan losses.

[9] Special resolution regimes for large financial firms have been proposed or introduced in several jurisdictions, including Germany, Switzerland, the United Kingdom and the United States. Cross-border resolution plans are also being considered, as discussed below.

[10] The Financial Stability Board (FSB) has presented guidelines for the reform of the regulatory and supervisory framework that address these concerns. See *FSB principles for sound compensation practices – implementation standards*, September 2009 (based on an April 2009 report issued by the predecessor organisation, the Financial Stability Forum). The FSB reviewed progress in the implementation of those standards in *Thematic review of compensation*, March 2010.

[11] Basel Committee on Banking Supervision, *Enhancements to the Basel II framework*, Revisions to Pillar 3, July 2009. A peer-reviewed progress report on risk disclosure by market participants is currently being prepared by the FSB.

and oversight for credit rating agencies; and improvements of disclosures more generally.

Reducing the chance of system-wide failure

We want to eliminate unnecessary instabilities in the structure of individual institutions in the ways just described, but we still want a system in which individual institutions can fail.[12] What we do not want is a system in which many fail at once, whether because they have a common exposure to a risk or because a single institution is so large or interconnected that its failure brings on a system-wide failure, creating a cascade of insolvencies.

The problem of common exposures is relatively straightforward. It means that a financial landscape dotted with a large number of small yet identical institutions will be just as prone to collapse as a system with a small number of financial behemoths. To guard against either type of weakness, all that regulators and supervisors have to do in principle is ensure that intermediaries are not all equally subject to the same stresses.

The bigger challenge is preventing a single financial institution from creating a cascade of failures. Doing that involves three tasks: (i) reducing the systemic importance of financial institutions; (ii) minimising spillovers from an institution's failure by ensuring that the costs of failure will be borne by the institution's unsecured liability holders; and (iii) bringing all systemically relevant financial institutions and activities within the regulatory perimeter and keeping them there. In all three of these areas, we see progress both through the regulation and the supervision of individual institutions – in many cases representing welcome steps towards adopting a macroprudential approach – and through the reform of market structures.

Reducing systemic importance. The first task – preventing a financial institution from becoming so big or so interconnected that its failure could not be tolerated – means confronting the systemic risks that its potential failure creates. Systemic risk is like pollution. We employ a variety of means to discourage people from dumping waste into the air or water. Likewise, we have a variety of means that could discourage institutions from contributing to systemic risk; among them are scope constraints and pricing policies.

On scope, policymakers are contemplating rules that would variously limit the extent of financial intermediaries' activities or simply limit the asset size of institutions. An example of the activity limit is the Volcker proposal, which would ban depository banks in the United States from proprietary trading.[13]

Under pricing policies, banks and other institutions could be forced to pay for the privilege of creating systemic risk. Among the several possible approaches, a so-called systemic capital charge in the form of capital or

[12] Nonetheless, in smaller countries with a small number of institutions, all of which are of systemic importance, the only option is to eliminate nearly all possibility of failure.

[13] Statement of Paul A Volcker before the Committee on Banking, Housing and Urban Affairs, US Senate, Washington DC, 2 February 2010.

liquidity charges appears to be the best. The charge would compel systemically important institutions to hold relatively more capital and liquidity, thereby reducing the probability of their failure. In theory a tax system could achieve the same objectives with the same incidence as a systemic capital charge, but the ultimate complexities of the solution make it unappealing.[14]

Containing resolution costs and spillovers. Limiting the systemic importance of institutions will help us achieve the second task – containing spillovers by making an institution's liability holders bear all costs of a failure. We can do that if, before any failure occurs, we are able to identify where risk is concentrated in the system and we have sound and transparent resolution processes in place. This task has obvious international aspects, and the transparency issue has implications for the structure of financial markets.

As the recent crisis taught us, resolution processes must include cross-border crisis management and resolution if we hope to limit spillovers from the failure of a large, globally active financial institution.[15] Measures aimed at coordinating the supervision of such institutions to ensure consistency across national authorities will allow regulators to step in ahead of a crisis.

In a supervisory college, national authorities involved in the supervision of a large, internationally active financial intermediary meet to coordinate their efforts. International progress on creating supervisory colleges for every large, global intermediary is a combined project of the FSB, the BCBS and the International Association of Insurance Supervisors (IAIS). The European Commission has already mandated such a scheme for the European Union.[16]

Regarding the market implications, information asymmetries are the fuel that feeds financial panics. In the 2007–09 crisis, we saw contagion ignited by uncertainty over counterparty exposures – not knowing who will bear losses should they occur. Transparency and information are the keys to any solution, including for markets. One of the core reforms to market infrastructure is the conceptually simple but technically complex move to establish central counterparties (CCPs) and require that more trading take place on registered exchanges. Shifting trading away from a primarily bilateral, over-the-counter system to one dominated by CCPs has a number of clear benefits. It improves the management of counterparty risk because the CCP is the counterparty for both sides of any transaction. It makes multilateral netting of exposures and payments straightforward. And it increases transparency by making information

[14] A third and much less palatable alternative is to tax all financial institutions ex post for the costs that large failures impose on the public treasury. The problem with this tax is that it provides no effective disincentive to take additional risk.

[15] A number of steps are being taken to address this problem. In March 2010, the BCBS published a set of recommendations. An FSB working group is looking at the resolution of financial firms under existing national frameworks and how the frameworks would interact; by October 2010, the FSB expects to issue principles to help harmonise those frameworks. The IMF has also been reviewing means of effective resolution for cross-border financial institutions.

[16] All European cross-border banking groups will need to have a supervisory college in place by end-2010 following requirements in the 2009 amendment to the Capital Requirements Directive (CRD2); and the Solvency II Directive requires that colleges be established for all cross-border insurance groups by end-October 2012.

on market activity and exposures – both prices and quantities – available to regulators and the public.[17]

Fortunately, legislators and regulators see the advantages of CCPs and of centralised clearing and exchange trading and are making significant progress on associated reforms that will improve systemic safety.[18]

Establishing a comprehensive regulatory perimeter. The third task, including and keeping all systemically relevant financial institutions and activities within the regulatory perimeter, arises from the lesson learned at high cost during the financial crisis. Some progress has been made in this area – for instance, the Joint Forum has recommended a broad set of measures that address the consistency and inclusiveness of regulation across financial sectors and products[19] – but much still needs to be done.

Prescription: reducing procyclicality

As noted above, writing prescriptions for a more resilient financial system means addressing the risks arising from two types of externalities. We have covered the first type – joint failures arising from common exposures and linkages. The second type, procyclicality, refers to the amplifying feedback effects between the financial system and the real economy. The basics of the procyclicality problem are straightforward. As the economy booms, lending tends to become easier and cheaper. Banks are flush with funds and capital, borrowers are more creditworthy, and collateral is more valuable. In a downturn, these conditions are reversed. Banks are forced to absorb unexpected losses, which makes them less well capitalised, so they cut back on lending. Borrowers become less creditworthy. And collateral values fall.

Monetary and prudential authorities are developing automatic stabilisers that complement discretionary monetary policy to reduce the natural amplification effects at work in the financial system. As discussed in detail in Chapter VII, these stabilisers are a key element of a macroprudential policy

[17] For details, see S Cecchetti, J Gyntelberg and M Hollanders, "Central counterparties for over-the-counter derivatives", *BIS Quarterly Review*, September 2009, pp 45–58.

[18] A number of steps towards greater use of CCPs have been taken, among them: the establishment of the OTC derivatives regulators forum in September 2009; the commitment, also this past September, by G15 major derivatives dealers to achieve specific target levels for central clearing of OTC credit derivatives; recommendations in January 2010 by the Joint Forum of banking, insurance and securities regulators to strengthen regulatory oversight of credit transfer products; revised standards for CCPs to better address risks associated with clearing OTC derivatives published by the Committee on Payment and Settlement Systems and IOSCO in May 2010; Basel Committee proposals that adjust capital requirements in a way that encourages a shift from OTC exposures to CCPs; and proposed reform legislation in Europe and the United States.

[19] In January 2010, the Joint Forum, composed of the BCBS, IOSCO and the IAIS, published its report *Review of the differentiated nature and scope of financial regulation: key issues and recommendations*. The report recommended a range of measures to address the appropriateness of the regulatory perimeter, including: harmonising regulation across the banking, insurance and securities sectors; strengthening the supervision and regulation of financial groups, particularly those providing cross-border services; establishing consistent and effective underwriting standards for mortgage origination; broadening the scope of regulation to include hedge fund activities; and strengthening regulatory oversight of credit transfer products.

framework. They include: capital buffers that are calibrated to aggregate levels of credit relative to economic activity so that they rise in booms and fall in busts; through-the-cycle provisioning; and margin and haircut practices at lenders that are more stable over the business cycle. Capital buffers and through-the-cycle provisioning are being addressed by the BCBS. Margin and haircut practices are the subject of a recent report by the Committee on the Global Financial System.[20] A variety of countercyclical supervisory instruments under development are also discussed in Chapter VII, including variation in maximum allowable loan-to-value ratios and limits on currency mismatch.

Reforms: key areas of unfinished business

Policymakers have made significant progress towards building a more stable financial system. The reforms in train should be enacted and enforced. But more is needed. On the regulatory side, while work on institutions continues, markets and instruments require more attention. And efforts should be redoubled to ensure that the regulatory perimeter remains robust to the inevitable efforts to erode it. Also needed is a clearer recognition that better regulation will not be enough – macroeconomic policies have an essential role to play, and their frameworks must be expanded to obtain the more stable system needed.

As we wrote last year, success in building a safer financial system means identifying and mitigating systemic risk in all three principal components of the system: markets and instruments, as well as institutions.[21] They must all be made safer and more transparent without impairing productivity-enhancing innovation or their essential function of improving the allocative efficiency of the economy. For markets, initiatives to introduce centralised clearing and settlement for OTC derivatives represent a helpful improvement to infrastructure and a first step towards requiring trading on organised exchanges.

For instruments, as discussed in last year's Annual Report, one approach to balancing innovation and safety is to require some form of product registration that limits investor access to instruments according to their degree of safety. Steps already taken in that direction include efforts to improve instrument standardisation and documentation, including those that facilitate the use of central counterparties, and efforts to better inform consumers by strengthening disclosures on investment products. But those steps should be just the start of more comprehensive reforms.

In a dynamic, market-based economy, in which the primary incentive is to increase profitability, we must expect that financial institutions will always seek to test the boundaries of regulation and escape the perimeter or place some of their activities beyond it, whenever and wherever they can. Regulators should

[20] Committee on the Global Financial System, "The role of margin requirements and haircuts in procyclicality", *CGFS Papers*, no 36, March 2010.

[21] BIS, *79th Annual Report*, June 2009, Chapter VII.

not stifle innovation, but they have to ensure that the ground rules apply to new ways of doing business. In other words, all systemically important financial institutions – no matter how big or small, no matter what their legal form – must be prevented from escaping the view and reach of regulators and supervisors. That is especially true for macroprudential supervision, which – as the crisis showed – must always be on the watch for threats to stability emerging from obscure corners of the financial system.

Yet regulatory reform alone is not enough to deliver financial stability. Monetary and fiscal policies also have a role, but if they are to play it, their frameworks must become broader-gauged and more forward-looking. As emphasised in Chapter VII, interest rates and countercyclical prudential policies are complementary tools for delivering a more resilient financial system. However, improved awareness of the implications of interest rate policy for asset prices and debt need not come at the expense of the traditional central bank objectives. Rather, monetary and prudential policies are essential partners in delivering high and stable growth.

On the fiscal policy front, reform must put authorities in a position where they can offset recessionary deficits with surpluses during booms and still have some ammunition left for emergencies.

Moreover, national authorities must be mindful that they operate in a global environment. For many emerging market economies, this means that they must act knowing that capital flows can be destabilising, foreign exchange reserve accumulation is no panacea, and export-led growth with persistent current account imbalances cannot go on indefinitely. Above all – as Chapter IV concludes – to promote orderly macroeconomic adjustment and balanced global growth, there is no substitute for tighter monetary policy conditions and increased exchange rate flexibility.

Conclusion

The financial disruptions in the first half of 2010 have brought the fragility of the industrial world's financial system into stark relief: a shock of virtually any size risks a replay of the events we saw in late 2008 and early 2009. The sovereign debt crisis in Greece is clearly jeopardising Europe's nascent recovery from the deep recession brought on by the earlier crisis.

Unlike then, however, we have hardly any room for manoeuvre. Policy rates are already at zero and central bank balance sheets are bloated. Although private sector debt has started to decline, public debt has taken its place, with sovereign fiscal positions already on an unsustainable path in a number of countries. In short, macroeconomic policy is in a vastly worse position than it was three years ago, with little capacity to combat a new crisis – it will be difficult to find a source of further treatment should another emergency arise. Regaining the ability to react to economic and financial crises, by putting policies onto sustainable paths, is therefore a priority for macroeconomic policy.

For fiscal policy, the sizeable fiscal consolidation needed urgently in a number of industrial countries should generally take two forms: reductions in

current deficits and action that ensures long-term fiscal sustainability. For monetary policy, the fragility of the macroeconomy may be delaying tightening. But policymakers should not lose sight of the risks to financial and macroeconomic stability arising from a long period of very low interest rates. The side effects will continue to cumulate – eventually reinforcing precisely those factors that contributed to the fragility of the financial system and made it crisis-prone in the first place.

Finishing the reforms to the financial system, particularly those that will quickly increase its resilience, has acquired even greater urgency. They can provide the most immediate protection to the financial system in the event of a new crisis. Moreover, acting now to improve the capital base and the liquidity of bank balance sheets will not jeopardise the recovery. Rather – by making financial institutions sounder – those actions will promote a sustainable recovery.

Those efforts will bring us closer to the long-term goal of making future crises less likely and less severe. Finishing that job means tackling remaining reforms without delay: implementing an impermeable regulatory perimeter for all systemically important financial institutions, addressing systemic weaknesses in financial market infrastructure and instruments, and integrating financial stability concerns in macroeconomic policy frameworks.