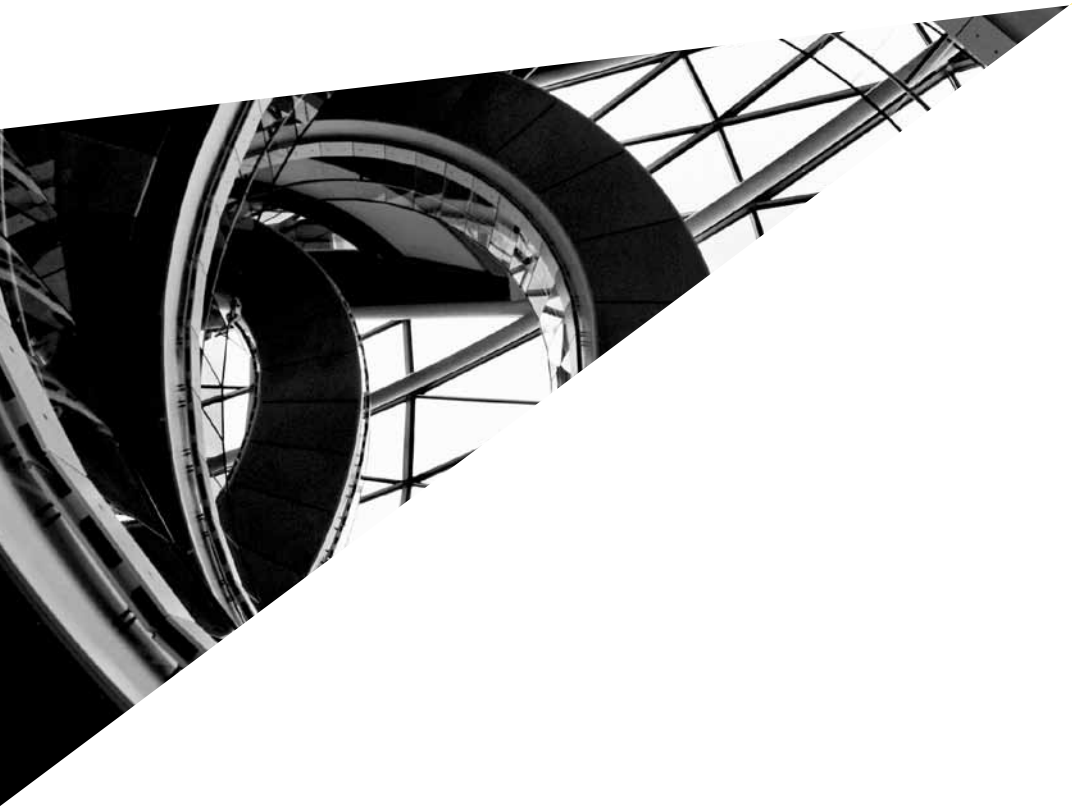
Challenges for central banks: wider powers, greater restraints

The financial crisis and its aftermath



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Forewords

This latest white paper, produced by Ernst & Young's Central Banking team with OMFIF (Official Monetary and Financial Institutions Forum), examines the rapidly changing roles of public sector institutions in financial services and markets. Together, we seek to analyze and assess in this paper the new challenges facing central banks. We ask whether their strategies and operations will become fundamentally different as a result of their pivotal role in responding to the current economic and financial crises.

I would like to thank the many distinguished senior figures from government, central banking, financial services, academia, Ernst & Young, OMFIF and other bodies around the world for their contributions to this white paper. They have stimulated, challenged and argued with us and with each other in an attempt to move the debate further. We are certain that although this is unlikely to be the last word on the subject, it is a work of analysis that will stand the test of time. We welcome further comments and contributions.

Philip Middleton
Head of Central Banking
Ernst & Young

Central bankers, like many other members of the financial market community, need to respond to several challenges at once. This includes the need to adapt to a world prone to disruption from "unknown unknowns," in which much more interdisciplinary input will be needed. Partly for these reasons — and also because there is very plainly no "one size fits all" approach in the realm of international central banking — in writing this joint report we have drawn our expert opinion from a very wide range of fields.

We are pleased to incorporate views from several central banks from emerging market economies, given their global importance and the fact that, on the whole, these countries have emerged with their economic structures and strengths reinforced in recent years. The overriding reason for the creation and development of OMFIF is to encourage mutually beneficial dialogue between public and private sector practitioners in world money and finance. We believe that the report that we have carried out with Ernst & Young lives up to this underlying objective.

David Marsh
Chairman
OMFIF

John Plender
Member of the Board
OMFIF

Executive summary

As recently as five years ago, most central bank governors could walk down the main street of their country's capital city unnoticed, their names and faces familiar only to avid readers of specialist journals. Today, in many countries, they are as well known as the government leaders they serve, and their words and deeds are the subject of heated debate in newspapers, bars and taxis. The continuing financial and economic crises have thrust central bankers center stage and cast them as leading actors, simultaneously berated as progenitors of the crisis and hailed as potential saviors.

It is not clear that all central bankers welcome this transition from membership of a hitherto largely anonymous technocratic elite to an increasingly public role. This white paper argues that central bankers need to adjust to an increasingly public and prominent position on the political stage. A fundamental debate about the position of central banking and its relationship to government is now under way.

The financial crisis has led to considerable interlinked economic, sovereign debt and financial sector turbulence. At the time of writing (September 2012) these concerns show little sign of abating. This has been accompanied by increasing volatility in the political arena and an unstable world against the backdrop of a wholesale macroeconomic global transformation. The benign economic conditions and stable politics of the "Great Moderation" have been shown to be transitory. The global economy confronts its greatest challenges since the Second World War.

Central bankers have achieved a new prominence and become pivotal members of the policy-making establishments of both national and intergovernmental organizations. As a result of a growing responsibility for financial stability, coupled with their injection of massive amounts of liquidity into the financial system, central banks in many jurisdictions have extended their powers and remit beyond their traditional "lender of last resort" function. We suggest in this report that this extension of powers is unlikely to be temporary and may not be entirely desirable. It raises far-reaching questions about the accountability and transparency of the principal activities of central bankers.

In addition to their traditional monetary policy and governmental banking roles, central banks have become national and global firemen with growing responsibility for the resilience of economies, the stability of financial systems and individual financial institutions, macro-and microprudential regulation, and macroeconomic and quasi-fiscal policy. They have gleaned far greater exposure to the media, politics and electorates. They have also taken on a whole range of new strategic and operational tasks and become exposed to far greater financial, reputational and operational risks. As their responsibilities have grown, so have their balance sheets and the accompanying risks.

From acting largely behind the scenes, central banks have now entered the political arena in a very public manner. Whether as principals, agents or advisers, it is unimaginable that there would no longer be a strong political dimension to the activities of central banks. If that is the case, to what extent and how should central banks strive to maintain political neutrality? Should fiscal policy, for example, be an arena restricted to elected politicians, or should the views of central bankers be publicly aired as well? To whom should central bankers be accountable, and how transparent should that accountability be to the media and to electorates?

If this expanding remit of new roles and activities is to become permanent, what targets should be set for a central bank, and who should decide whether these targets have been met? While it is comparatively straightforward to set a target for inflation, how does one measure "financial stability," and just what degree of financial instability is deemed acceptable?

The white paper draws on extensive primary and secondary research with participation from current and former central bankers, politicians, academics, senior officials, members of OMFIF staff and Advisory Council, and contributors from Ernst & Young to analyze the recent activities of central banks. We reach three major conclusions:

- The crisis has fundamentally changed the roles of central banks and central bankers, and there will be no reversion to the previous status quo. Adjusting to an increasingly public and prominent position on the political stage will be one of the lasting legacies for central bankers. The role of the central banker has become inherently more powerful, more complex and more contentious.
- The price of extending the activities and powers of central banks is likely to be restrictions on their hitherto sacrosanct independence. In many countries there will be a growing and vigorous debate about the transparency of the activities of central bankers and of accountability to government and the wider electorate.
- Many central banks are confronting a new set of policy and operational challenges. In a palette of disciplines ranging from overall strategy and governance, through risk management, and on to the core operational platform, there is much work to be done in attaining organizational fitness to manage significantly increased and more complex roles.

The report argues that the role of central bankers is changing and will continue to change fundamentally and irreversibly. There are multiple challenges, ranging from the grandly philosophical and strategic to more prosaic concerns. Paradoxically, in the final analysis, it may well be that expanded powers and responsibilities for central banks will lead to a full or partial loss of the independence that has, particularly in the Western world, become the cherished hallmark of central banking. Having been forced center stage as a result of the financial crisis, it is doubtful that central bankers will be able to escape the limelight, so they will have to define and adapt to an increasingly public role.

In **Section 1, "The new centrality of central bankers,"** we describe the key challenges facing central bankers and discuss how the growing multiplicity, complexity and difficulty of roles now undertaken by central banks have fundamentally and irrevocably changed the nature of central banking. We highlight the growing expectations of central banks and ask whether their powers and capabilities are adequate — and whether expanded powers will require greater accountability and transparency with corresponding changes in governance.

Section 2, "Lessons from recent central banking history," presents summary issues arising from the recent activities of some of the world's major central banks, looks at the differing responses to challenges of monetary policy and financial stability, and sets the stage for the following sections.

Section 3, "The new risk landscape for central banking," describes the growth in the balance sheets of several major central banks and points to the new and more complex risks within those balance sheets and elsewhere. Issues of profit and loss, impairment, and capital are discussed from both theoretical and practical standpoints. The section discusses quantitative easing, its role in monetary policy and the questions it raises for central banks, the new and interesting problem of reserves, and introduces the subject of the central bank's role in financial sector stability, which is addressed in depth in section 5.

Section 4, "Conflicts, accountability and independence" is a wide-ranging discussion of the issues of accountability and independence and asks whether, in democratic societies, complete independence for central banks is any longer a sustainable proposition. It argues that, at the least, central bankers will have to explain and defend their actions to parliaments, members of the press and the public, and it asks whether current governance arrangements are still suitable. This section also examines major new accounting policy questions for central banks and discusses their implications.

Section 5, "Macroprudential supervision" addresses the question of macroprudential supervision, discusses the issue of financial sector stability and the central bank's role in assuring it, examines the roles of structural policies and measures and compares these with instruments to address pro-cyclicality, and concludes with a discussion of appropriate targets and how these should be set and monitored.

Finally, **Section 6, "Central banks in a new environment"** and a concluding section summarize the principal issues and challenges and look to the future of central banking.

Section 1
Overview — The new centrality of central bankers

Central bankers have risen significantly in the economic rankings to become a pivotal part of the policy-making establishment in both industrialized countries and emerging market economies.

Seminal shift in central banks' policy-making roles

Money has been with us for more than 4,000 years; for most of that time, we did without central bankers. During the past 150 years in which they have played an important role in the economic lives of leading nations, central banks' influence has waxed and waned. But since the eruption of the global financial crisis in 2007 and the accompanying large-scale increase in government debt in the US, Europe and Japan, they have undergone a seminal shift with few precedents. Central bankers have risen significantly in the economic rankings to become a pivotal part of the policy-making establishment in both industrialized countries and in emerging market economies. The new landscape brings a range of consequences on a global scale, with repercussions on financial and business practices in many parts of the world.

In nearly all cases, central bankers are unelected officials who, until relatively recently, were operating largely unseen in technical areas. Now, central banks have become ubiquitous. As part of emergency action to combat the crisis, many of the world's leading central banks have moved into new fields — or back into old ones — of responsibility. Some interpretations are that they are under-resourced and not subject to sufficient oversight or accountability. In some countries they now appear to be engaged in both fiscal and monetary policy; they have become judges of probity, arbiters of capital markets, rescuers of banks, backstops to governments and overarching umpires of the financial system. They operate in an economic and political environment of "shared objectives"[1] that has become harsher, more complex and less forgiving. They have become more vulnerable to risks of all kinds, whether from fluctuations in capital markets, from changes in political and public opinion, or from broader macroeconomic developments.

In two critical, interlinked areas — by taking charge in many cases of the wider stability of the financial system, and by systematically expanding their balance sheets to inject liquidity into government bond markets and commercial banks' balance sheets — central banks have amassed great influence. Yet they attract manifold criticism for real or alleged misdemeanors and shortcomings. There are two interlinked paradoxes here. First, they have been widely blamed for not spotting the buildup of the financial crisis, for not taking action to forestall it and for following one-sided policies such as inflation-targeting that may have exacerbated it. Nevertheless, they have been granted wider duties and remits for action. Second, as their field of maneuver has widened, they have simultaneously become more constrained. Reflecting the extreme attention that they attract and the far-reaching consequences of their actions, central banks are confronted with acute and many-sided tests of their abilities and acumen. Greater exposure to politics and the media and fresh operational tasks require them to increase diversity of recruitment. In some cases, they are required to be more market-orientated and focused on profitability while also being more aware of commercial and financial risk — for example, in managing official reserves of gold and foreign exchange, or in handling collateral in the shape of government bonds that may no longer be risk-free.

A complex trade-off between power, risk and responsibility is under way. Many central banks have admitted their (partial) responsibility for the circumstances generating the present set of international economic and financial problems — and have pledged to do better. Ben Bernanke, Chairman of the Board of Governors of the Federal Reserve, told Congress in 2009, "There were mistakes made all around. ... We should have done more [in banking supervision]. We should have required more capital, more liquidity. We should have required tougher risk management controls."[2]

Such declarations have brought in their wake wider powers coupled with greater restraints. John Nugée, Senior Managing Director at State Street Global Advisors and former Reserve Manager at the Bank of England, says: "Central banks face the loss of three characteristics that in the past were among their most prized attributes: clarity of mission, independence of action and political neutrality."[3]*

There is an important distinction between the behavior of central banks in developed countries and those in emerging market economies. On the whole, those in emerging market economies have withstood economic turbulence better than their Western counterparts, although in many instances the conditions of their financial sectors were different, not least in the lack of exposure of the banking system to residential mortgage-backed Securities (RMBS). Rakesh Mohan, former Deputy Governor of the Reserve Bank of India and now Professor of International Economics and Finance at the Yale University School of Management, warns against a unified perception of central banks around the world: "History suggests that there is no constancy in the practice of central banking. This implies that there is no one size that fits all: we have to keep changing central banking functions as the need changes. We can see that over time in the same jurisdiction and across countries at the same time. We need to acknowledge this and then act accordingly. We need different horses for different courses."[4]

Mohan, a particular critic of financial innovation in the West, says the Reserve Bank's example of "active policy intervention" in the pre-crisis years, in contrast to the then-prevailing approach of laissez-faire liberalization, "demonstrated the value of independent thinking in the face of considerable groupthink that was characteristic of much thinking on monetary policy and financial regulation around the world."[5]

A strong backlash from politicians, in the most extreme cases, could tend to deprive central banks in developed economies of much of their hard-won autonomy. This could even propel them back to the position some of them had before, as little more than government bookkeepers. Stephen Cecchetti, Economic Adviser and Head of the Monetary and Economic Department of the Bank for International Settlements (BIS), sums up the main problem confronting central banks: "As they are given more responsibility they may end up with less independence."[6] That juxtaposition may be the defining equation in the next 10 years in the multifaceted relationship among central banks, governments and the financial system.

*The views expressed by John Nugée are his views through the period ended September 2012 and are subject to change based on market and other conditions.

There is now growing debate about whether central banks are sufficiently "accountable"; whether some of their activities are outside of their mandate; and whether the previously accepted belief that "independence" guaranteed freedom from "political interference" is sustainable or indeed desirable.

Different kinds of pressure

In many countries and regions, "Who controls whom?" is a central question. As central banks have intruded more directly into the political arena, engaging considerably greater sums of public money, demands have grown in intensity for greater political oversight and scrutiny and new standards of transparency and accountability. Different kinds of pressure arise in different ways in various countries. In the most well-known central banks – the Federal Reserve (Fed), the Bank of Japan (BoJ), the European Central Bank (ECB), the Bank of England (BoE) and even the firmly state-controlled People's Bank of China (PBOC) – the new strains are noticeable. The same is true for many other central banks in industrialized and developing countries. Jens Weidmann, President of the German Bundesbank, still by far the most influential national central bank (NCB) in the euro area, concedes that central banks in many jurisdictions have been brought "to the limits of their mandates" by their new roles.[7] Weidmann openly cites the pressure on central banking colleagues who are being increasingly called to account by parliaments, he says, which believe central banks have moved into areas that need to be "democratically legitimized or controlled."[8] Even the ECB, whose independence is entrenched in a treaty, has found itself under different kinds of political pressure for most of its existence. Partly because these pressures are growing as a result of the strains in economic and monetary union (EMU) in Europe, and partly because of the greatly increased complexity of the ECB's operations, the ECB now concedes that it must be more open in its deliberations and its policy declarations. As Peter Praet, the ECB Executive Board Member responsible for economics, puts it: "We must act more transparently. Our measures are so far-reaching and so complicated that we have to give the public a good explanation of the factors for and against every step we take."[9]

The changing conduct and status of central banks provide an important illustration of broader global patterns. Economic and financial power and resources are moving toward the emerging market economies, away from the industrialized West. Mohan, the former Reserve Bank of India Deputy Governor, points out that central banks face different policy imperatives, and this must necessarily affect monetary policies. "For example, there has been a persistence of inflation differentials between developed countries and emerging market economies for an extended period of time. This implies a corresponding nominal interest rate differential, leading to arbitrage capital flows that then put further upward pressure on exchange rates and even more arbitrage flows: is there any alternative for emerging market economies other than to practice regular foreign exchange intervention and some degree of capital account management?"[10]

The influence of the emerging market economies can be seen in another field, too. A large part of Western central banks' apparent success in bringing down inflation to targeted levels in the early 2000s was through globalization of the world economy. This coincided with what in hindsight turned out to be shortcomings in policing wider financial stability criteria and a failure to control the adverse effects of certain financial innovations. Developing countries sharply increased exports to the West, depressing price levels without damping the formation of asset bubbles. The aftermath of the crisis has ushered in a further stage of world economic transformation, with important

consequences for central banks in industrialized as well as emerging market countries. Central banks in the former have been propelled by the upheavals to extend their duties and responsibilities but are, in general, growing less independent. Those in the latter, in general less encumbered by the financial crisis, are increasing their focus on monetary tasks and are consequently becoming more autonomous.

It is worth dwelling briefly on what is meant by "central bank independence." Central banks are given a mandate, which may be price stability, financial stability or some other measure of economic well-being, by the political authorities of the jurisdiction concerned. Central banks are emphatically not at liberty to select their own mandate and must report periodically to government on how and how well they have executed that mandate. "Independence" resides in the bank's choice of methods, priorities and timing for executing that mandate. These mandates are broad, the constraints on the bank's freedom of execution are limited, and day-to-day external oversight of the bank's activities is ipso facto absent.

Although most governments have the power to nominate the head of the central bank, many governors have fixed-term mandates and only can be removed for reasons of gross negligence, misconduct or criminal behavior. There is now growing debate about whether central banks are sufficiently "accountable"; whether some of their activities (e.g., government financing or direct lending to non-financial institutions) are outside of their mandate; and whether the previously accepted belief that "independence" guaranteed freedom from "political interference" is sustainable or indeed desirable.

The battleground of politics

In the industrialized West, there have always been ebbs, flows and limits in central banking independence. Since the 19th century it has been understood that, in extremis, central banks should act as backstops to their national economies and financial systems.

At different times during the era of the gold standard, most often in periods of war or national emergency, central banks stepped in to impose order, nearly always acting on the instructions of governments. The new enlargement of their roles has brought them much more fully into the battleground of politics.

"Central banks are blamed for taking actions which should be the responsibility of governments," says Nick Butler, a professor at King's College, London.[11] Professor Harold James of Princeton University says central banks' decisions in quantitative easing to purchase particular classes of securities (mortgage-backed assets, student loans, European government debt) look like subsidies to particular borrowers or groups of borrowers, and hence raise a demand for more political and democratic control.[12]

The days are gone when central banks could dispense homilies and advice that politicians would more or less automatically accept. Yet, as Sir Andrew Large, former Deputy Governor of the BoE, says, accusations that central banks are acquiring "too much power" may cause overreaction from parliaments and subsequently lower central banks' willingness to take required levels of risk to meet agreed objectives.[13]

> "The potential for confusion between risk and uncertainty will be the most important problem facing central banks."
>
> Abdul Rahman,
> Telfer School of Management

Much depends on whether the public at large comes to believe that politicians themselves – or their trusted servants and advisers – are more competent and able than the central bankers. Some economists, such as Richard Koo, Chief Economist at Nomura Research Institute in Tokyo and a former Federal Reserve Bank of New York economist, believe that central banks have the knowledge and experience to decide measures that intrude into many areas of politics without being encumbered by unnecessary public accountability.[14] But, with the world of politics growing increasingly restive at the encroachment of central banking power, that is a minority view.

Exposure to risks

The institutions charged with policing world finance find themselves subject to forces they find difficult to forecast and assess, let alone control. According to Professor Abdul Rahman of the Telfer School of Management at the University of Ottawa: "As central banks take concerted actions to enhance systemic financial stability, they are entering a world of Knightian uncertainty – the unknown unknowns. There is potential for cascading unintended consequences and policy feedback loops. It is truly a new experience as central banks move from executing monetary policy in the pre-2008 period to restoring financial stability in the new environment. The potential for confusion between risk and uncertainty will be the most important problem facing central banks."[15]

Lorenzo Bini Smaghi, former Member of the Executive Board of the ECB, sees the three main risks facing central banks as:

- A major financial institution becoming insolvent, giving rise to tensions in the financial markets and further interventions to mitigate these risks. This could also lead to balance sheet losses.
- A major sovereign debt restructuring or default, with impact on the balance sheet and contagion to other assets.
- Central bank money is not withdrawn sufficiently quickly to avoid inflation creeping up, with impact on inflation expectations and long-term interest rates.

"The best way of lowering these risks," Bini Smaghi says, "is to take appropriate risk-control measures for the assets in the bank's balance sheet; tighten supervision over the banking system and the process of de-leveraging; and prepare adequate instruments to absorb liquidity ahead of emerging inflationary pressures, including the issuance of certificates of deposit or term deposits by the central bank, and standing ready to tighten monetary conditions."[16]

Philippe Lagayette, a former Deputy Governor of the Banque de France, also sees the dangers of excessive liquidity. He sees the following three biggest risks for central banks:

- The negative consequences of negative real interest rates during a prolonged period, producing excess debt (especially governments) and "disorderly investment management through excessive risk-taking."
- "Reduced central banking credibility through losses suffered through acquisition (or acceptance as collateral) of low-quality assets as part of efforts to resolve a liquidity crisis."
- "Loss of independence through excessive involvement in government economic stimulus efforts."[17]

According to Stephen Cecchetti of the BIS, the heightening of risks intensifies the need for more effective communication: "Mitigating the risks — of being overburdened with responsibilities that should belong elsewhere, of being pushed into monetary finance and of losing independence — requires central bankers to be clear about what they can and cannot do, as well as what they should and should not do. Forceful communication combined with continued delineation of responsibilities is the only defense."[18] Marek Belka, President of the National Bank of Poland, makes a similar point: "Mitigating risks requires a high degree of credibility and transparency. Provided these conditions are met, a central bank explaining to the public the difficulty of its task when facing high inflation and/or the danger of recession may still be successful."[19]

Worries that the extension of central banks' mandates may weaken their institutional hold spread far beyond the industrialized West. According to Monde Mnyande, former Chief Economist of the South African Reserve Bank: "At an institutional or structural level, the proposed arrangements [for financial stability] have the potential to undermine the operational independence of the central bank. Operating the financial stability mandate requires clarity and a well-structured road map. Models to measure and predict financial stability, the related policy instruments and the assessment of their effectiveness are all still underdeveloped, in contrast with the maturity of the models, instruments and understanding related to monetary policy. Central banks are entering unchartered territory. It is likely to be partly a process of trial and error, which in certain instances may still expose central banks to the risk of perceived failure."[20]

"Economic recovery needs monetary easing, but expansion of central banks' balance sheets has a downside by creating liquidity and sowing seeds of inflation."

Gao Haihong,
Chinese Academy of Social Sciences

Rediscovering the balance sheet

In a fundamental manner, central banks have rediscovered their original function and purpose — not simply as decision-makers with and advisers to governments, but as banks. Their balance sheets are no longer a largely residual item reflecting conventional operations such as responding to public demand for notes and coins, levying minimum reserve requirements and interacting with money markets. Instead, these central banking balance sheets have come to represent in many cases a crucial instrument for maintaining financial market liquidity, preventing a re-run of the shocks of 2007–08 and promoting what in many countries remains only a halting and uncertainty-prone recovery from recession.

Using central banks' balance sheets is a two-edged sword. On the one hand, substituting, in extreme conditions, for private sector deleveraging can be regarded as legitimate action to shore up public confidence and prevent a disastrous downturn.

Richard Fisher, President of the Federal Reserve Bank of Dallas, has defended the Fed's action to "reliquify" the economy, even though as a member of the policy-making Federal Open Market Committee (FOMC) he has taken a conservative line on the Fed's quantitative easing (QE), under which central banks purchase outright government bonds and other securities. "Monetary policy pretty much filled the tank," he says, referring to the Fed's measures in the wake of the crisis. "In 2008–09 there was no liquidity; we stepped up to the plate."[21]

Donald Kohn, Deputy Chairman of the Board of Governors of the Fed from 2006 to 2010, who now sits on the new Financial Stability Committee of the BoE, says the crisis-induced use of central banks' balance sheets was essential to cushion the effect of shrinking balance sheets in the private sector. "The central banks through their lender-of-last-resort function were able to offset the decline in credit flows elsewhere in the system."[22]

On the other hand, the expansion of Western central banks' balance sheets as part of a general effort to stimulate demand in the trans-Atlantic economies has encountered massive criticism from emerging market countries. This action is seen as promoting destabilizing flows of funds into developing economies, driving up their currencies to levels that make exports overly expensive and reduce economic growth. Leading figures from Asia, Africa and Latin America have criticized alleged Western efforts to weaken their own currencies, labeled a "currency war" in 2010 by Brazilian Finance Minister Guido Mantega.[23]

According to Gao Haihong, Professor and Director at the Research Center for International Finance, Chinese Academy of Social Sciences: "Economic recovery needs monetary easing, but expansion of central banks' balance sheets has a downside by creating liquidity and sowing seeds of inflation. The Fed doesn't seem to worry about the effects of its quantitative easing operations, but the rest of the world, especially the emerging economies, suffers the consequences."[24]

Such measures undermine general faith in currency regimes and in the smooth working of the international economic system, according to Alexander Kashturov, Director of the Bank of Russia's Financial Market Operations Department.

"Loss of trust in a particular currency follows the deterioration of asset quality of the central bank issuing that currency. The massive stimulus programs implemented by central banks result in a growing amount of assets of dubious quality on the asset side of central banks' balance sheets. In a modern system of fiat money, the currency is typically not directly backed by the issuing central bank's assets, but a general public may seriously doubt that a particular central bank may efficiently manage its currency supply once its assets have deteriorated in quality."[25]

Running into constraints

Among the repercussions of central banks' new roles, and reflecting, too, the intertwined nature of new global economic structures, is that central banks face new policy-making constraints. Central bankers accustomed to letting prudent reflection determine their discretionary policy choices now find they have less room to maneuver. Forced to slash interest rates in the wake of the global financial crisis in September 2008, central banks have encountered the infamous "liquidity trap" under which interest rates at the zero bound can actually deter risk-taking and promote deflation. This has left them with little choice but to embark on a further course that is fraught with technical difficulty and economic and political risk.

The aims of quantitative easing have varied: in the US, it was to depress interest rates across the yield curve and free opportunities for private sector borrowing; in the UK, it was more explicitly to boost the growth of broad money supply. One of the side effects has been to make government financing easier at a time when central banks nearly everywhere have been entreating governments to become more fiscally responsible.

By crossing the demarcation line between fiscal and monetary policies, Professor Shumpei Takemori of Keio University in Tokyo says: "Central banks have emerged into the field of politics. It should be the fiscal authorities carrying out the crisis management, but they rely on the central banks to do this and ask them to bear the burdens, because the fiscal side of policy is often paralyzed. This makes me pessimistic that we will fix our long-run fiscal deterioration."[26]

The extension of central bankers' functions into the fiscal area can be seen, like the rediscovery of their "lender of last resort" function, as a return to the practices of a previous era. Debt market operations have traditionally been part of central banking tasks and have only more recently been made a more formal responsibility of government or, in some cases, placed into a separate entity. Whatever the precedents, there is no doubt that the central banks' "case load" has become heavier. The widening of their duties, the prevalence of conflicting priorities and the probability that at least some of the recipes will backfire confront central banks with the real possibility of strategic and operational overload.

Managing a combination of high debt levels has brought fresh demands on the traditional central banking challenge of balancing priorities.

Because of the explosion of government debt and the interlocking challenges for growth policies, standard central banking activities such as taking in, securing and valuing collateral (whether government securities or other paper) have acquired new complexity. So have apparently innocuous technical arrangements such as payments systems, now seen as one of the central building blocks behind financial stability. As a result of central bankers' greater responsibilities — actual and perceived — for the global financial system, what was previously a generally accepted (if not unquestioned) level of independence and freedom from political interference has been replaced by a demand for more transparency and accountability.

Macroeconomic complexities

Central bankers are no strangers to the inherent complexities of juggling different policies necessitated by varied domestic objectives and intense international interdependence. However, managing a combination of high debt levels (both public and private sector) and low growth — a macroeconomic environment that demands conflicting policy responses in different spheres — has brought fresh demands on the traditional central banking challenge of balancing priorities. In particular, the 2008 near-collapse of the financial system and the onset of a steep recession have prompted sharp reductions in interest rates under classical central banking policies that may countermand the essential task of bringing debt under control and could even trigger new asset bubbles.

In addition, growth patterns vary widely, both between and within country groups of developed nations and the emerging market economies. According to Jamie McAndrews, Director of Financial Research and Executive Vice President at the New York Federal Reserve Bank: "The very uneven growth prospects of countries around the world add up to one of central banks' biggest challenges."[27]

Some central banks, mainly in the developed economy countries, face depressed demand conditions and poor labor market conditions for some time. Others, primarily in emerging markets, face conditions similar to the late stages of an expansionary cycle, with some signs of capital goods overhang, inflationary pressures emerging, and some slowdown in labor and product markets. These are "typical" challenges for central banks, but, for the developed economies, the challenges are extreme and have led to the use of unconventional tools. Trying to facilitate recovery for the one set of central banks while providing a glide path to continued growth for the other set poses major risks to central banks.

Demographic pressures in both advanced and developing nations pose another area of risk because of the differential effect on different countries, particularly between those having funded pensions and those working on a "pay as you go" model. The problems facing both China and Japan are examples. The world's two largest creditor nations, recently accounting for 21% and 13%, respectively, of world capital exports,[28] are likely to become capital importers in coming years. This will take place against the background of anticipated drawing on savings to fund elderly populations [29] and (in China's case) a rebalancing of the economy toward domestic expansion rather than export-fueled growth. It will coincide with the well-documented economic consequences of aging populations in Europe.[30]

International complexities — is monetary reform needed?

Emerging countries' greater importance to the world economy has generated criticism of Western monetary policy and led to calls for some kind of international monetary reform. One of the strongest proponents of such reform is China. On the one hand, the capital restrictions and the state-controlled finance system enabled the Chinese authorities to partly shield the country from the worst effects of the financial crisis in 2008 and 2009 and to engineer a remarkable, if inflationary, stimulus. On the other hand, these same factors mean that China, in the words of Jin Liqun, Chairman of the Supervisory Board of China's sovereign fund, China Investment Corporation, is the only one of the six biggest world economies that does not have its own international currency.[31] This theme has also been a feature of various statements by Zhou Xiaochuan, PBOC Governor, over the past two years. In February 2012, China outlined a three-phase route map for full renminbi internationalization over the next 10 years, amounting to a new framework for China's financial interactions with the rest of the world. However, this was not a "grand plan," rather a cautiously worded proposal that emphasized China would not take a "Big Bang" approach to internationalization but would proceed in small, potentially reversible steps.[32, 33]

One important reason why renminbi internationalization will not happen overnight is because it involves a loosening of state control and is therefore politically contentious. Of course, China clearly sees the benefits of having a reserve currency. Professor David Li Daokui of Tsinghua University, Beijing, a former member of the PBOC Monetary Policy Committee, says China should recycle funds from abroad and invest them at a profit, copying what he says have been sizable benefits over many years for the US as the world's main reserve currency issuer.[34] But it does not see the renminbi supplanting the dollar; rather, it sees it as an eventual equal. Fan Gang, another former MPC member, now Director of China's National Economic Research Institute, says: "Part of the effort toward changing the international monetary system comes because people realize that there are problems when a national currency (the dollar) becomes an international standard currency used by others. This has consequences that we need to change, but this can take place only slowly, and there's a long way to go.

The way to proceed is through diversification of currencies. I don't believe we will have a single international currency in any foreseeable future. But there will be additional currencies playing a role internationally along with the dollar, and these will include the euro, the pound, the Japanese yen and, over time, the renminbi."[35] However, this kind of multi-reserve currency world has never previously existed; "there are legitimate doubts about how stable it will be."

Section 2
Lessons from recent central banking history

> "Those of us who have looked to the self-interest of lending institutions to protect shareholders' equity, myself included, are in a state of shocked disbelief."
>
> Alan Greenspan, former Chairman, Federal Reserve Board

The Federal Reserve: Change of guard, change of style

The high point of Alan Greenspan's reputation was perhaps 1999, when then US presidential candidate John McCain declared: "I would not only reappoint Mr Greenspan. If Mr Greenspan should happen to die, God forbid, I would do as they did in the movie Weekend at Bernie's. I'd prop him up and put a pair of dark glasses on him and keep him as long as we could."[36] Handled with respectful deference during his semiannual pilgrimage to testify in Congress about monetary policy, and praised for the Delphic quality of his remarks about interest rates, Greenspan urged regulators to liberate markets and allow markets relatively free rein. He philosophized that central banks could not deflate bubbles, only clean up the wreckage after they burst.[37] The man once lionized as "The Maestro"[38] admitted later that he had placed misguided faith in the self-correcting power of free markets. "Those of us who have looked to the self-interest of lending institutions to protect shareholders' equity, myself included, are in a state of shocked disbelief," he said in 2008.[39]

Greenspan stuck to an ideology that emphasized regulatory inactivity, allowing the perception of considerable latitude of action. By contrast, Ben Bernanke, with his background in academia, originally approached the Fed with the intention of emphasizing its inflation-fighting role. This had to be abandoned to deal with the immediate financial crisis. But with the setting of a "near-formal" inflation target of 2% in 2012, the issue has returned. It is also notable that the FOMC has been less unanimous under Bernanke.

Bernanke's willingness in the heat of the financial crisis to push the Fed's independence to the limit angered some US lawmakers, who perceived the central bank as acting in a high-handed fashion, even though the Fed acted in close cooperation with the Secretary of the Treasury. Though the Fed is under no formal requirement to seek the opinion of Congress regarding the particular monetary or supervisory steps that the Fed might decide to take, many legislators felt that such momentous decisions should be subject to more stringent oversight than that afforded by after-the-fact hearings in Congress on Fed decisions.

Along with other banking regulators, the Fed was accused of inattention in allowing risk to build up in the financial system to such an extent. As a result, there was also talk of stripping the Fed of its regulatory functions and making monetary policy its sole activity. In the end, the Fed lost none of its statutory powers and even gained further influence. A last-ditch effort to consolidate banking regulation in a single agency — which would have removed 850 state-chartered banks from direct Fed supervision — ultimately failed. However, Congress did mandate that the Treasury rather than the Fed chair the Financial Stability Oversight Council (FSOC) that would be responsible for the design and implementation of macroprudential supervision in the United States.

Changes in monetary policy

Under Bernanke the Fed markedly changed the implementation of monetary policy. It departed from relying solely on adjusting the Fed funds rate, used for overnight loans to banks. It put the Fed funds rate down to zero, kept it there and announced that it intended to keep it there until at least the end of 2015. It also elected to supplement this interest rate policy with three rounds of quantitative easing. This involved massive purchases of government securities in the open market, including long-term securities to bring down long-term rates (a return to "Operation Twist" from the 1960s) as well as mortgage-backed securities (to remove distortions in that market and reverse the collapse in the housing market). All this represented financial market activism on an unprecedented scale.

A second major change under Bernanke's chairmanship has been the move toward more disclosure regarding Fed policies and policy intentions. He has accelerated a gradual opening-up that started even before the financial crisis with regular testimony of the Fed chairman to Congress and the delayed publication of the minutes (by three weeks) and of the full transcripts (by five years) of the FOMC meetings. In 2011, Bernanke began holding press conferences following certain FOMC meetings, with the plan to hold at least four a year, primarily to talk about the Fed's view of the economic outlook. In addition, this year the Fed has begun publishing a number of documents showing the views of individual FOMC members (without giving their names) regarding growth, inflation and Fed funds rates. In this manner, the public can get an idea of the range of expectations within the panel and where consensus seems to be headed.

Controversies at the Bank of England

In the 15 years before the 2007 credit crunch, the BoE's approach to monetary policy was substantially transformed, as was the quality of its economic analysis. This was largely the work of Sir Mervyn King in his successive roles as Chief Economist, Deputy Governor and Governor of the Bank. Sir Mervyn was an early advocate of flexible inflation targeting whereby interest rates were set in response to forecasts of future inflation. An underlying assumption was that achieving price and output stability would be sufficient to ensure financial stability.

However, during Sir Mervyn's governorship, the Bank downgraded its financial stability objective and put increased emphasis on monetary policy. Like the Fed, the BoE believed at the time that the best way for central banks to minimize the likelihood of macroeconomic instability arising from extreme fluctuations in asset prices was to focus on monetary policy. They believed that asset price bubbles were hard to identify, difficult to pop safely and best cleaned up after the event.

"Experiences in many countries over several decades taught us that a central bank that bows to the needs of public finances cannot ultimately be successful toward delivering upon its medium-term-oriented price-stability objective."
Peter Praet, European Central Bank

Critics argue that the Bank failed to foresee the financial crisis and was slow to grasp its severity when it struck. The Bank might quibble about its perceived lack of foresight, but the Governor has acknowledged that he and others at the Bank should have shouted from the rooftops that the system was unstable. Although the Bank did not provide liquidity to the banking system as freely as the ECB did (particularly at the start of the crisis), the Bank did progressively expand its provision of liquidity and did restructure its discount window policies to allow it to deal more effectively with market-wide and bank-specific problems.

Difficult tasks in euro area

The governance of the euro makes arrangements within the Economic and Monetary Union (EMU) a special case. According to Ruud Lubbers, former Prime Minister of the Netherlands, who presided over the Maastricht Treaty process in 1991–92 that led to the euro: "The euro's problems threaten the global financial system, and thus the activities of central banks worldwide. To resolve those problems, EU governance needs to be expanded by giving the ECB president fully fledged powers, comparable to those of the UK or US central bank presidents, and by creating a European finance minister with the authority to make and implement new deficit/budgetary rules."[40]

Early confidence in the sustainability of EMU after it was set up in 1999 coincided with persistent inflows of international capital, fueled by expectations of European economic convergence and solid growth prospects, allowing governments across the euro area to borrow more or less at the same low interest rates as the government of the European country with the most stable post-war economic track record; Germany. A sharp reduction in the interest rate spread between better-class and less-good borrowers convinced politicians that EMU was succeeding far more than many had expected or hoped. Governments in the peripheral countries experiencing booms fueled by low interest rates appeared to have no further incentive to carry out unpopular structural reforms at home, even though such measures were necessary to underpin EMU's long-term health.

With the restoration of financial market risk aversion after the trans-Atlantic bubble burst, the true level of danger confronting overstretched debtors suddenly became apparent. Europe had to cope not only with the cost of years of unrealized reforms in many countries that had lived beyond their means, but also with the economic challenges of financing persistent current account imbalances and capital flight in EMU members that could no longer adjust by devaluing their currencies.

Sensitivities on the balance sheet

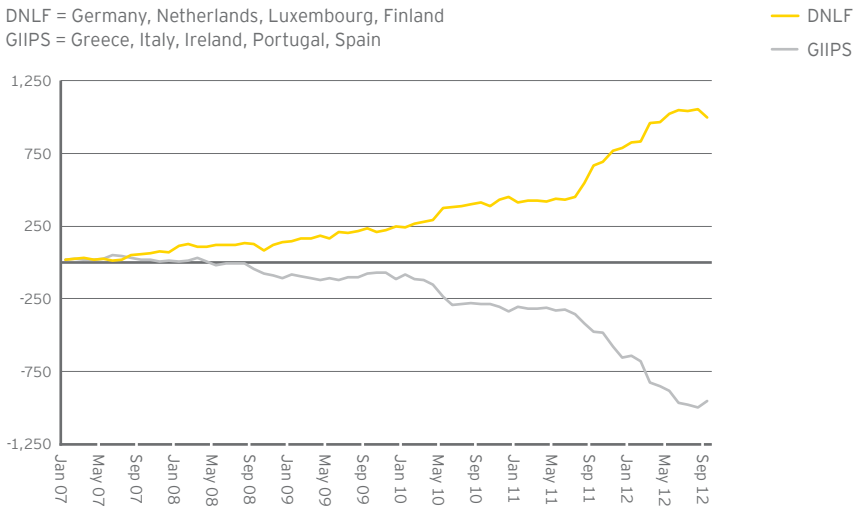
ECB President Mario Draghi has presided over a very large increase in the balance sheet of the Eurosystem, which is regarded by many central bank watchers (especially in Germany and other more economically orthodox EMU members in Northern Europe) as a portent of higher inflation.

However, the ECB has been showing a united front toward governments in an effort to ensure it is not left with an unfair share of the burdens of stabilizing EMU. Ewald Nowotny, President of the National Bank of Austria and one of the longest-serving central bank governors on the ECB Council, is among the many who caution against the ECB being drawn into territory that is the domain of politicians. "We have to limit the fields where we are expected to do something, and divide these from areas for which we are not responsible, and where we don't have the means. There has to be a division of labor."[41] Peter Praet, ECB Board Member responsible for economics, warns against sporadic calls for the ECB to fund sovereign governments. Not only does this contravene the basic legal statutes behind the ECB,[42] it also counters "experiences in many countries over several decades, which taught us that a central bank that bows to the needs of public finances cannot ultimately be successful toward delivering upon its medium-term-oriented price-stability objective."[43] Draghi started his term of office in November 2011 by stating that the ECB becoming the lender of last resort for governments was "not really within the remit of the ECB."[44] By summer 2012, with borrowing conditions for peripheral members of EMU deteriorating significantly, he shifted his position by backing the so-called Outright Monetary Transactions (OMT) program under which the ECB would indeed – subject to the affected governments accepting European Union economic conditions – buy "unlimited" quantities of weaker members' government bonds.[45]

The ECB's widespread belief in the necessity of fiscal consolidation explains its long-running support for the fiscal compact agreed to by Member States in March 2012 to instill greater discipline into the single currency arrangements. However, a much greater form of political union is needed to bring together EMU's fragmented structures. It remains to be seen whether the proposals for the outright monetary transactions (OMT) program and the mooted banking union encompassing a single European regulator provide merely a temporary reprieve or lay the foundations for greater stability delivered through more federal European structures.

Net balance with the Eurosystem/target (€b)

DNLF = Germany, Netherlands, Luxembourg, Finland
GIIPS = Greece, Italy, Ireland, Portugal, Spain

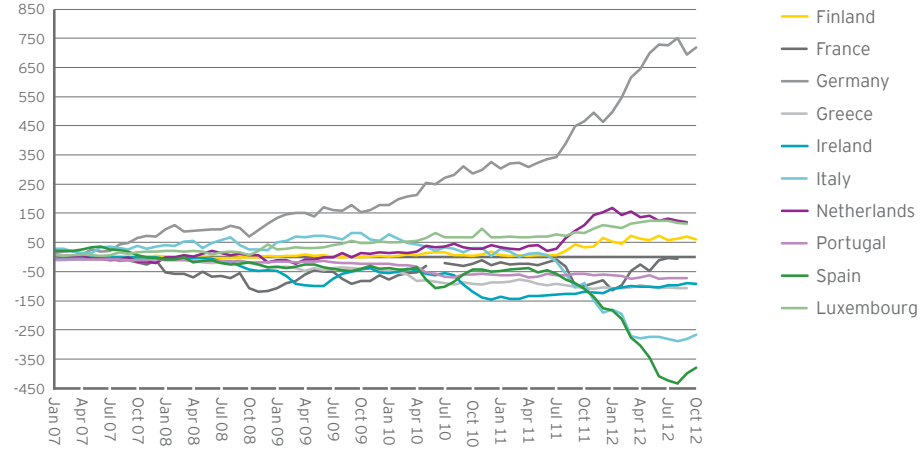


Euro Crisis Monitor, Institute of Empirical Economic Research, Osnabrück University.

With downgrades and bailouts impacting GIIPS there has been a notable flight to safety to the northern nations by depositors.

The divergence in confidence levels between and in northern and southern Europe is starkly illustrated by the divergence in the Target 2 intra-euro area payment balances between AAA Germany, Finland, Luxemburg and Netherlands and the "peripheral" GIIPS; Greece, Italy, Ireland, Portugal and Spain. With downgrades and bailouts impacting GIIPS there has been a notable flight to safety to the northern nations by depositors.

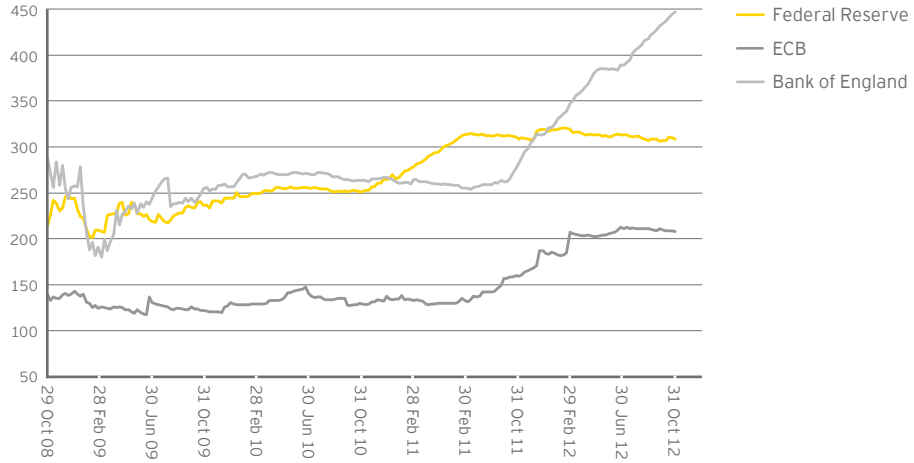
Net balance with the Eurosystem/target (€b)



Euro Crisis Monitor, Institute of Empirical Economic Research, Osnabrück University.

The divergence between the trajectory of Germany's Target 2 balance and the rest of Europe's highlights Germany, as the largest AAA country, has attracted the greatest volume of capital inflows, which have as their counter party a corresponding build-upon of the Bundesbank's claims on the ECB. (However, on the basis of GDP, Luxembourg's claims on the ECB are larger.) The A country-specific picture shows that the deterioration of balances is greater for a country believed to be needing assistance than for one that has already been bailed out.

Central bank assets, index week of 13 August 2008=100



As central banks have acted to increase liquidity in capital markets, they have increasingly embarked on targeted asset purchase schemes, which, alongside their increased collateral based lending, have led to a significant growth in balance sheet risk for both national and regional central banks.

Target 2 system

In EMU, policy is decided centrally, yet enforcement and implementation is conducted on an NCB level. Each NCB is in charge of providing liquidity to its own particular market. Payment surpluses and deficits created through unilateral NCB processes are settled via the so-called Target 2 system, so individual NCBs build up claims and liabilities against each other through a "hub and spoke" mechanism centralized at the ECB. Although Target 2 necessarily nets out to zero, the figures are extremely large due to overall payments imbalances within the euro area. These imbalances partly reflect a propensity of bank customers in weaker countries to withdraw deposits and place them in stronger banks abroad and these banks' unwillingness to transfer the balances back again. The Bundesbank's outstanding credit balance against the ECB – €720b in October 2012 – greatly outweighs the peripheral country bonds it has bought as part of the ECB's Securities Market Program (SMP).

In the case of a breakdown or fragmentation of EMU, involving partial reintroduction of national currencies and/or default of some of the borrowing banks, the central banks from balance-of-payments-surplus countries holding claims against the weaker members via the ECB would almost certainly be left nursing large losses. Under ECB rules, these losses would have to be shared among EMU members.

The process of greater accountability and transparency is undoubtedly moving forward in China.

Increased prominence for the People's Bank of China

The higher profile in China and abroad of the People's Bank of China partly reflects the public stance of Governor Zhou Xiaochuan, now on the Board of the Bank for International Settlements in Basel. The process of greater accountability and transparency is undoubtedly moving forward in China. Zhou has to appear before the finance and economic committee of the Chinese parliament once every three months to answer questions on the implementation of China's monetary policy.

Zhou has lent prominence to the PBOC's role in encouraging Chinese financial liberalization to promote both capital inflows and outflows for China's up-to-now tightly circumscribed financial markets. China sees three major benefits from capital account liberalization. First, more foreign investment will flow into the domestic market, generating growth and employment. Second, overseas investment will provide Chinese entrepreneurs with more opportunities to diversify their businesses and provide Chinese citizens with more financial products to spread their savings. Third, opening up the financial services industry and the capital account is a crucial step to promote much-needed domestic financial competition and innovation.

Defusing tensions with US

In promoting financial liberalization, the PBOC and Zhou also have a role to play in defusing long-running tensions with the US on trade and currency issues.[46] One powerful incentive for the US to take such liberalization moves seriously is that it could buttress the position of US and other foreign asset managers seeking to do business in China. Moving toward a more flexible currency regime by announcing a wider trading band for the renminbi would help China develop a more independent monetary policy, setting interest rates to meet domestic objectives rather than being constrained by fears of vulnerability to flows of foreign capital. This in turn assists financial sector reforms by allowing the central bank to use interest rates to guide credit allocation and rebalance growth toward domestically generated expansion — a major theme of the current Five-Year Plan.

China has been hesitant about widening the renminbi's trading band because of the possibility of surges of speculative inflows. But in early 2012, pressures for renminbi appreciation have eased. This is partly because export growth has slowed as a result of weakness in the major advanced economies in Europe and elsewhere; consequently, China's reserve accumulation diminished markedly in 2011, with forecasters expecting little or no appreciation of the renminbi in 2012–13. This may be one reason why the trading band was doubled from 0.5% to 1% in the spring of 2012.

Growing politicization of the Bank of Japan

Cautious approach on debt monetization

Japan's experience of unconventional monetary policy started relatively early. It was initiated by the BoJ in March 2001, one week after the Japanese government announced the economy was in "mild deflation." (As a result of the fallout of the Asian financial crisis in 1997–98, the BoJ had already begun to expand its balance sheet some years earlier.) The policy in 2001 included zero interest rates as well as quantitative easing, although the manner of the policy was highly cautious.[47] It was also associated in 2003–04 with massive intervention on the foreign exchanges to depress the yen.

The BoJ set a ceiling on government bond purchases equal to the size of the banknote issue, on the grounds that the central bank wished to prevent debt monetization. The BoJ also announced credit easing through the purchase of asset-backed securities, asset-backed commercial paper and equities from financial institutions. The purchase of equities was implemented as part of macroprudential policy; the Japanese banks held large volume of equities of customer firms, and the collapse of equity prices had a cumulatively detrimental effect on the banks' capital base and hence their ability to lend. One reason why the BoJ was more cautious about purchasing government bonds was that the costs involved in the transactions were not indemnified by the Ministry of Finance (in contrast to the BoE, but comparable to the Fed and the ECB).

Although Governor Masaaki Shirakawa has maintained a stout defense against more aggressive QE, in early 2012 the BoJ diverged from previous practice both in moving to expand government bond purchases and in announcing a price stability goal (at 1%) to encourage economic recovery.

Section 3
The new risk landscape for central banking

The mantra that central banks' policy priority of maintaining stable prices would be sufficient to promote stable economic growth was revealed as misplaced.

Confronting risks

Traditionally, central banks have enjoyed being positive role models, as advisers on good economic policy, upholders of monetary discipline, guardians of sound public finance and reliable sources of government income (from passing on profits from their money market and foreign exchange operations as well as seigniorage profits from notes and coins in circulation). Now, these relatively comfortable positions have been turned on their head.

One of the greatest risks concerns encroachment on central banks' independence caused by the multiplicity of burdens put on them. As Stephen Cecchetti from the BIS puts it: "Central banks face a variety of important risks. First and foremost is the risk that they will be asked to solve virtually every macroeconomic and financial stability problem facing countries today. While central banks can do many things, they cannot solve structural problems. Instead they can provide time while others do the necessary work to ensure fiscal sustainability, regulatory stringency and market flexibility. As a part of this, central banks must fight the inevitable political pressure to become a part of the government's funding apparatus, either on specific projects under the guise of financial stability policy or in the broader sense of financing the government. We know the results of this fiscal dominance: high inflation and low growth."[48]

Central banks, notably in the West, enjoyed a period of considerable success and enhanced status from the 1980s to the beginning of the financial crisis in 2007. This stemmed from their success in conquering inflation, notably in the United States, starting with the massive spike in interest rates (and the consequent recession) in 1981. Recessions became fewer, shorter and shallower, giving rise to the belief that the achievement of price stability (for goods and services) had produced what economists came to call the "Great Moderation" — a belief that monetary policy had effectively tamed the business cycle and set the stage for more rapid and more consistent economic growth. In light of this apparent triumph, a consensus emerged that central banks' main, if not sole, target should be combating inflation.[49] Following the reintroduction of inflation targeting, commonly attributed to the Reserve Bank of New Zealand in the early 1990s, this model has spread and is now followed by most advanced-economy central banks as well as by a large number of institutions from emerging markets.[50] Moreover, a view also emerged that the best way to assure that central banks achieve their inflation targets was to make them independent — to give them the right to decide the timing and magnitude of changes in interest rates necessary to achieve price stability. That seemed to be the lesson from the Bundesbank and from the Fed (it received this power in 1951), and it was followed in the UK in 1997 and in the design of the ECB at the end of the 1990s.

In the troubled aftermath of the financial crisis, three sets of paradigms fractured. First, although they were frequently praised for speedy action to pump in liquidity and lower interest rates, central banks' evident unpreparedness has been a factor undermining the model of independence. Further, central banks faced criticism that interest rate policies — at least in the trans-Atlantic world — contributed to the destabilizing forces that fueled the buildup of the financial crisis. In the supervisory arena, their hands-off approach was an important factor behind the steady rise in risks that almost brought down the financial system.

Second, the tools and instruments previously at their disposal were shown to have been insufficient and new ones were needed (or old ones brought back). The mantra that central banks' policy priority of maintaining stable prices would be sufficient to promote stable economic growth was revealed as misplaced, as central banks seemingly lost sight of one of their key original tasks: providing financial stability.[51] There was a similar undermining of the belief that "microsupervision" of the banking system — that is, scrutiny of individual components of it without regard to the whole structure — would suffice to keep it on an even keel. The same was true of the view that price movements on financial markets would turn out to be self-correcting without large-scale government intervention.

Third, the new policy landscape was itself fraught with difficulties amid general disagreement about whether the new policies are really appropriate and what their effects would be.

As Claudio Borio, Head of Research and Statistics at the BIS, described it in 2009: "The prevailing paradigm assumed that price stabilization was synonymous with macroeconomic stabilization. That paradigm had no room for the possibly destabilizing forces of finance. In fact, it had no meaningful role for money and credit either. In retrospect, there is a sense of Greek tragedy in all this."[52]

In 2011, Borio went further: "At first glance, central banks have emerged as the great winners among policy institutions. They have been rightly hailed as saviors of the global financial system: their swift and internationally coordinated action, through liquidity support and interest rate cuts, prevented the system's implosion. And they have gained much broader powers. … And yet, beneath this glittering surface, the picture is less reassuring. … Central banks will take decisions in full knowledge that their benchmark macroeconomic paradigms have failed them. These paradigms, and the macroeconomic models that underpin them, provided no guidance to anticipate, ward off or fight the crisis. The crisis has exposed a chasm between the theory and practice of policy."[53]

"Since governments face the urgent need for budget consolidation, central banks are expected to play an omnipotent role in promoting growth — which seems to be beyond their capability."

Makoto Utsumi, Japan Credit Rating Agency

Into new territory

As they gradually recovered their poise, central banks moved into new territory. As outlined above, they have designed and implemented new monetary policy tools, such as QE, that border on fiscal policy. They have also broadened their extension of liquidity to the banking system and adjusted their collateral criteria with large-scale implications both for central banks' own finances and for the overall health and liquidity of capital markets. As Makoto Utsumi, former Japanese Deputy Finance Minister in charge of International Monetary Affairs, puts it: "Since governments face the urgent need for budget consolidation, central banks are expected to play an omnipotent role in promoting growth — which seems to be beyond their capability."[54] Utsumi points to the danger in Japan and elsewhere that central banks will lose significant freedom of action if they maintain government bond purchasing programs. He points out that they will find it very difficult to choose between two unpalatable options: "On the one hand, maintaining an artificially narrowed spread will pose problems for the banking industry, savers and other purchasers of bonds relying on the coupon for income. On the other hand the abolition of this policy could cause a huge loss [to the present holders of bonds]."[55]

Central banks have also embraced the concept of macroprudential supervision. They have effectively resolved the so-called "lean versus clean" debate in favor of "lean." Central banks have come to the view (together with finance ministries and other policy makers) that they should "lean against the wind" in taking pre-emptive action to guard against bubbles building up in financial or other asset markets during upswings in the credit cycle. This echoes the philosophy that the central bank should "take away the punch bowl just as the party gets going."[56] Raising rates was the tool that the author of the phrase, William McChesney Martin, Chairman of the Federal Reserve Board from 1951 to 1970, originally had in mind. Today's central bankers have a much broader — but still untested — set of macroprudential tools in mind, such as varying capital and/or leverage ratios at banks. In this respect, the "lean" school is paying respect to the reservations of the "clean" school, who holds that raising rates is a counterproductive way to "lean against the wind," for it threatens to bring about the very recession that the central bank should seek to avoid.[57]

But wielding macroprudential tools to counter financial instability when inflation may be under control significantly widens central banks' remit. This is an ill-defined task that, almost by definition, will turn out to be rather thankless and exposes central banks to conflicts of interest and creeping political influence. According to State Street's John Nugée, central banks' additional activities have made them, in some countries at least, "dangerously confused and conflicted institutions with multiple and unclear objectives, whose role is now quasi-fiscal and whose public persona is overtly political." This would be a difficult test even for the most politically aware institutions; the danger is, Nugée says, that precisely in view of their non-political past, central banks will find the balancing act even tougher: "And the potential cost of failure is very high, because once the general population loses confidence in their central bank, it is extremely difficult to build a workable Plan B."

Balance sheet hazards

The biggest quantifiable risk comes from balance sheet hazards in lending to banks and purchasing government and other securities. The latter is predominantly a risk where government securities purchased by the central bank are in foreign currency, giving rise to exchange rate and/or default risk. Here central banks are confronted with the possibility of losses in cases where the measures fail to work and debtors' difficulties get worse. Such cases represent a significant extension of the famous "lender of last resort" dictum of 19th-century British essayist Walter Bagehot that central banks should lend freely (i.e., liberally) at a high rate to solvent but illiquid banks that have good collateral.[58] All the main industrialized country central banks have undergone large-scale expansion of their balance sheets, albeit at different times during the development of the financial crisis, in different ways and for different reasons.

The BoE registered the biggest proportionate increase in the balance sheet, up 250% since the beginning of 2007, followed by the Fed (up 230%) and the ECB (up 162%). The BoJ, which carried out large-scale QE during the 1990s, reflecting the effects of an earlier severe recession in Japan, has registered a much smaller rise in the balance sheet of only 20% since January 2007.[59] As well as moving in smaller steps, the BoJ has resorted to less conventional actions, with forays into the stock markets and corporate bonds, while the Fed and the BoE have concentrated on purchases of government bonds, usually of relatively short duration. The ECB and the NCBs (i.e., the Eurosystem) roughly doubled their overall balance sheets in the first 18 months after the US subprime-mortgage crisis hit markets, then kept them relatively steady until the deepening of the euro-area debt unrest in summer 2011. In the period to spring 2012, the Eurosystem balance sheet rose a further 50%, much more than for the other large central banks, mainly reflecting a big increase in unconventional lending to banks in December 2011 and February 2012 under the ECB's so-called long-term refinancing operation (LTRO).[60] Expressed as a proportion of the GDP of their areas of jurisdiction, as the Bundesbank itself has pointed out, the Eurosystem's balance sheet increased as of March 2012 to 32%, above the comparative figures for the BoJ (31%), the BoE (22%) and the Fed (19%).

Sir Andrew Large, former Deputy Governor of the BoE, points to the danger of "a loss of credibility and policy traction when people figure out the hole in central banks' balance sheets, with effects on the quality and credit standing of sovereign owners."[61] This has been brought into focus by discussion in Europe over "burden-sharing" and over potential losses by the ECB and the Eurosystem combining the ECB and NCBs, Large says. Engineering an "exit" from what Jean-Claude Trichet calls the "historically abnormal" expansion of central banks' balance sheets is one of the biggest, and most intractable, challenges facing central banks in the leading industrialized countries.[62] Since, through seigniorage, central banks have access to present and future revenue streams from the profits of printing banknotes and minting coins (effectively non-interest-rate-bearing loans to the currency issuer from the rest of the financial system), it is difficult (but not impossible) for them to become technically bankrupt, but balance sheet strength is still politically and symbolically significant.[63]

Some emerging economy central banks are energetically diversifying their reserve management operations.

Pressures in emerging market economies

In emerging market economies, too, additional pressures have emerged from extended burdens on central banks' balance sheets, albeit for different reasons. The massive increase in foreign exchange reserves in Asia and Latin America reflects the authorities' efforts both to dampen local currency appreciation and protect export-orientated economies, and also to build up financial arsenals to guard against a repeat of unrest of the sort that occurred during the 1997–98 Asian financial crisis. These much-enlarged stocks of foreign exchange (largely in dollars, but with a sizable component in euros) represent a form of self-insurance against the buffeting of world capital flows, as well as a reaction against what was considered to be ill-conceived conditions from the International Monetary Fund accompanying loans made at the height of the Asian crisis.

But such insurance comes at a price. Greatly increased reserve holdings may appear outwardly a sign of virility and growing maturity of the fast-growing parts of the world. In an important sense, this interpretation contains a good deal of truth. But, paradoxically, sharply higher asset volumes are also a source of vulnerability that is directly connected to the relatively poor economic performance of (and lower returns in) the industrialized nations that provide the lion's share of the world's reserve currencies. This reflects recent tendencies for reserve currencies to depreciate against the local currencies in which emerging markets' central bank balance sheets are denominated and, furthermore, the historically low interest rates in the US and Europe. These developments expose central banks to "negative carry" in their reserve operations in which their holdings of unprofitable foreign exchange cause significant falls in income and sometimes outright losses. This can add further to strains on central banks' balance sheets that are recovering only gradually from the results of the longer-term bailout actions undertaken during the Asian crisis 15 years ago.

With this in mind, some emerging economy central banks are energetically diversifying their reserve management operations. The aim in many cases is to maintain a traditional leaning toward conservatism and liquidity yet to include more active return-boosting techniques, such as expanding the range of instruments and currencies and even moving into non-standard fields such as real estate and private equity. Emerging market economies' exposure to the travails of the dollar and euro provide an illuminating case study on risk transference between the private and official sectors in certain countries. By seeking to shield their nascent manufacturing companies from the effects of relative economic decline in the developed markets on which they depend for exports, emerging market economies (and others in a similar position) are opening themselves to potential financial fragility in their official institutions that could spill over to the nation's economic core.

Section 4
Conflicts, accountability and independence

Balance of diverging opinions

Finding a balance in the new landscape is fraught with real and potential conflicts of interest, all with large repercussions for central banks' accountability and independence. Hanging over central bankers is a specter that has been prevalent throughout the history of official monetary policy and especially during the financial crisis: moral hazard, or the development of counterproductive incentives that promote rather than hinder destabilizing behavior by financial market participants. This is an especially large issue regarding the political, economic and legal tussle surrounding EMU and over the status and remit of the ECB. These differences of emphasis about credit policies in Europe are part of a wider central banking debate in which opinion around the world has moved toward greater pre-emptive stringency, adapting to signs of excess monetary growth and asset price bubbles through "leaning against the wind" earlier in the credit cycle.

There is plenty of room for conflicts of interest between previously separated operational structures of financial and monetary stability, now being brought together in a way that, in many cases, amounts to reversion to an old form of central banking architecture. For example, the tightening of capital requirements for banks under the Basel III accords at least partly contradicts the need to prompt recession-defeating flows of bank funding to businesses. The separation or "ring-fencing" of retail commercial banking structures to protect them from risks in investment banking has been put forward for many countries, predominantly the US and Europe, as a way of avoiding the need for taxpayers to bail out risk-prone banking operations. (It should be noted that investment banking is not necessarily or inherently riskier than retail banking; an early bank failure in the financial crisis was the British retail bank and former building society Northern Rock.)

Imbalance in democratic accountability

The upheavals in the central banking landscape have substantial repercussions in the sphere of politics and public opinion, as shown in the US, Europe and Japan, as well as in emerging market economies. The substantial upgrading and widening of central banks' roles have taken place while they have maintained a high degree of statutory independence from governments, part of a compact to preserve their freedom of monetary policy action and guard against irresponsible and inflationary government policies. Politicians' scrutiny and control rights over central banks' actions have, however, not increased in line with the considerable expansion in central banks' realm of action and de facto power. This has sometimes given rise to searching debates about democratic accountability.

One particularly important part of this debate is the specialist field of accounting policies and standards. It is argued in some quarters that the absence of common accounting policies among central banks is also a barrier to transparency. In this section we discuss some of the most important new accounting questions facing central banks and consider their implications.

While most large commercial organizations report under well-recognized accounting frameworks, accounting and reporting standards used by central banks diverge widely.

Central banking in emerging market economies, too, has undertaken an important transition as a result of the general pressures on economic policies in recent years. Yet these changes have been less radical than in the industrialized nations. As they have come of age in the past two or three decades, central banks in emerging market economies have been traditionally closer to the core of government, more prone to government influence and holding sway over a greater variety of economic and social tasks, often involving national development goals.

Since the impact of the trans-Atlantic economic crisis on these countries has been less acute, and since their central banks already commanded a relatively wide field of action, they have not been confronted with the operational widening that has been such a challenging transition for central banks in the West.

Pressures on independence

Shortcomings displayed by central banks — and subsequent pressures on their independence — have been epitomized by Alan Greenspan, widely praised during his 18 years as Chairman of the Board of Governors of the US Federal Reserve. Ben Bernanke, his successor, himself a governor of the Fed from 2002 to 2005 before he took over as Chairman in February 2006, has faced a political backlash that has been all the fiercer because of the unquestioning enthusiasm that preceded it.

The debate over the role of the Fed and other central banks underlines how the threat to independence is very far from being a matter of theoretical dispute: it has entered into the realms of realpolitik. According to Jamie McAndrews of the New York Federal Reserve: "In many countries, central bank independence is at risk. The use of unconventional tools is difficult to explain, and the discussion around central bank actions has been increasingly coarse and uninformed. This represents a major risk to central banks."[64]

Marek Belka, President of the National Bank of Poland, sees central bank independence endangered by "the blurred line dividing monetary and quasi-fiscal actions of many central banks during the crisis," driven by what he calls the "unpleasant arithmetic" of very high public debt.[65] Further risks stem from difficulties in "efficient implementation of institutional structures covering both monetary policy and macroprudential policy mandates" as well as in "fulfilling the price stability mandate in the current international environment," which is characterized by QE extensions and greater volatility of financial flows. "This issue is particularly pertinent for emerging economies."[66]

In a sense, it is not surprising that the historically somewhat anomalous position of statutorily autonomous central banks is now under pressure. The ECB's independence is still more solidly embedded into law than that of the German central bank, since it is part of an international treaty. But as a result of compromises with governments caused by the strains confronting EMU, the high-water mark of ECB independence may now have passed. Professor Niels Thygesen of Copenhagen University says the ECB in its first years of existence probably exaggerated its independence.

"The idea of the central bank as it was set up at Maastricht was a very pure sort of central bank. It was not going to get involved in supervision. It would not be involved in foreign exchange operations. It should not be overly concerned with economic policy throughout the euro area. It would be isolated from EMU political authorities," Thygesen says. "But it has become increasingly obvious that the greatest threat to the ECB's independence is to be alone on the stage, rather than having some capacity to take political actions. So the ECB has inevitably to accept a less pure form of independence where it can be a counterparty to dialogue with the political authorities."[67]

According to Lord Desai, a professor at the London School of Economics, the shift in opinion on the necessity and efficacy of independence is part of a steady historical pattern: a changing carousel of central banking doctrine. Now, he says, the world is moving to a new form of central banking multilateralism. Desai is somewhat cynical about the lags in the central banks' reactions to changes in the economic or political environment. "Generals fight the last war, and central banking tends to follow suit. After the Great Depression, the world agreed to abandon the gold standard and orthodox monetary policy. During the era of fiscal policy leading monetary policy, central banks became adjuncts of the Treasury. Then after the Great Inflation of the 1960s and 1970s, we had monetarism, with central banks pursuing money supply targets. After that, the success of the Bundesbank became an object of international regard. So the worldwide norm became independent central banks following inflation targets." But now, Desai says, the constellation is changing again: "Free-standing central banks pursuing their own national agenda are on the way out."[68]

Precisely what will take their place is, of course, a matter of conjecture.

Accounting questions for central banks

The recent unprecedented growth in central bank balance sheets and the complexity of the operations that these institutions now undertake have introduced a new set of questions into the hitherto placid waters of central bank accounting. These questions are not just simply of a technical accounting nature (although the complications here are real enough) but also have serious policy implications in both financial and political arenas. To give just one example, the turmoil surrounding a number of sovereign bond markets raises the question of just how should a central bank account for its holdings in such bonds. The choice between using a fair value or historical cost measure can be far reaching, not only for the impact on the central bank's results, but also, for example, the message that any change to the valuation, or lack thereof, can send to the market.

Below we consider some of the key questions and challenges we see for central banks:

- **Accounting policies:** While most large commercial organizations report under well-recognized accounting frameworks (e.g., IFRS or national GAAPs), accounting and reporting standards used by central banks diverge widely. In a number of cases, central banks use a recognized GAAP as a base but make adjustments where they feel it does not appropriately represent their operations. This is perhaps

The increasing prominence of central banks is likely to give rise to ever more public scrutiny, and this can significantly affect organizations not used to such attention.

understandable as many GAAPs were developed with commercial organizations in mind and so may not be the answer for some specific operations of a central bank; however, in the absence of standard accounting frameworks, it is currently both difficult and occasionally contentious to attempt to draw detailed comparisons of central bank accounts either at the overall or the specific technical levels.

- **Valuation uncertainty:** Whether the aim is to obtain a fair value or to determine whether an impairment has occurred, valuation is a complex and potentially subjective area, and this has been shown in the varied accounting for sovereign bonds by a number of commercial organizations. Further challenges can also occur for central banks who may have significant concentrations in a particular market or may be expecting a different treatment to commercial organizations in a bailout or restructuring, and whose valuation decisions – for example, whether to impair – may have political and market consequences far beyond the accounting implications.
- **Treatment of government interventions:** In many countries, central banks have been engaged in complex market operations including quantitative easing, emergency liquidity assistance, asset protection and support to extraordinary activities of the domestic authorities. Existing accounting policies may not always represent such actions well and therefore call for developing policies and disclosures that may not only raise significant accounting questions but also influence the way these actions are understood and ultimately judged.
- **Exposure to international agencies:** The growing interconnectivity of the global financial system and the scale of central bank involvement with international institutions such as the International Monetary Fund (IMF) or the ECB give rise to some unique accounting transactions and hence reporting requirements. It also raises issues about exposures and potential liabilities to international payments systems such as Target 2, for example.
- **Risk management:** As stakeholders seek to better understand central banks' risks, the volume of risk information, historically not generally an area of extensive disclosure, is likely to increase. Judged by traditional commercial banking yardsticks, the level of market, credit, liquidity and concentration risk run by central banks from areas such a foreign exchange and bond holdings can appear significant. A key element to consider in any risk management disclosure is therefore not only the quantitative information but the context that it is placed in. The way this risk is viewed can ultimately significantly affect the way it is managed and the appetite of a central bank to engage in certain activities.
- **Transparency:** A central theme to the items above is transparency, and how much is appropriate for a central bank must be considered. The increasing prominence of central banks is likely to give rise to ever more public scrutiny, and this can significantly affect organizations not used to such attention. While there is a general push for transparency in global markets, the unique role of central banks also presents many situations where full transparency may not be desired. Central banks may, for example, be sensitive about providing details of transactions with related parties and may not want to provide financial support information for fear of its impact on the market.

Section 5
Macroprudential supervision

Before the crisis: how "clean" won over "lean"

In an increasingly politicized world of central banks, attention is now being focused on the precise extent of macroprudential supervision and financial stability measures.[69] For the LSE's Lord Desai, this is just one episode in the historical shifts of central banking. "The Great Recession made us aware that price stability was not enough. We need financial stability too, some might say much more. Financial regulation proved inadequate across many Western countries. So we began a search for macroprudential as well as microprudential policies. Attention shifted from the macroeconomy to the financial sector. On top of this, globalization requires supranational regulation."[70]

Before the crisis, it was a different story. Taking their cue from Alan Greenspan, some central bankers downgraded the goal of financial stability, believing that state-of-the-art monetary policy conducted by independent central banks would be sufficient to stabilize the economy. In addition, the Fed took an asymmetrical view on asset prices, in that it did not believe it had the responsibility to step in to check asset price bubbles but was ready to intervene to support prices should they fall — an important contributory factor in the buildup to the financial crisis. Following the Fed's lead, most central bankers more or less ignored those economists, most notably Hyman Minsky, who argued that the economy was hostage to financial instability and that it was most endangered when conditions appeared most benign.

Those who argued for "leaning against the wind," among them the Reserve Bank of Australia and leading economists at the BIS, were given short shrift. Even though many central bankers were clearly aware of growing risks in the system,[71] the neatness of a central banker approach that assigned different tools to different objectives proved highly seductive. A number of factors militated in favor of "cleaning" the credit cycle after any upset, rather than taking pre-emptive action to mitigate asset bubbles. Some of these are far more than mere technicalities, since they go to the heart of the makeup of central banking.

- **Bubbles are hard to detect.** The benefits of pricking a bubble need to be seen against the costs of attempting to offset long-running sustained movements in asset prices. In addition, if the bubble is spotted only later in the credit process, raising interest rates late could be counterproductive.
- **Bubbles don't burst easily;** combating them requires that a central bank raise interest rates significantly to bring asset prices back into line, and this would depress economic activity as well as inflation. Reactive monetary policy is not quite as complicated as is sometimes alleged. Monetary policy is sufficiently flexible and powerful to cope with the task of "cleaning up" after the bubble bursts and then restoring the path to monetary stability.
- A less visible explanation for inactivity was that **central banks were keen not to take on or expand their financial stability mandates.** They deduced that this was a thankless and extraordinarily difficult job that threatened to conflict with their monetary policy goals.

In financial crises, the goal of financial stability has historically always trumped that of price stability.

In fact, the financial crisis revealed a fundamental flaw in the regulatory structure. After 2007–08, central banks and the myriad players who follow or react to their actions focused on the need for a new approach that would rectify the shortcomings of a system that had evidently failed. Macroprudential policy, including an arsenal of preventive weapons to mitigate systemic risk, was called upon to fill the gap. Not for the first time in the chronicles of central banking, the monetary authorities reached back to past methods.

Back to the future

Jean-Claude Trichet, then ECB President, summed up the change in 2009: "Recent experience has demonstrated the limitations of a wait-and-see approach." What was needed, he said, was "a systematic approach … that leans against the emergence of asset price booms as well as dealing with asset price busts. … Such an approach should make cycles of boom and bust less likely."[72] In fact, the reshaping of priorities in many cases represented a return to the previous status quo, and in many ways this involves policies that turned out to be imperfect. Until relatively recently, central bankers over many years were deeply preoccupied with systemic risk and conscious that, since monetary policy was implemented through the financial system, it was vital to keep a close eye on financial markets and institutions. Moreover, in financial crises, the goal of financial stability has historically always trumped that of price stability. Many macroprudential tools such as capital and liquidity ratios or loan-to-value ratios are long-standing central bank instruments. As Alexandre Lamfalussy, the former BIS General Manager, has pointed out, macroprudential policy tools were deployed in the 1970s — with success that he termed as "mild, patchy and uncertain"[73] — in attempting to reconcile the concerns of supervisors monitoring international banks' exposures to Latin American countries with the broader objective of stabilizing the region's economy.

In finding a workable policy, listing financial stability objectives in broad terms and assembling tools to meet them is in a sense the easy part. The extreme difficulty lies in the detailed implementation. The overall approach entails macroprudential analysis (which was, in fact, conducted by many central banks before the crisis but not acted upon); macroprudential supervision, which uses the analysis to influence the behavior of financial intermediaries; the deployment of preventive macroprudential tools; and crisis management, notably the lender and market-maker-of-last-resort roles.

The tools can be divided into two main categories. The first is structural measures, such as resolution regimes for the orderly closure of financial institutions, capital controls, increased capital requirements for systemically important institutions and putting more derivatives trading onto central clearing counterparties. The second category is instruments designed to prevent or mitigate imbalances and address pro-cyclicality — these include countercyclical capital requirements, loan-to-value and debt-to-income limits, margin requirements, and limits on leverage, maturity and currency mismatches.

As the past shows, reconciling financial stability and monetary policy is fraught with pitfalls. Central banks once again find themselves in waters that, if not exactly uncharted, are full of obstacles, both visible and hidden. As Jamie McAndrews of the New York Fed puts it: "The design and use of such macroprudential policies, whether they be supervisory or 'monetary' (such as regulation of margin requirements or collateral haircuts), is untested, as is their effects on the economy. Consequently, I think that the active use of such policies poses risks to central banks, as learning will take place with little in the way of a model by which to judge the response to the use of the instruments."[74]

Defining targets

One set of problems centers on setting a clearly defined, quantified target for a complicated dual objective, one half of which — "financial stability" — is clearly identifiable only by its absence. The practical deployment of weaponry brings great challenges. One of the reasons central banks shied away from the task in the past was the perception that if interest rates were to be deployed solely in the service of price stability for goods and services (whilst ignoring asset price inflation), those charged with financial stability had no weapons to deploy, except perhaps to make speeches and write reports. A lot of effort has been put into developing tools (such as loan-to-value limits or countercyclical capital provisions) that central banks could use to restrain financial activities or institutions deemed to be too risky. However, implementing these policies could be excruciating.

One main problem is the possibility of a clash with monetary policy. It seems clear, for example, that if central banks were to follow macroprudential objectives, interest rates would differ from what they would otherwise be — as shown by the meeting of inflation targets in the period when crisis-inducing imbalances built up before 2007. The BoE argued in a paper in 2009: "Monetary policy would not have been able to curb these emerging financial balances without diluting the inflation objective. An attempt to curb banks' balance sheet growth through monetary policy may have been seriously destabilizing for the real economy over this period."[75] David Green, a leading authority on central banking, has commented: "It seems difficult to believe that, if rates of credit growth had indeed been constrained by the use of macroprudential tools, inflation and growth figures would not have also been significantly different."[76]

There is a fascinating corollary in the case of EMU in Europe. Macroprudential policy, it is said, would have prevented or mitigated the buildup of imbalances in states such as Spain or Ireland that experienced overheating as a result of lower-than-optimal interest rates in the early 2000s. In the same way, Bundesbank President Jens Weidmann claimed in 2012 that similar tools could have an effect in curbing "inflationary pressures" in Germany resulting from low interest rates and high liquidity levels introduced throughout the euro area to combat the threat of banking and sovereign state failures.[77]

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>
> Charles Goodhart, London School of Economics

Most of the macroprudential tools being considered are largely untried, so – unlike with monetary policy – central banks will not be able to cite experience or evidence to justify them. On this basis, financial intermediaries whose business is to be constrained by them will complain loudly, and possibly, justifiably, that their business is being hobbled on the basis of a theory. Finally, it will never be clear whether policy has worked. If crisis recurs, then whatever the central bank did will not have been enough. If on the other hand the central bank successfully reins in, say, commercial property lending and no stability problems emerge, this success may well be held up as evidence of heavy-handed dirigiste policy-making.

The political dimension

Equally problematic is the political dimension. Many financial imbalances have arisen historically in housing finance. Housing booms, particularly in the English-speaking countries, are popular, not least with politicians. Charles Goodhart, Professor Emeritus of Banking and Finance at the London School of Economics, points out that central banks will require strong nerves if they decide – on the basis of "superior wisdom" – to take away the punch bowl just as the party is getting going. If we assume that the central bank does succeed in deflating the property balloon quietly and successfully, he adds, then it will be told that its restrictive actions were not necessary in the first place. Note, too, that in Spain, which used countercyclical provisioning before the crisis, the central bank came under considerable pressure from private banks and from business to loosen the regime just as the construction and real estate party was becoming potentially dangerous.

At the very least, governance arrangements for the macroprudential role, which logically should sit in the central bank (apart from crisis management, which involves taxpayers' money), will need a clear mandate and a high degree of transparency to ensure that it gains wider legitimacy. Since macroprudential policy requires such difficult judgments about the nature of the cycle and scale of the threat implicit in financial imbalances, there are bound to be mistakes. That further underlines the importance of transparent explanations. One leading central banker explains: "We have to be clear-cut and avoid fuzziness about the mandate." Precisely in fields where there is so much interaction between politics and finance – and so many cross-border repercussions into countries and regions of different jurisdiction and standards – that precision is very difficult to achieve.

Section 6
Central banks in a new environment

The framework

1 Accountability, independence and limits to power

The Great Recession pushed new roles and new responsibilities onto central banks. Some of the new tasks were welcome, some less so. But every expansion of power carries risks. The pressure to do everything may produce an ability to do nothing very well. Moreover, central banks cannot automatically expect the independence they have enjoyed when restricted to inflation-fighting to carry over into their non-monetary functions. Moreover, with multiple tasks comes the risk of conflicting tasks. Central banks will have to be careful to spell out what they can do, and, more importantly, what they cannot do. One particular problem here is that success can be a non-event – e.g., the absence of a crisis – which makes it more difficult to justify action. They will therefore have to be prepared for greater political interference and demands for accountability and transparency, as well as to take broader consequences of their actions into account. Central banks also need to define the legal framework for their activities so there is unambiguous division between operations that are decided and implemented by the bank itself and those undertaken by the bank acting as an agent of the government. This provides the best means of imposing a clear demarcation line between the central bank and its ultimate overseer, the political authority.

This will require skillful communications management – even more so given the high likelihood of increased political pressure. Criticisms of Western central banks for being out of touch with ordinary people facing economic hardships, or for being insufficiently communicative to political representatives, are signs that the broad consensus that has sustained central bank independence could break down – or maybe is doing so already. In the emerging market economies, too, central banks require more deft communications skills to overcome criticism that they may be presiding over imbalanced economic growth, taking insufficient action to ward off currency pressure or making losses in management of official foreign exchange and gold reserves.

In the sphere of financial stability, the public does not need reminding of the costs of letting the financial system get out of control. However, nobody has much idea, or much previous experience, in making financial stability policy comprehensible. As well as being ineffective, the financial stability reports published before the crisis were usually comprehensible only to the cognoscenti. They also tended to embrace a backward-looking approach rather than a forward-looking discussion of risks and potential future issues. One of the top priorities for central banks facing greatly expanded roles should be to explain precisely what they plan to do, especially if those actions are likely to be controversial. If central banks can secure support for the principle of intervening to slow incipient bubbles, they have some defense against criticism from those who are disadvantaged by any particular initiative.

The search for operational excellence in central banks has now taken on a new urgency. The challenge is to find, incentivize and retain appropriate staff.

Particularly when they interact with government more fully through macroprudential measures (as well as in other areas such as purchases of government bonds), central banks must recognize the many-sided nature of their governance arrangements. Especially with regard to macroprudential aspects, several important functional areas need to be engaged. The main stakeholders are the fiscal authority, which is likely to be called upon in a crisis; the central banks as creators of money, a vital ingredient to restoring confidence; and the supervisors with relationships to individual institutions.

Information about macroprudential risks should be presented by a separate institution, or at least one that reports directly to the board of a new-style central bank where the macroprudential approach is given equal weight to monetary policy-making. This is similar to the separation of powers in a private sector asset management company, where the investment manager (analogous to the central bank) is balanced by an independent risk management function (the macroprudential risk committee), which focuses purely on identifying, quantifying and mitigating risks.

Establishing an appropriate corporate governance framework for macroprudential policy is difficult. Unlike monetary policy, where the rate of inflation provides a measurable, comprehensible benchmark, there is no single, continuously observable metric to describe the buildup of systemic risk. A further problem is that the benefits of macroprudential policy are long-term and not readily grasped by politicians and the public, whereas the costs may be highly visible and felt immediately. There is thus an inbuilt bias toward inertia. The grant of operational independence may also be more controversial than with monetary policy. It follows that for credible accountability, a clear mandate is vital, along with a high degree of transparency and good communications.

Extension of central banking roles has brought great challenges as well as opportunities for management at central banks, at both senior and intermediate levels. The search for operational excellence in central banks has now taken on a new urgency. The challenge is to find (via internal or external appointments), incentivize and retain appropriate staff. The opportunity is to restructure management systems that may have been preserved for many years in spite of changing external circumstances and adapt personnel hierarchies and individual staff positions to the new environment, introducing a new spirit of dynamism and flair into the operation of highly traditional institutions.

There are diverse areas where central banks need to import expertise and know-how from non-central-banking fields to improve their management practices. At the same time, the interlinked nature of the financial crisis and the new emphasis on cross-border cooperation has brought fresh imperatives for central banks to cooperate more fully both with other central banks and with other public sector authorities around the world. The new environment highlights the requirement for skill sets that have always been part of central banking expertise but are now returning to the fore with greater intensity.

Given the bias toward inertia, it is important that the institutional arrangements for macroprudential policy should strengthen the ability and willingness of policy-makers to act. The institutional architecture must also reflect the need for coordination and consultation where macroprudential policy overlaps with related policy areas. Central bankers and prudential agencies must clearly be involved, as should securities regulators in financial systems where capital markets play a large role in financial intermediation. The involvement of treasuries, while potentially helpful, needs to be carefully managed to avoid operational independence being compromised.

The tasks

3 Early warning systems

Central banks are coming under increasing pressure to provide early warnings of when economies are becoming unstuck. They will face having to prescribe harsh economic medicine to counter predicted but unquantifiable threats. This will require a heightened level of alertness in assessing signs of stress in the economy stemming from both domestic and international factors. Such an approach will frequently involve acting pre-emptively when the need for action is not generally accepted. In addition to developing early warning systems, this once more highlights the crucial need for central bank communications skills.

4 Central banking targets and instruments

The limits of inflation targeting as a unitary central banking goal have been cruelly exposed. A new framework must solve the conceptual challenge of finding appropriate instruments and targets and how to meet multiple targets. The issue of whether central banks have any effective macroprudential tools has yet to be resolved. The same is true for the pros and cons of the countercyclical instruments typically favored in Europe, such as "dynamic provisioning" (as in Spain). Central banks must see the real possibility that adoption of multiple targets (i.e., a reduction in the importance of the inflation target) would automatically raise fears of higher inflation and thus gravely set back their agenda of promoting low inflation growth.

In the macroprudential sphere, it is vital that regulators and central banks work out what they mean by "financial stability" and set down concrete objectives that will allow them to measure progress (or lack of it). They need, too, a mechanism to handle the conflicts of objectives that inevitably arise.

5 Lender-of-last-resort function

One of the most pressing challenges is the idea that a central bank should act as a "lender of last resort." Central banks should make clear where they see the dividing line between normal financing activities that help execute monetary policy and emergency liquidity assistance to particular institutions. Realizing a satisfactory exit from the latter is a major priority for central banks. It is a particularly complicated issue in Europe in view of the heterogeneous nature of the euro-area economy and the absence of European political or fiscal union.

Purchases of assets in markets under stress imply a financial risk for the central bank's balance sheet.

Central banks face pressure from time to time to act as a provider of extensive liquidity support to the bonds of sovereign borrowers, as has been advocated for the ECB with regard to peripheral states in EMU — an issue highlighted by controversy over the ECB's OMT program. Central banks in other developed and emerging market economies have also purchased government bonds via QE, but this has been carried out as part of overall macroeconomic policy to add liquidity to financial markets and lower interest rates within the economy as a whole. When calls are made for a central bank specifically to provide massive liquidity to support the market for government debt, such calls can be viewed as equivalent to the central bank being asked to directly fund illiquid sovereigns, either via direct interventions on the primary market or by extending direct credit lines. But this is a fraught field. Any central bank that undertook aggressive funding of its sovereign in an overt fashion would be likely to see its currency and financial assets downgraded in the marketplace. Although this is a legal and political gray area, central banks will need to take care, for a mixture of reputational, governance and economic reasons, if contemplating extending significant market support operations for the debt of their own government. Central banks, in effect, are always lenders of last resort to governments that issue their own currency. The unique feature of the euro is that the currency is itself independent from the Member States. In this sense, the euro bears some resemblance to the gold standard.

6 Central bank balance sheets

Central banks have had to use their balance sheets as rarely before in peacetime. During the last five years, they have become progressively more exposed to credit risks and issues of collateral adequacy that were previously not a constraint. Purchases of assets in markets under stress imply a financial risk for the central bank's balance sheet. In theory, a central bank can fail, since it cannot create unlimited money at will. Moreover, since central banks are normally part of the public sector, they can call on the tax-raising powers of the state. But, because of the potential political difficulties associated with this, balance sheet weakness is likely sooner or later to spill over into reputational and political weakness that can affect financial market outcomes.

This is an acute question for the ECB and the NCBs of the Eurosystem, since large-scale recapitalizations for creditor central banks in EMU that suffer losses because of defaults or impairments affecting counterparties from the private or public sector will be financially irksome and politically controversial. However, the issue is preoccupying emerging market economies, too, because of the "negative carry" generated by many developing country governments' and central banks' investments in low-interest-bearing foreign government bonds issued by industrialized countries. These governments and central banks, like their opposite numbers in the West, are also concerned about the impact on international and domestic public opinion of losses caused by such disadvantageous investment policies.

7 Regulating and supervising the financial system

The experience of the past five years has taught central banks and regulators that they almost certainly need to support an activist approach to banking regulation and supervision, including such previously ignored issues as bonuses and the impact of dividends on banks' capital. One potential pitfall here is macroeconomic: overzealous regulation may drive banks to avoid the type of risks they should be taking in financing sound corporate or public investments, stifling the financing enterprise. Regulation must be subject to cost-benefit analysis to avoid this trap. The second is more microeconomic: a simplification approach to bank capital adequacy rules may result in many different relative risks being grouped together into a single category and assigned a single risk weight where because of a broad capital bucket the capital charge understates the risks. Regulatory arbitrage may ensue: banks will accumulate those assets for which they believe the risks are underestimated and avoid those for which they believe the risks are overestimated. If, to overcome this, regulators impose a disproportionately high risk weight, then this constricts economic growth. Furthermore, differing regimes across regions engender counterproductive regulatory arbitrage.

Central banks need to have, and communicate, a clear idea of the kind of banking systems they are aiming for, even though they clearly do not possess the powers to shape structures in what they may consider to be a beneficial direction. At a minimum, central banks need to know more about how their banks make their profits. In the recent past, substantial profits were treated as reassuring, but, as we now know, it depends how they are made. If such profits arise from "rent seeking" or from speculation, then they may turn out to be unsustainable. As part of their supervisory function, central banks should be trained to recognize such phenomena and act accordingly.

One of the reasons why central banks are being pushed into the forefront of efforts to deal with financial system weakness is that politicians have taken a back seat. Some actions that hold genuine promise for reducing global systemic risk — for instance, creating a credible international resolution regime for global banks — cannot be undertaken by central banks or even groups of central banks. They require concerted political action and international diplomacy and coordination. Central banks must not allow themselves to be backed into a corner with weak and untried tools because politicians are unwilling to make structural changes to the financial system. Just as central bank governors sometimes need to grit their teeth and criticize spendthrift fiscal policy, they may have to start calling their political masters on failure to make progress risk-proofing the financial system.

Central banks have to heed widespread public antagonism toward what is often perceived as misguided, foolhardy or self-centered action by commercial and investment banks contributing to the financial crisis. As a priority, they must explore the need for much stricter conditions for and surveillance of new and potentially risky financial products, building on and extending the strictures of Basel III.

As a result of the enormous increase in world monetary reserves, central banks' practices as custodians and/or managers of their countries' official assets have come under increased scrutiny.

The international dimension

8 Policing disequilibria in the world monetary system

The financial crisis that started in 2008 demonstrated that central banks need to think beyond their own borders. Disequilibria in the world monetary system provides a considerable source of risk for central banks in implementing their objectives in both the monetary and financial stability areas. Failure to cope with current account imbalances and other sources of macroeconomic instability was a key contributor to the financial crisis.

Another area for enhanced central banking activity is in the management and oversight of the International Monetary Fund, which has greatly expanded its activity, especially in Europe. A third field is in enhanced regional monetary cooperation seen in most continents. All this has far-reaching implications for the operations and management of central banks, for the way that they interact with diverse sets of players on the financial markets, for their public communications and accountability, and for the way they are monitored and assessed by their own supervisory bodies, by governments and by the public.

9 The role of foreign exchange reserves

Central banks are in the vanguard of the gradual evolution of a multiple reserve currency system, but there is little certainty whether this will turn out to be more or less stable than the constellation that has pertained hitherto. Global foreign exchange reserves rose from 6% of gross world GDP in 1999 to more than 16% in 2011. Driving the trend was reserve accumulation in emerging market economies, which account for more than 67% of total official foreign exchange reserves of US$10.2tr. China alone has amassed official reserves of US$3.2tr. As a percentage of GDP, reserve holdings in emerging market economies have risen fivefold to 25% from the 1980s average of about 5%. This is generally perceived to be far in excess of what these countries need for self-insurance against balance-of-payments crises, sudden stops in external funding or as a means of smoothing exceptionally volatile flows. Much of the buildup has been a by-product of mercantilist growth strategies aimed at keeping exchange rates competitive.

As a result of the enormous increase in world monetary reserves, central banks' practices as custodians and/or managers of their countries' official assets have come under increased scrutiny. Unless there is a mandatory sale of foreign currency to the central banks, or the central bank follows an exchange rate target, there is no clear-cut reason why the central bank should be the manager of foreign exchange reserves. If anything, concerns about the effect on FX reserves could risk dividing central bank attention from other goals.

Where they do have responsibility for reserve management, central banks have to strive for balance between the different considerations of maintaining conservatively managed stocks of liquid assets, helping to police the exchange rate and achieving profitability (or at least avoiding large losses) on their operations. Adequate coordination with domestically attuned policy-makers is needed to ensure that management of foreign exchange reserves does not conflict with the financial stability and lender-of-last-resort functions. As a general maxim, financial stability considerations should take priority over optimizing returns on official reserves.

Central banks need to bear in mind the reasons for expansion of official reserves — partly because of efforts at maintaining competitive exchange rates, and partly because of a desire to build up "self-insurance" against future foreign exchange crises. There has also been an element of windfall from higher commodity prices, especially oil. With the decline in yields on traditional assets — most notably US Treasury bills and bonds — central bankers have come under pressure to raise returns. Critics argue that the high opportunity cost of holding low-yielding assets is harmful from a social welfare perspective.

Another worry for central bankers has been their concentration of holdings in the dollar, the world's pre-eminent reserve currency, backed by deep and liquid markets in the world's largest, but heavily debt-laden, economy. The ability to divest or diversify without incurring foreign exchange losses is severely constrained.

Central banks are under no illusions that their opportunity to emulate the private sector is limited. A foreign exchange reserve portfolio is just one part of the assets and liabilities of a country and of the central bank balance sheet. Reserve management has to be highly sensitive to the potential impact on central bank capital and to wider economic priorities such as insuring against a halt to capital inflows or repatriation of external capital.

Conclusions

The roles of central banks worldwide are changing fundamentally. As a general rule, the role of the central bank will become bigger, riskier and more complex. The paradox is that as central banks become inexorably more powerful and influential, the reins on their long-cherished independence will become tighter.

This white paper has argued that whatever the macro and micro-outcomes of the current economic, financial and regulatory crises, the roles of central banks worldwide are changing fundamentally and forever. These changes will not be uniform, and different models of central banking, especially with regard to strategic remit and operational activities, will be seen in different jurisdictions. However, as a general rule, the role of the central bank will become bigger, riskier and more complex. In many instances, a re-evaluation of a central bank's fundamental relationships, both formal and informal, will be required. These will include the institutional and governance relationships with both state governments and pan-national institutions, links with banks and financial firms over which the central bank may have monetary, fiscal and regulatory power, relationships with the media, and communication with the electorate as a whole. Many central bankers will find this new transparency and accountability as irksome as it is novel, but attention will be required if the extended powers of the central bank are to be seen as legitimate. The paradox is that as central banks become inexorably more powerful and influential, the reins on their long-cherished independence will become tighter.

While rethinking roles and constitutions in the depth of the crisis may seem to most central bank boards to be akin to changing the airplane's engines while in flight, satisfactory answers to a series of fundamental questions will be required. These will include considerations of:

- **Strategy:** Has the bank's remit been comprehensively defined and new roles adequately specified? Is there clarity on quantitative targets and objectives for the bank and the measures of success? Does the bank have the requisite powers and authorities to accomplish its mission? What are the delineations between national, transnational and supranational responsibilities and authorities?
- **Governance:** Are the bank's institutional framework and accountabilities in line with the strategic mission defined above? In particular, are authorities, reporting lines and responsibilities sufficiently well delineated? How independent is the bank to be, and how far does the remit of politicians extend?
- **Risk management:** If the bank's balance sheet and financial markets operations have significantly expanded, are the right skills and processes in place to measure, assess and manage the enhanced risk?
- **Operational platform:** Does the bank have sufficient and suitable operational capabilities to manage an increased workload, and in particular are IT systems up to scratch? Is the bank being managed as efficiently and effectively as it could be? Is there a need to review the distinction between "policy requirements" and "executive requirements"?

The answers to these questions will vary markedly depending on institutional circumstance, but it will be imperative that central banks wrestle with them if they are to cope successfully with the significant challenges and major increases in the remits that lie ahead.

In summary, the report arrives at three major conclusions:

- The crisis has fundamentally changed the roles of central banks and central bankers, and there will be no reversion to the previous status quo. Adjusting to an increasingly public and prominent position on the political stage will be one of the lasting legacies for central bankers of the current crises. The role of the central banker has become inherently more powerful, more complex and more contentious.
- The price of the extension of the activities and powers of central banks is likely to be a restriction of their hitherto sacrosanct independence. In many countries there will be a growing and vigorous debate about the transparency of the activities of central bankers and of accountability to government and the wider electorate.
- Many central banks are confronting a new set of policy and operational challenges. In a palette of disciplines ranging from overall strategy and governance, through risk management, and on to the core operational platform, there is much work to be done in attaining organizational fitness to manage significantly increased and more complex roles.

This report maintains that the role of central bankers is changing and will continue to change fundamentally. There are multiple challenges, ranging from the grandly philosophical and strategic to more prosaic concerns. It may well be that expanded powers and responsibilities for central banks will lead to a full or partial loss of the independence that has, particularly in the western world, become the cherished hallmark of central banking. Having been forced center stage as a result of the financial crisis, central bankers are adapting with difficulty to an increasingly public role. As a condition for wielding wider power, they will have to accept greater restraints.

Appendix I – List of experts consulted

Katinka Barysch	Deputy Director, Centre for European Reform, Member of OMFIF Advisory Board
Prof. Charles Bean	Deputy Governor, Bank of England
Prof. Marek Belka	President, National Bank of Poland
Prof. Harald Benink	Professor of Finance, Founding Chairman of the ESFRC, Erasmus University
Dr. Lorenzo Bini Smaghi	Former member of the Executive Board, European Central Bank
Bert Boertje	Director, Financial Markets, De Nederlandsche Bank
Dr. Claudio Borio	Head of Research and Statistics, Bank for International Settlements
Neil Courtis	Member of OMFIF Advisory Board
Prof. Nick Butler	Kings College London, former Senior Policy Adviser to the Prime Minister, Member of OMFIF Advisory Board
Dr. Stephen Cecchetti	Economic Adviser and Head of the Monetary and Economic Department, Bank for International Settlements
John Chown	Principal, Chown Dewhurst LLP
Prof. Meghnad Desai	Emeritus Professor of Economics, London School of Economics, Chairman, OMFIF Advisory Board
Darrell Delamaide	Member of OMFIF Advisory Board
Prof. Gao Haihong	Professor and Director, Research Center for International Finance, Chinese Academy of Social Sciences, Member of OMFIF Advisory Board
Prof. Fan Gang	Director, National Economic Research Institute, China Reform Foundation
Stewart Fleming	Associate Fellow, Chatham House, Member of OMFIF Advisory Board
Prof. Steve Hanke	Professor of Applied Economics, Johns Hopkins University, Baltimore, Member of OMFIF Advisory Board
Dr. Thomas Huertas	Partner, Financial Services Risk, Ernst & Young LLP (UK)
Prof. Kazumasa Iwata	President, Japan Center for Economic Research
Prof. Harold James	Professor of History and International Affairs, Princeton University, and European University Institute, Member of OMFIF Advisory Board
Patricia Jackson	Partner, Head of Financial Regulatory Advice EMEIA, Ernst & Young LLP (UK)

Michael Kaimakliotis	Head of Investments, Quantum Global Wealth Management
Alexander Kashturov	Head of Markets Operations, Bank of Russia
Mumtaz Khan	Managing Director, Middle East and Asia Capital Partners, Member of OMFIF Advisory Board
Donald Kohn	Former Vice Chairman of the Board of Governors, Federal Reserve, Vice Chairman, Brookings Institute
Richard Koo	Chief Economist, Nomura Research Institute
Philippe Lagayette	President, Fondation de France, former Deputy Goveror, Banque de France
Sir Andrew Large	Former Deputy Governor, Bank of England, Member of OMFIF Advisory Board
Ruud Lubbers	Former Netherlands Prime Minister, Member of OMFIF Advisory Board
Prof. Rakesh Mohan	Professor of International Economics and Finance and Yale University School of Management former Deputy Governor, Reserve Bank of India
Jamie McAndrews	Executive Vice President and Director of Financial Research, Federal Reserve Bank of New York
Monde Mnyande	Chief Economist and Advisor to the Governor, South African Reserve Bank
Peter Norman	Member of OMFIF Advisory Board
Ewald Nowotny	Governor, Österreichische Nationalbank
John Nugée	Senior Managing Director, Official Institutions Group, State Street Global Advisors, Vice Chairman OMFIF Advisory Board
Rolf Pauli	Financial Markets, De Nederlandsche Bank
Prof. Abdul Rahman	Professor, Telfer School of Management
Prof. Shumpei Takemori	Professor of Economics, Keio University
Prof. Niels Christoffer Thygesen	Emeritus Professor of Economics, University of Copenhagen, Member of OMFIF Advisory Board
Prof. Paul van Seters	Tilberg University, Member of OMFIF Advisory Board
Makoto Utsumi	President and CEO, Japan Credit Rating Agency
Prof. Philip Wood	Head of Global Law Intelligence, Allen & Overy

The authors would like to thank the above-named experts for their invaluable insights. Some of these experts provided their views on condition that they should not be directly quoted.

Appendix II – Authors

The main authors of this report are:

David Marsh	Chairman, OMFIF
Philip Middleton	Head of Central Banking, Ernst & Young
John Plender	Member of the Board, OMFIF
Gabriel Stein	Chief Economic Advisor, OMFIF

Contributing authors to this report include:

John Chown	Principal, Chown Dewhurst LLP
Neil Courtis	Member of OMFIF Advisory Board
Darrell Delamaide	Member of OMFIF Advisory Board
Michael Kaimakliotis	Head of Investments, Quantum Global Wealth Management
William Keegan	Senior Economics Commentator, The Observer, Member of OMFIF Advisory Board

Appendix III — Notes to text

[1] Lucas Papademos, then Member of the European Central Bank Executive Board, BIS annual conference, June 2010. In 2011 as Greek Prime Minister, he was thrust into the centre of one of the world's most intractable economic policy dilemmas.

[2] Senate hearing, December 2009.

[3] John Nugée, Statement to OMFIF, emailed response to survey on 6 February 2012.

[4] Rakesh Mohan, *Diversity to combat groupthink*, OMFIF May Bulletin, 18 May 2012, pp. 6–7.

[5] Rakesh Mohan, *Growth with Financial Stability, Central Banking in an Emerging Market*, Oxford University Press, 2011, p. xvi.

[6] Stephen Cecchetti, statement to OMFIF, emailed answer to survey 20 February 2012.

[7] Press conference, Frankfurt, 13 March 2012.

[8] Conversation with David Marsh, 5 April 2012.

[9] Interview with Handelsblatt, 31 October 2012.

[10] Rakesh Mohan, "*Diversity to combat groupthink*," OMFIF May Bulletin, 18 May 2012, pp. 6–7.

[11] Nick Butler, statement to OMFIF, emailed answer to survey on 5 February 2012.

[12] Harold James, statement to OMFIF, emailed answer to survey on 30 January 2012.

[13] Andrew Large, statement to OMFIF, emailed answer to survey on 1 February 2012.

[14] Conversation between David Marsh and Richard Koo on 6 March 2012, Tokyo.

[15] Abdul Rahman, statement to OMFIF, emailed response to survey on 8 February 2012.

[16] Lorenzo Bini Smaghi, statement to OMFIF, emailed response to survey (confirmed 4 July 2012).

[17] Philippe Lagayette, statement to OMFIF, emailed response to survey on 15 February 2012.

[18] Stephen Cecchetti, statement to OMFIF, emailed response to survey on 20 February 2012.

[19] Marek Belka, statement to OMFIF, emailed response to survey on 24 February 2012.

[20] Monde Mnyande, statement to OMFIF, emailed response to survey on 23 March 2012.

[21] Talk at Centre for Study of Financial Innovation, London, 19 March 2012.

[22] Conversation between David Marsh and Donald Kohn in Washington on 27 March 2012.

[23] Speech by Guido Mantega to the Federação das Indústrias do Estado de São Paulo (Fiesp), 27 September 2010.

[24] Gao Haihong, statement to OMFIF, emailed response to survey on 30 January 2012.

[25] Aleksander Kashturov, statement to OMFIF, emailed response to survey on 5 March 2012.

[26] Statement in Tokyo, 7 March 2012.

[27] Jamie McAndrews, statement to OMFIF, emailed response to survey on 16 February 2012.

[28] IMF Global Financial Stability Report, Statistical Appendix, April 2011.

[29] Japanese data show that the retired generation is not drawing down savings as fast as had been anticipated, even though the savings ratio has fallen toward average levels pertaining elsewhere.

[30] See Eurostat's *2009 Ageing Report*, covering all the current EU members and taking the figures out to 2060.

[31] Boao Forum, 3 April 2012.

[32] Research report from Sheng Songcheng, head of the statistics department of People's Bank of China, February 2012. This was published by Xinhua, the state news agency, rather than the PBoC – suggesting the objective of provoking debate rather than introducing a fully workable plan.

[33] The PBoC report contained some critical comments about the overall cautious approach. "By overemphasising preconditions [for reform] a gradual approach is easily twisted into a negative immobile approach, leading to delays." But the document ended up effectively endorsing this stance.

[34] Boao Forum, 3 April 2012.

[35] Statement, Beijing, 5 April 2012.

[36] Statement by John McCain at the Republican presidential primary debate in New Hampshire, 2 December 1999.

[37] Laurence Ball wrote about groupthink in his paper, *Ben Bernanke and the Zero-Bound*, February 2012.

[38] Bob Woodward, *Maestro: Greenspan's Fed and the American Boom*, Simon and Schuster, 2000. Reference is to title.

[39] Greenspan congressional testimony, Washington, 23 October 2008.

[40] Ruud Lubbers, statement to OMFIF, emailed response to survey on 6 February 2012.

[41] Statement at OMFIF meeting, London, 28 February 2012.

[42] Article 123 TFEU.

[43] Speech in Geneva, 20 February 2012.

[44] Press Conference in Frankfurt, 3 November 2011.

[45] Press Conference in Frankfurt, 6 September 2012.

[46] Washington in early 2012: It has set up a new agency to investigate China's trade practices and, along with Japan and the European Union, recently initiated a process through the World Trade Organization to challenge the restrictions that China places on exports of rare earth minerals.

[47] Central Bank Balance Sheet Expansion: Japan's experience. Kazumasa Iwata and Shinji Takenaka described the stance in the following terms: "The unconventional policy was executed in a conventional way." Bank of Thailand, BIS Research Conference, 12 December 2011.

[48] Stephen Cecchetti, statement to OMFIF, emailed response to survey on 20 February 2012.

[49] Inflation targeting is not a new idea. The first central bank to be formally assigned a price target was Sweden's Riksbank following the decision to leave gold in 1931. This was a price level target, rather than an inflation target; but for the purposes of these comments, the difference is minimal.

[50] There were and are, however, several notable exceptions. The US Fed has a dual mandate of stable prices and maximum employment, although it has recently moved to setting a de facto 2% inflation target. The ECB acts like an inflation-targeting central bank but with some crucial omissions, notably a lack of sanction if the target is breached. The BoJ, even though it has recently moved in the direction of inflation-targeting, is not formally following such a goal. A number of important Asian central banks such as the People's Bank of China and the Monetary Authority of Singapore follow exchange rate targets. Taiwan's Central Bank of China, perhaps uniquely among central banks, has no formal target at all.

[51] Partly this was because the very success of inflation targeting carried within it the seed of the crisis. Historically, periods of low and stable inflation — and therefore of low and stable interest rates — are more prone to financial crisis than others. In this case, it was exacerbated by the refusal of some central banks, above all the Fed, to attempt to deflate incipient asset price bubbles.

[52] Claudio Borio, "The financial crisis of 2007–?: macroeconomic origins and policy lessons," G20 Workshop on the Global Economy, Mumbai, India, 24–26 May 2009.

[53] Claudio Borio, "Central banking post-crisis: What compass for uncharted waters?" BIS Working Papers, No 353, September 2011, www.bis.org/publ/work353.pdf.

[54] Makoto Utsumi, statement to OMFIF, emailed response to survey on 9 February 2012.

[55] Makoto Utsumi, statement to OMFIF, emailed response to survey on 9 February 2012.

[56] Address of William McChesney Martin Jr., Chairman, Board of Governors of the Federal Reserve System before the New York Group of the Investment Bankers Association of America, 19 October 1955.

[57] See, for instance, paper by William White, the former BIS economist, who argued (Federal Reserve Bank of Dallas, 2009) that monetary policy should be more focused on "pre-emptive tightening" to moderate credit bubbles than on "pre-emptive easing" to deal with the aftereffects. There is a need for a new macrofinancial stability framework that would use both regulatory and monetary instruments to resist credit bubbles and thus promote sustainable economic growth over time.

[58] Walter Bagehot, *Lombard Street*, "Lombard Street: A Description of the Money Market" (references are given to the online version: www.econlib.org/library/Bagehot/bagLom.html).

[59] Data as of March 2012.

[60] The two rounds of the LTRO were for a total of more than €1t at a 1% interest rate for the unusually long period of three years.

[61] Andrew Large, statement to OMFIF, emailed response to survey on 1 February 2012.

[62] Comments in London, 11 April 2012.

[63] One risk of technical bankruptcy would be where a central bank's liabilities in foreign currencies rise dramatically through devaluation of the domestic currency, where seigniorage cannot be used to stem the weakness of its balance sheet.

[64] Jamie McAndrews, statement to OMFIF in response to survey on 16 February 2012.

[65] Marek Belka, statement to OMFIF, emailed answer to survey on 24 February 2012.

[66] Marek Belka, statement to OMFIF, emailed answer to survey on 24 February 2012.

[67] Niels Thygesen, statement to OMFIF, emailed answer to survey on 4 April 2012.

[68] Meghnad Desai, statement to OMFIF, emailed response to survey on 21 February 2012.

[69] The terms refer to two opposing views of how central banks should treat asset price bubbles. "Lean" means leaning against the wind, i.e., attempting to deflate a bubble before it grows to large and bursts. "Clean" refers to allowing bubbles to develop and burst, restricting central bank action to cleaning up afterwards.

[70] Meghnad Desai, statement to OMFIF, emailed response to survey on 21 February 2012.

[71] Research and commentary they published on financial stability reflected this.

[72] Trichet speech, Jean-Claude Trichet, President of the ECB, Keynote speech at the 19th Frankfurt European Banking Congress: "After the Crisis," Frankfurt am Main, Alte Oper, 20 November 2009, www.ecb.int/press/key/date/2009/html/sp091120.en.html

[73] Speech, Basel, 2010.

[74] Jamie McAndrews, statement to OMFIF, emailed response to survey on 16 February 2012.

[75] Bank of England discussion paper, *The role of macroprudential policy*, 19 November 2009, accessed at: www.bankofengland.co.uk/publications/Documents/other/financialstability/roleofmacroprudentialpolicy091121.pdf

[76] David Green, *The relationship between the objectives and tools of macroprudential and monetary policy*, from: Financial Markets Group Special Paper Series, London School of Economics, May 2011. Accessed at http://www2.lse.ac.uk/fmg/workingPapers/specialPapers/PDF/SP200.pdf. This may be another argument in favour of PLT.

[77] Chatham House, 28 March 2012.

Contacts

Philip Middleton
Head of Central Banking
Ernst & Young
Tel: + 44 20 7951 1139
Email: pmiddleton@uk.ey.com

David Marsh
Chairman
OMFIF (Official Monetary and Financial Institutions Forum)
Tel: + 44 20 3008 5262
Email: david.marsh@omfif.org

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