MONETARY POLICY, BANKING UNION AND ECONOMIC GROWTH

CHALLENGES FOR EUROPE IN THE WAKE OF THE CRISIS

EDITED BY **LUCAS PAPADEMOS**

BANK OF GREECE
EUROSYSTEM

ACADEMY OF ATHENS

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Tel. +30 210 320 2041

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Preface

Since the global financial and economic crisis of 2007-2009 and the onset of the European sovereign debt and banking crisis in 2010, policymakers in Europe have had to deal with a series of extraordinary challenges. Initially, these stemmed directly from the crises and the urgent need to address severe tensions and distortions in financial markets, provide sufficient liquidity to banking systems, contain financial contagion, and mitigate the impact of market turmoil on economic activity and employment.

Subsequently, as overall financial conditions improved and the European economy stabilised and began to recover, the serious policy issues faced have been different in nature and more forward-looking: they relate to the medium- and longer-term effects of the crises on the European financial system and the real economy, as well as to the crucial requirement to implement policies and reforms that would prevent, or at least minimise, the re-emergence of the factors and risks responsible for the financial and macroeconomic instability experienced in previous years.

This book focuses mainly, though not exclusively, on the latter type of policy issues that have been confronted by monetary and financial authorities in Europe in the wake of the crisis. These challenges bear important similarities to the problems that have been faced in other advanced economies in the aftermath of the global financial crisis, but they also differ significantly owing to divergences in economic conditions and to the unique institutional framework and policy constraints that characterise the European monetary union. Hence, addressing these challenges requires policy actions and reforms which, *inter alia*, should also tackle the weaknesses identified in the present institutional architecture and economic governance of the euro area.

The origin of this volume is a symposium on "Monetary Policy, Banking Union and Economic Growth", which was held in Athens in June 2014, in the context of the Greek Presidency of the European Union Council, and was organised under the auspices of the Academy of Athens. The symposium brought together prominent academics and policymakers from continental Europe, the United States, Japan and the United Kingdom with deep knowledge of, and broad experience in, the policy issues to be addressed.

The purpose of the symposium was to review and assess the effectiveness of policies and reforms with a Europe-wide impact, notably the single monetary policy and the European banking union, in achieving three fundamental economic objectives of the European Union: strengthening economic growth, preserving price stability and safeguarding financial stability. Achieving stronger growth and protecting financial and macroeconomic stability have been set as top priorities of the Union in the wake of the European debt and banking crisis. They will remain so for years to come, because their sustained attainment is likely to prove challenging.

All the essays included in this book are based on the speeches and panelists' remarks during the meeting. As the completion and editing of the final texts took a fair amount of time, several of the initial contributions were adapted or updated to take into account developments and policies in 2015 and 2016, while a few others were further developed after the event in order to produce a more complete analysis of the issues presented. Hence, this book is an updated and enhanced version of the symposium proceedings.

The chapters in this volume are organised into two main parts. The first part contains six contributions which examine the key challenges posed to monetary policy in the wake of the crisis in Europe, as well as in the United States and Japan. The first two are the speeches given by Vítor Constâncio and Benjamin M. Friedman, while the following four chapters are the panel presentations made by Otmar Issing, Donald Kohn, Hiroshi Nakaso and Paul Tucker. The policy issues being addressed include: (1) the effectiveness of unconventional monetary policy measures, (2) the contribution of central bank communication to the attainment of monetary policy objectives, (3) the role of monetary policy in safeguarding financial stability, (4) the potential use of unconventional monetary policy instruments in normal times, (5) the optimal size and appropriate composition of central bank balance sheets, (6) the intersection of monetary policy and prudential supervision, and (7) the institutional framework and governance of central banks in light of their expanded responsibilities in the aftermath of the crisis.

The second part contains seven contributions which focus on the role and effectiveness of the recently established European banking union in protecting financial stability and fostering economic growth. The first two chapters are the speeches delivered by Ignazio Visco and Yannis Stournaras and the other five are based on the presentations of Tassos Giannitsis, Hans-Helmut Kotz, Jan-Pieter Krahnen, Angel Ubide and Nout Wellink. Among the specific topics analysed and assessed are: (1) the institutional architecture, operational features and transitional arrangements of the European banking union that has been established so far (until the end of 2016), (2) the expected contribution of banking union to financial stability in the

euro area, especially in the event of large asymmetric shocks, (3) the part of banking union in supporting the provision and efficient allocation of credit and its beneficial impact, through various channels, on sustained economic growth throughout the euro area, (4) the implications of banking union for the uniform transmission of the single monetary policy across the euro area, (5) the role of banking union in overcoming the financial fragmentation observed during the crisis, in promoting deeper financial development and in securing a level playing field, (6) proposals for completing banking union and improving its functioning, and (7) considerations about the appropriate institutional setting for addressing interactions, complementarities and potential trade-offs between macroprudential and microprudential supervision and monetary policy.

The introductory chapter contains my opening speech at the symposium. It provides an overview of the growth prospects and associated policy challenges for the European Union, raises a number of questions on the conduct and effectiveness of monetary policy in achieving its objectives in the new post-crisis economic environment and puts forward issues for discussion regarding the institutional architecture and certain operational features of the European banking union and its likely effects on financial stability and economic growth.

As organiser of the symposium and editor of this volume, my debts are many to all those who contributed to this project. First and foremost, I am deeply grateful to the speakers at the symposium and authors of the essays in this book for their outstanding contributions on fundamental issues concerning the future of the European economy.

I want to thank Yannis Manos, president of the Athens Megaron Concert Hall, where the symposium was held, and his staff for their multifaceted support in organising the event. Special thanks go to the Office of the Presidency of the EU Council and the Ministry of Foreign Affairs for their generous financial support.

The Bank of Greece contributed to the publication of this book in various ways. I take this opportunity to express my sincere thanks to Governor Yannis Stournaras for participating in the symposium and supporting the production of this volume. I would especially like to thank George Nikolaidis of the Bank's Economic Analysis and Research Department for his exemplary editorial work and for coordinating the publication process with diligence and enthusiasm. I am also indebted to Panagiotis Panagakis, Director of the Centre for Culture, Research and Documentation, and to Nikos Dougekos for the original design of the book's cover. The staff of the Bank of Greece Printing Works deserve credit for the impeccable digital layout and printing of the volume. Finally, I would particularly like to thank Michael Nicolinakos and Isaac Sabethai, who read parts of the manuscript and offered valuable

comments, and Eri Konstantaki, who provided excellent and vital administrative assistance in all stages of the process of organising the event and publishing this volume.

Looking ahead and adopting a broader perspective, it is increasingly clear that in order to improve economic performance and social welfare in Europe it will be necessary to implement appropriate policies and reforms at both the national and the European level. It is also broadly accepted that such actions will be necessary in all policy areas, including fiscal policy as well as reforms in markets and institutions, in order to achieve the objectives of growth and stability more effectively and efficiently. In the euro area, in particular, it is essential to take further steps towards completing and reinforcing the institutional architecture of the economic and monetary union by strengthening its economic and fiscal pillars together with their political foundations.

Having said that, monetary policy, financial regulation and prudential supervision will continue to play decisive roles in maintaining stability and fostering growth. I am hopeful that this book will enhance our understanding of the design, conduct and effectiveness of monetary policy and financial policy in the wake of the crisis and will contribute to the ongoing debate on these issues.

Lucas Papademos

Introduction

1

Monetary Policy and Banking Union: Fostering Growth and Preserving Stability

Lucas Papademos

It is with great pleasure that I welcome you to this symposium on "Monetary Policy, Banking Union and Economic Growth". We are very fortunate to have with us today a group of eminent academics and policymakers with deep knowledge of, and broad experience in, the subjects and policies to be examined. I want to express my gratitude to the speakers who have come to Athens to present their views on important issues for the future of Europe.

The global financial crisis of 2007-2009 and, especially, the sovereign debt and banking crisis that erupted in the euro area in 2010 have had profound and long-lasting effects on the European economy and have posed extraordinary challenges to policymakers at both the national and the European level. Unsustainable public finances, stress in banking systems and protracted weakness in economic activity gave rise to serious risks to financial and macroeconomic stability and, at times, even threatened the viability of monetary union. Addressing these challenges required resolute and far-reaching policy actions in individual Member States, as well as a serious reassessment and significant reform of the economic governance and institutional architecture of Economic and Monetary Union (EMU).

Although the crisis is largely behind us and economic recovery has gained momentum in recent years, important challenges remain and are related to the need to achieve stronger and sustainable growth of the European economy, reduce still unacceptably high unemployment, address increased income inequality, and implement further institutional reforms that will prevent the re-emergence of the factors responsible for the instability experienced in previous years and will ensure the efficient functioning and long-term viability of the European monetary union.

The purpose of this symposium is to review and assess policies and reforms aimed at achieving fundamental economic objectives of the European Union (EU), namely:

- strengthening economic growth while preserving price stability, and

- protecting financial and macroeconomic stability by taking further steps towards establishing a genuine Economic and Monetary Union (EMU), notably by completing banking union in the euro area.

These objectives will remain central policy priorities of the EU for years to come because their sustained attainment is likely to prove challenging.

In the wake of the global financial and economic crisis and the European sovereign debt and banking crisis, achieving stronger and sustainable growth, without jeopardising stability, is a difficult task. It will require concerted efforts and effective policy actions on several fronts, which should be appropriately designed and efficiently implemented.

In introducing this topic, let me:

- first, provide an overview of the growth prospects and associated policy challenges for Europe in the aftermath of the crisis;
- second, raise a number of questions on the role, conduct and effectiveness of monetary policy in supporting economic growth, preserving price stability and safeguarding financial stability in the post-crisis economic environment;
- third, consider the main features of the European banking union that has been established and its medium-term impact on the euro area economy and put forward for discussion certain issues related to its likely effects on financial stability and economic growth over the longer run.

Achieving Strong and Durable Growth: Prospects and Policy Challenges

In recent years, the European Union in general and the euro area in particular have been at a critical juncture. Let me call it a point of inflection. This is not a usual term, but it seems appropriate for an exceptionally complex and potentially unstable situation, which involves both encouraging and troubling developments, poses serious policy challenges and is associated with uncertain prospects.

On the one hand, there have been several positive developments:

- as a result of policies implemented at the national level and policy actions taken at the European level, major progress has been made in resolving the debt and banking crisis in the euro area;
- economic recovery has gained momentum, with moderate growth of 1.3% in 2014, 2.1% in 2015 and 1.8% in 2016 in the euro area (1.5% , 2.3% and 2.0% respectively in the EU), supported by the very accommodative monetary policy of the European Central Bank (ECB), improved financing conditions, lower energy prices and increasing confidence; and

- important steps have been taken to reinforce economic governance and improve the institutional architecture of EMU, starting with the creation of a banking union.

On the other hand, the economic outlook remains challenging, the political environment has been complex and tense, and various risks lie ahead. Although the debt and banking crisis in the euro area is largely behind us, its underlying causes have not been fully addressed, while its consequences for growth and employment have entailed substantial – and in some cases huge – economic and social costs.

In the coming years (2017-2019), the European economy is projected to grow at a higher, yet rather modest pace of 1.5-2% and the decline in unemployment is forecast to be painfully slow.[1] Potential growth in the euro area over the medium term is estimated at 1.1- 1.4% . Growth is likely to remain uneven across euro area countries. Furthermore, most international institutions' assessments of the outlook indicate that, on balance, downside risks to economic activity will probably prevail over the medium term.[2]

Several factors have posed obstacles to faster recovery and higher growth in the EU and the euro area, including:

- structural weaknesses that existed before the crisis and have not yet been adequately dealt with;
- high public debt relative to GDP, which requires further fiscal consolidation efforts and imposes constraints on budgetary policy;
- a potential decline in trend productivity growth and a rise in structural unemployment in the wake of the crisis;
- the process of bank balance sheet deleveraging and the need to further strengthen the capital of banks, which limit their ability to provide credit to the private sector; and
- persisting, though diminishing, financial fragmentation across the euro area, which has increased the cost and reduced the availability of credit precisely in those countries that need it most to support economic growth.

1 Real GDP in the euro area was projected in the fall of 2016 by international institutions to grow by 1.5-1.8% in 2016 and 2017 and by 1.6-1.7% in 2018. See European Commission, European Economic Forecast, Autumn 2016, *European Economy*, Institutional Paper 38, 2016; European Central Bank, ECB Staff macroeconomic projections for the euro area, September 2016; and International Monetary Fund, *World Economic Outlook*, October 2016.

2 Medium-term potential growth in the euro area is estimated at 1.4% by the IMF (*World Economic Outlook*, October 2016, p. 21) and at 1.1-1.2% by the European Commission (European Economic Forecast, Autumn 2016, p. 65). Risks to the economic outlook, including political risks and economic policy uncertainty, had been assessed by international institutions in 2015 and 2016 as being tilted to the downside, but they have become more balanced since then.

Moreover, globalisation and demographics have had adverse effects on growth and employment in some countries.

Overcoming these obstacles is likely to become more complicated in light of the evolving political landscape in the EU. The outcome of the elections for the European Parliament in 2014 and national elections in a number of EU countries since then have confirmed the findings of opinion surveys that Euroscepticism and nationalism have risen, though to a varying extent across countries. Moreover, populism, political fragmentation and extremism have also increased. If these developments persist, they could affect the pace and scope of implementation of necessary structural reforms and fiscal consolidation measures; they could also reduce support for further European integration and the creation of a genuine EMU.

In my opinion, the increase in Euroscepticism and nationalism reflects to a significant extent the severe and prolonged weakness of the euro area economy and the rise in unemployment to record levels. It also reflects doubts about the benefits of cross-border economic integration and associated public perceptions that the European Union's institutions have not managed the crisis effectively and in a timely manner. I do not share this view, considering the nature, intensity and complexity of the crisis, but many of our fellow citizens believe that this is the case. Economic adjustment costs in debtor countries and bailout fatigue in creditor countries, as well as concerns about the impact of globalisation and migration on employment and the rising income inequality have adversely influenced public attitudes towards the Union and European integration.

There is a serious risk that an undesirable feedback will emerge between the state of the economy and the orientation of political views. Anaemic growth, persistently high unemployment and rising income inequality have underpinned the position of political forces that promise to deal with economic problems by using the wrong means: protectionism, statism and inflation. In order to prevent such a dangerous interaction between economics and politics from taking hold with detrimental consequences for the economy and the future of the Union, appropriate policy actions and institutional reforms are urgently needed at both national and European levels. Their focus should be on strengthening economic recovery in the medium term and raising potential growth in the long run.

In the wake of the crisis, how can we overcome the obstacles to growth that have been identified, so as to reinforce economic recovery and augment the European economy's growth potential? There is broad consensus that reforms at the national level to improve the functioning of markets and institutions as well as policies to enhance human capital are key levers for boosting productivity and competitive-

ness, thereby increasing long-term growth and reducing structural unemployment in EU Member States.

Given the level of public debt in several European countries, it is self-evident that stronger economic growth should be attained without jeopardising the progress made in fiscal consolidation and without undermining ongoing efforts to reduce public debt to sustainable levels. In a number of European countries, growth cannot be stimulated by relying on expansionary fiscal policy. It can, however, be fostered significantly through fiscal reforms, by changing the composition of public expenditure and the structure of the tax system, so as to make them more growth-friendly and to promote efficiency and social cohesion. Moreover, in some cases, debt restructuring can facilitate the attainment of debt sustainability, ease constraints on fiscal policy and help speed up economic recovery.

The focus of this symposium is not on the necessary structural reforms and the appropriate fiscal policy at the national level, but on the role and effectiveness of policies and reforms with a Europe-wide impact – specifically the single monetary policy and the European banking union – in fostering economic growth, preserving price stability and protecting financial stability.

Monetary Policy Challenges in the Wake of the Crisis

Since the global financial and economic crisis of 2007-2009 and the onset of the euro area sovereign debt and banking crisis in 2010, monetary authorities in advanced economies have had to confront extraordinary circumstances and risks threatening financial and macroeconomic stability. Central banks have used a combination of conventional and unconventional monetary policy instruments to address severe tensions and distortions in financial markets, provide sufficient liquidity to banking systems and mitigate the adverse effects of market turmoil on economic activity and employment.

During the initial phases of the two crises, central banks intervened decisively with all available instruments to prevent a meltdown of the financial system. They effectively acted as the firefighters that aimed at, and succeeded in, preventing a precarious situation in the financial sector from evolving into an economic catastrophe. Subsequently, as overall financial conditions improved and the European economy stabilised and began to recover, the serious policy issues faced have been different in nature and more connected to future prospects. In Europe they have related to the medium- and longer-term effects of the crisis on the European banking system and the real economy, as well as to the crucial requirement to implement policies and re-

forms that would prevent, or at least minimise, the re-emergence of the factors and risks responsible for the financial and macroeconomic instability experienced in previous years.

As policy interest rates reached their zero lower bound and the room for manoeuvre using conventional monetary policy instruments was progressively exhausted, central banks had to rely on unconventional monetary policy (UMP) measures. These have typically taken three forms: (i) management of expectations about the future path of policy rates and, more generally, future monetary policy actions (forward guidance); (ii) financial market operations, including outright large-scale purchases of assets by the central bank (quantitative easing, QE); and (iii) non-standard refinancing operations aimed at improving the provision of bank loans to the real economy (credit easing).

The specific UMP measures chosen by the central banks in the US, Europe and Japan have differed, partly reflecting differences in economic conditions, in the structure of financial markets and in the overall institutional environment within which central banks operate. However, four important similarities have characterised the monetary policy stance and the instruments used by major central banks over the past six years. The degree of monetary stimulus has been unprecedented in size, scope and duration. Central bank interventions have focused on quantities rather than prices (interest rates). The large-scale asset purchases and the provision of liquidity to the banking system through a fixed-rate full allotment regime fully satisfying banks' demand have resulted in an unprecedented expansion of central bank balance sheets. And words have supplemented actions in the conduct of monetary policy. Central bank communication about the future stance of monetary policy has aimed at strengthening the impact of monetary policy on inflation, long-term yields and economic activity by influencing market expectations.

In the euro area, the ECB has played a crucial role in the resolution of the euro area debt and banking crisis from the outset, by implementing various unconventional policy measures. Let me point to three such measures taken during the first three years of the crisis: (i) the introduction of the Securities Markets Programme in May 2010 to address the dysfunctioning of sovereign bond markets and contain financial contagion and stability risks, (ii) the supply of huge amounts of liquidity with two Longer-Term Refinancing Operations (LTROs) in 2011 and 2012 that provided banks with funds amounting to 1.1 trillion euro, during the darkest period of the crisis, and (iii) the announcement in the summer of 2012 of the Outright Monetary Transactions (OMTs) scheme and Mario Draghi's declaration that the Bank "will do whatever it takes" to save the euro. These actions and words of the ECB had a profound and lasting effect on financial conditions, which have improved

markedly since mid-2012, while uncertainty declined and confidence increased. As a result, they contributed to economic recovery and facilitated fiscal adjustment.

Nevertheless, the measures taken until 2014 did not prove sufficient to address increasing deflation risks, improve credit provision and offer adequate support to sustain the incipient recovery. Hence, monetary policy continued to face challenges and rely on the use of unconventional policy measures to deal with deflation risks, foster economic growth and safeguard financial stability. The challenges faced had largely been the legacy of the two crises. The continuing deleveraging of banks, the high indebtedness of public and non-financial private sectors in several countries, the weaknesses in some banking systems, and the fragmentation of financial markets along national lines are among the factors that contributed to persisting economic weakness and impaired the transmission of monetary policy impulses to objectives across the euro area.

In light of these developments and growing deflation risks, an assessment associated with "heightened risks of too prolonged a period of low inflation" and persistent weakness in economic activity, the ECB took further unconventional monetary policy measures in 2014 and 2015. The rationale for and the specific features of these measures will be elaborated by other speakers, especially Vítor Constâncio and Ignazio Visco. I would like to underscore that the measures decided in June and September 2014, which included a series of Targeted Longer-Term Refinancing Operations (TLTROs), the adoption of negative interest rates on the central bank deposit facility, and the launching of purchase programmes for asset-backed securities and covered bonds, aimed particularly at enhancing the monetary policy transmission mechanism and facilitating the provision of bank credit to the real economy. In January 2015, the ECB announced large-scale asset purchases by launching an asset purchase programme to include securities issued by euro area central governments, agencies and European institutions. The programme was extended, recalibrated and expanded in December 2015 to address continued downside risks to the inflation and growth outlook.

The monetary policies implemented by major central banks, the ECB in particular, during and in the aftermath of the two crises, have been appropriate in light of the special circumstances that prevailed and the forecasts and risk assessments available when decisions were made. Overall, the unconventional monetary policy measures applied have been effective in achieving policy objectives. Nevertheless, there have been some shortcomings and there are a number of issues that need to be addressed regarding the relative degree of effectiveness and certain consequences of the specific policies adopted. These issues are important and relevant to the conduct of monetary policy in the future. Let me highlight a number of pertinent questions:

- How effective have the various unconventional monetary policy measures (notably: forward guidance, credit easing and quantitative easing) been in preserving price stability, boosting recovery and fostering higher and sustainable economic growth?
- In particular, has the use of forward guidance by central banks contributed significantly and as envisaged to the attainment of monetary policy objectives by appropriately influencing inflation expectations, limiting uncertainty about future policy and reducing market volatility? Have some forms of forward guidance resulted in undesirable side effects and risks, e.g. inducing excessive risk-taking and the build-up of financial vulnerabilities? If this has been the case, how should central bank communication on monetary policy be provided in the future?
- Regarding the effectiveness of a prolonged period of very low, zero or even negative policy interest rates and large-scale asset purchases in supporting growth, is it diminishing over time, while the risks to financial stability are increasing? And if the answer is affirmative, what are the implications for the conduct of monetary policy going forward?
- More generally and looking ahead, should all unconventional monetary policy measures be phased out and eventually be removed from the toolkit or could some of these instruments continue to be deployed in normal circumstances?
- Given the extraordinary increase in the balance sheets of central banks during and after the crisis, an important question for the future, related to the previous one, is the optimal size and appropriate composition of central bank balance sheets.
- With regard to the role of monetary policy in safeguarding financial stability, what lessons have been learnt from the crisis that are pertinent to a situation of high asset valuations and of substantial, though moderating, accommodative monetary policy? And, more broadly, what are the benefits and costs from the use of monetary policy instruments to lean against asset bubbles and other potential threats to financial stability?
- Do central banks have sufficient tools to achieve the price stability and financial stability objectives simultaneously if and when economic and financial conditions indicate that there is a trade-off between them over the medium term? Although such a trade-off has not been visible so far, it may emerge in the future.

This last question brings me to a broader and major issue, which is especially crucial for the euro area: the relationship between monetary policy and financial policy, their roles in protecting financial and macroeconomic stability, and the way their

"intersection" affects the functioning of the monetary policy transmission mechanism. Prudential regulation and supervision, both the microprudential supervision of financial institutions and the macroprudential oversight of the financial system as a whole, should have primary responsibility for maintaining financial stability. Having said that, monetary policy and macroprudential supervision can play complementary roles in safeguarding financial stability by employing different instruments. This complementarity can help prevent more efficiently the build-up of financial imbalances and enhance the effectiveness of monetary policy in fostering growth while preserving price stability. In addition, the prudential supervision of financial institutions should help address structural weaknesses and vulnerabilities in banking systems, which have impaired the provision of credit, particularly in over-indebted countries, and thus facilitate the financing of the real economy and support its growth performance.

Before the global financial crisis, there was no macroprudential framework in place in advanced economies. Indeed, a major lesson from the crisis is the importance of macroprudential oversight for improving crisis prevention and for strengthening financial system resilience. Moreover, prudential supervision of financial institutions in the EU was the responsibility of national authorities. As a result, supervisory rules and practices differed considerably across Member States and there was no uniform assessment of the quality of bank assets and of the potential vulnerabilities of financial institutions (e.g. associated with banks' common exposures and their funding structures). The decentralisation of microprudential supervision in the euro area was detrimental to financial stability. It contributed significantly to the severity of the euro area crisis through various channels and impaired the uniform transmission of the single monetary policy across the euro area.

The Effects of Banking Union on Financial Stability and Economic Growth

It is now widely recognised that the euro area crisis was more severe and protracted than initially expected because of an adverse feedback between public finances and bank balance sheets. This negative feedback is not the only factor that explains the intensity and duration of the crisis, but it is an important one. It manifested itself in all programme or vulnerable countries, regardless of whether the origin of the crisis was mainly due to unsustainable public debt, as was the case in Greece, or vulnerabilities in the banking system, as was the case in Ireland. The hazardous interaction between banking systems and government finances became more acute as recession deepened and it delayed economic recovery.

As a result, financial integration in the euro area went into a sharp reverse, the banking system became fragmented along national borders and the transmission of the single monetary policy across the euro area was impaired. Highly indebted countries pursuing economic adjustment programmes did not benefit from the ECB's accommodative monetary policy and the lower interest rates that would normally be associated with fiscal consolidation and would mitigate its impact on economic activity. On the contrary, they experienced a credit crunch, which reinforced the effects of fiscal contraction, as bank lending rates increased significantly and credit availability was sharply curtailed.

Over certain periods, bank lending rates in programme or other vulnerable countries were 2 to 6 percentage points higher than the corresponding lending rates in core Member States, depending on the country and the type of loan.[3] Hence, the very accommodative monetary policy of the ECB over the past several years was not transmitted uniformly across the euro area. In fact, the nexus between banks and their national sovereigns, as well as the fragmentation of financial markets resulted in very tight monetary and credit conditions in several countries that accompanied the implementation of restrictive fiscal policies.

The creation of the European banking union has been instrumental in resolving the euro area crisis and is of crucial importance for protecting financial stability and boosting economic growth in the euro area over the longer run. In assessing its beneficial impact it is necessary to distinguish the expected effects of a *fully-fledged* banking union from those of the European banking union that has been established so far. A fully-fledged banking union should comprise: (i) a single supervisory authority, (ii) a single resolution authority and a single resolution fund, and (iii) a single deposit insurance scheme. It would also require a framework of common rules, legal provisions and financial instruments regarding the way bank losses are to be borne and troubled banks are to be recapitalised, as well as the size and financing modalities of the single deposit insurance scheme.

A fully-fledged banking union would break the link between banks and their sovereigns. It would reduce the risk premia that reflect differences in banks because of financial fragmentation. The pooling of supervisory powers would harmonise supervisory rules and practices, thereby providing a common and credible assessment of the quality of assets and the soundness of banks. Hence, a uniform standard

3 To be sure, the higher bank lending rates and lower credit availability in some euro area countries reflected the higher credit risk stemming from weak macroeconomic conditions and uncertainties about the quality of bank balance sheets. There is evidence, however, that the higher funding costs of banks in vulnerable countries and the constraints they faced in raising funds also reflected concerns about the country of establishment of these banks, that is about sovereign risk.

of oversight of all systemically important financial institutions would bolster confidence in euro area banks and strengthen the resilience of the banking system to shocks. In particular, potential risks stemming from concentrated bank exposures to certain types of assets that could threaten the stability of the financial system would be contained.

Importantly, a fully-fledged banking union would also result in high substitutability of deposits across banks in all euro area countries and ensure that the euro in the form of deposits is a single money. It would also foster the completion of the single market for financial services and support the efficient functioning of the single market for all goods and services. Consequently, financial fragmentation would be virtually eliminated and financing conditions would improve throughout the euro area, promoting economic growth.

Is this positive assessment of banking union too good to be true? Are its beneficial effects likely to materialise in the real world? Will the European banking union that has been established contribute effectively and in a timely manner to the attainment of Europe's stability and growth objectives? I do not want to prejudge the outcome of our deliberations on these issues, but let me first point to the main features of the banking union actually implemented and then raise a number of specific questions for discussion.

Undoubtedly, the European banking union that has been set up is a far-reaching and ambitious institutional reform that reinforces Europe's economic and monetary union. Overall, it has the appropriate structure, most of the essential components and many positive features. It includes:

- The Single Supervisory Mechanism (SSM) at the ECB, which became fully operational in November 2014. The SSM should significantly reduce the probability of bank failure and mitigate, though not eliminate, financial fragmentation in the euro area.
- The Single Resolution Mechanism (SRM) for failing systemic banks, which became operational in January 2016 and involves a Single Resolution Authority and a Single Resolution Fund (SRF). The latter is progressively funded by contributions from financial institutions.
- A framework for the recovery and resolution of failing banks that was set up under the Bank Recovery and Resolution Directive (BRRD). This framework emphasises bail-in rules before resort to direct recapitalisation of banks by the European Stability Mechanism (ESM) is possible.
- A financial instrument for the direct bank recapitalisation by the ESM that could be provided on the basis of eligibility criteria and other conditions.
- A system of national deposit guarantee schemes (DGS).

Other pertinent institutional and procedural aspects that are necessary for the functioning of banking union have also been agreed. This brief review of the European banking union highlights the impressive and elaborate structure that has been created and provides a basis for specific questions.

Although the banking union that has been set up includes most of the necessary components of a fully-fledged banking union and has many attractive features, it is not complete. It has missing elements and it also incorporates rules, provisions and transitional arrangements that may pose serious policy challenges depending on the nature and size of future shocks and other circumstances.[4]

Specifically:

- a key component missing from the current banking union structure is a single European deposit insurance scheme providing equal deposit protection across the euro area;
- another missing element is a common backstop to the Single Resolution Fund, which could be deployed as a last resort to ensure that, after bank shareholders and creditors have borne losses, the SRF, whose *ex ante* funding is limited, has adequate resources to deal with the resolution of a major bank or with several bank resolutions occurring at the same time or in succession;
- the gradual sequencing of establishing the various banking union components, including the envisaged long period for the build-up of the SRF, which will ultimately have limited *ex ante* resources covering about 1% of all insured deposits; and
- the restrictions regarding the accessibility of the ESM direct bank recapitalisation instrument, given the bail-in rules adopted for the absorption of bank losses by creditors and uninsured depositors.

Following the proposal made in the Five Presidents' Report of June 2015 on the completion of EMU,[5] the European Commission proposed in November 2015 the setting up of a European Deposit Insurance Scheme (EDIS), which would be built on the existing system of national deposit guarantee schemes and would be intro-

4 The banking union that has been established fundamentally reflects the prevailing view about the appropriate way to deal with the trade-off between, on the one hand, taking action to protect financial stability by bailing out troubled financial institutions and, on the other hand, addressing the risk of moral hazard, at the country level and at the bank level, by aiming to minimise the financial support provided by governments and ultimately taxpayers, with the help of rules that bail in creditors and depositors so as to absorb bank losses and thus share the cost of recovery. The optimality of the chosen rules will be ultimately assessed in light of future developments.

5 The Five Presidents' Report, "Completing Europe's Economic and Monetary Union", Report by Jean-Claude Juncker in close cooperation with Donald Tusk, Jeroen Dijsselbloem, Mario Draghi and Martin Schulz, European Commission, 22 June 2015. See https://ec.europa.eu/commission/sites/beta-political/files/5-presidents-report_en.pdf

duced gradually and in different stages.[6] Negotiations on this proposal have proved difficult as a result of diverging views on some of its features and it had not been adopted by the European Parliament and the Council by the end of 2016. Also the development of a common backstop to the SRF, which had been agreed in principle by the European Council in December 2012, and was strongly supported by the European Parliament subsequently, had not been implemented four years later, although pertinent work has been initiated.

It is therefore evident that the incompleteness and certain features of the banking union established so far imply limited risk-sharing at the European level, thereby reducing its effectiveness in safeguarding financial stability and fostering economic growth. A number of pertinent questions need to be addressed about the banking union actually implemented:

- Will it safeguard financial stability in the euro area in an effective and efficient manner, especially in the event of large asymmetric shocks?
- Will it significantly support economic activity in the euro area? Is it possible to estimate its likely quantitative impact on long-term growth?
- Will the envisaged timeframe for introducing all the banking union's missing elements help to mitigate financial fragmentation substantially and strengthen economic growth in all Member States over the medium term?
- Will it be sufficient in securing a level playing field for all banks in the euro area and in fostering the creation of a single market for banking products and services in the longer run?
- Will it ensure a uniform transmission of the single monetary policy across the euro area?
- If the answers to the previous questions are uncertain or not reassuring, what steps should be taken to improve the institutional architecture and the functioning of banking union so as to better safeguard financial stability, promote economic growth, eliminate financial fragmentation in a timely manner and further the establishment of a single market in financial services by securing a level playing field?

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6 The proposed EDIS would fully insure national DGS as of 2024, the same year when the Single Resolution Fund and the requirements of the current DGS directive will be phased in. See European Commission, Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions, "Towards the completion of the Banking Union", COM(2015) 587 final, 24 November 2015 (http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0587) and European Commission, "Commission Proposal for a European Deposit Insurance Scheme", 24 November 2015 (http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015PC0586).

- Will the effective and smooth functioning of banking union and, generally, of EMU require more cross-border risk-sharing and a higher degree of fiscal integration in the euro area?

Conclusion

There are other important issues that need to be addressed pertaining to monetary policy and the central bank institutional framework, including independence, democratic accountability and governance, which are being reconsidered in light of the expanded responsibilities of central banks. In the wake of the crisis, monetary policy and central banking have entered a "brave new world" and will certainly continue to face various challenges.

My opening address has been longer than envisaged as I considered it useful to provide both background and an overview of the topics to be examined in this symposium. I am sure that the presentations of our distinguished speakers – based on their academic work and experience in policymaking – will be insightful and stimulating and will enhance our understanding of the role and effectiveness of monetary policy and of the European banking union in fostering stronger growth, preserving price stability and protecting financial stability.

Looking ahead, we should also bear in mind that the extraordinary monetary easing, even though appropriate in light of prevailing circumstances as well as of forecasts and risk assessments, will not last forever. Central banks are not lending only funds to the economy; they are also lending time to governments to implement the other policies – fiscal and structural – that are essential for robust long-term growth and increased social welfare. The borrowed time should be used wisely and the necessary policy actions should be taken promptly. In the euro area, in particular, it is essential to take further steps towards completing and reinforcing the institutional architecture of the economic and monetary union by strengthening its economic and fiscal pillars together with their political foundations.

Part I Monetary Policy

2

Recent Challenges to Monetary Policy in the Euro Area

Vítor Constâncio

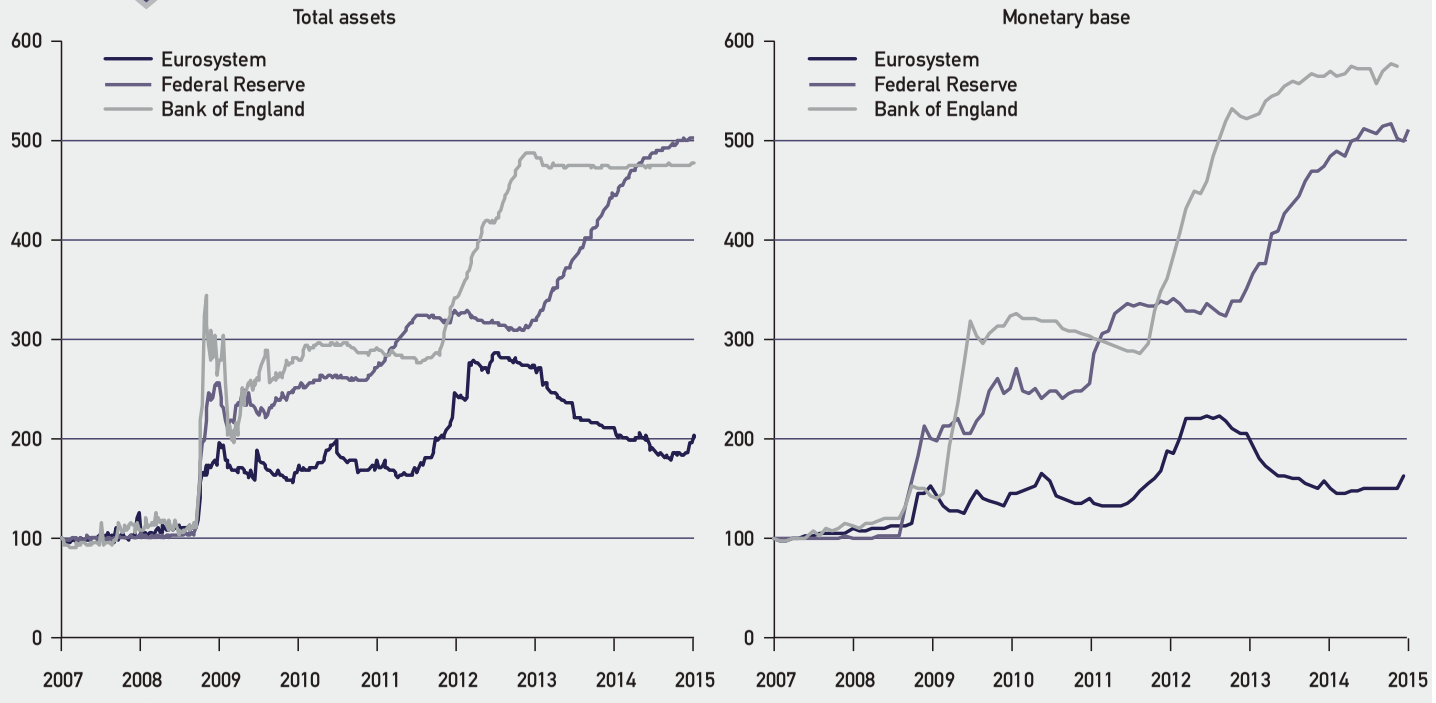
Nine years have passed since the financial market turmoil in the summer of 2007 marked the beginning of the financial crisis and the ensuing recession. These years have been challenging for all central banks. They have marked the end of a long period of remarkably stable and good macroeconomic performance. The widespread adoption of an explicit price stability objective had been conducive to a low inflation outcome in an environment of prolonged economic growth. Existing monetary policy strategies – mostly variants of the inflation targeting model, though with notable exceptions at the ECB and at the Federal Reserve – appeared to be adequate and sufficient to attain this goal. Consistently with the Tinbergen principle, the primary objective of price stability was achieved in all advanced economies through a single, conventional monetary policy instrument: a short-term interest rate.

The global financial crisis changed this situation abruptly. Since then, some central banks have been endowed with additional macroprudential instruments and a more explicit mandate to preserve financial stability. While no explicit change in monetary policy strategies has taken place, it is fair to say that there has been a generalised increase in the attention paid to banks' balance sheet conditions and to the evolution of credit. By far the most visible innovation since the beginning of the Great Recession, however, has been the increase in the array of instruments used for monetary policy purposes, particularly forward guidance about interest rates and most notably the use of central banks' balance sheets through Large Scale Asset Purchases (LSAP, i.e. Quantitative Easing or QE).

In theoretical debates, other proposals were made, namely to change the targets of monetary policy to price level targeting or to nominal GDP or, simply, to increase the established objective of 2 per cent in inflation targeting regimes to 3 per cent or

Updated text based on the speech delivered at the Athens Symposium.

Chart 1 Size of Central Banks' Balance Sheet and the Monetary Base



Note: Since September 2014, the Bank of England publishes the figures of balance sheet total assets on a quarterly basis with a five-quarter lag. Provisional figures are computed by assuming constant the information relative to the temporary liquidity assistance, which was discontinued on financial stability grounds.

4 per cent. For practical reasons, these proposals were not retained and forward guidance and QE were the new instruments of choice for many central banks.

Before the crisis, the established instrument of monetary policy was a short-term interest rate steered either by traditional open-market operations of buying and selling securities or through temporary lending to banks via repos, like in the ECB's case. After the crisis, all major central banks significantly increased their balance sheets and the respective monetary base.

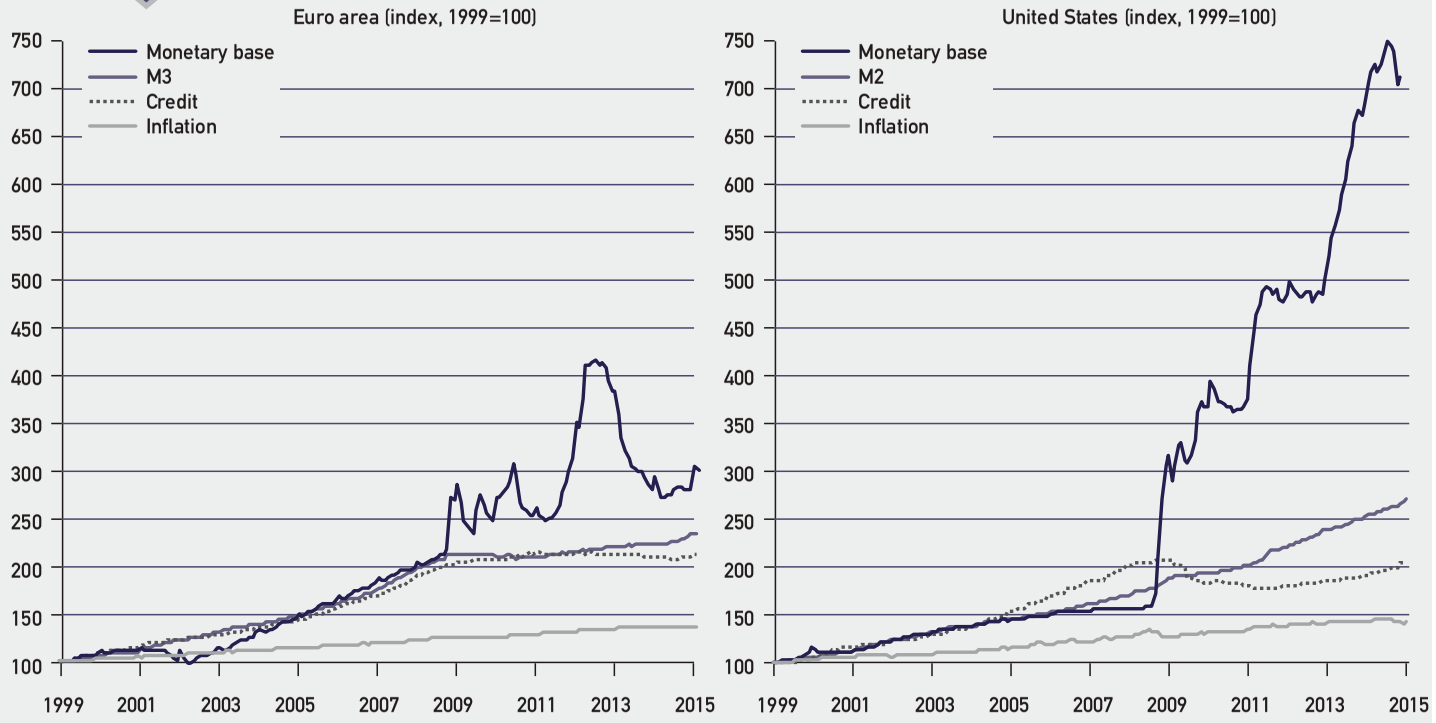
It would, nevertheless, be misleading to compare the changes in balance sheet size as if they were originated by the same policies and, consequently, had the same impact. The case of the ECB is different from the other central banks, as the expansion of the balance sheet occurred as a result of lending to banks, through repos of different maturity. The increase in the balance sheet was dependent on the demand for primary liquidity by banks, facilitated, however, by the provision of liquidity through a regime of fixed-rate full allotment of banks' demand, introduced in September 2008. The impact on overall monetary conditions was, as before the crisis, dependent on the behaviour of banks to pass through the higher monetary base into credit and broad money, which did not happen. What did happen was a justified fulfilment of the role of lender of last resort but not a

Table **Central Banks' Balance Sheets: Size and Composition**

		Total assets (% of GDP)	Monetary base (% of GDP)	Outright purchases (% of GDP)	Outright purchases (% of total assets)
ECB (Eurosystem)	December 2014	17.6	11.9	2.2	12.2
	Peak (June 2012)	26.2	18.0		
	Pre-crisis (June 2007)	9.9	8.8		
FED	December 2014	24.5	23.4*	24.4	99.5
	Pre-crisis (June 2007)	5.8	5.5		
Bank of Japan	December 2014	59.1	54.7	53.1	89.9
	Pre-crisis (June 2007)	16.3	17.1		
Bank of England	December 2014	22.6	20.8	20.9	92.4
	Pre-crisis (June 2007)	5.4	4.4		

Note: 2014 GDP based on OECD November 2014 *Economic Outlook* forecast. The figure for the Federal Reserve monetary base refers to October 2014.
Sources: ECB, Federal Reserve, Bank of England, Bank of Japan.

Chart 2 Monetary Base, Broad Money, Credit and Inflation



Sources: ECB, Federal Reserve.

new type of monetary policy instrument in the sense of aiming at a new transmission channel.

The adoption of a fixed-rate full allotment regime of liquidity provision, which has been in place since and was recently extended until December 2016 (at the very least) was indeed an extraordinary unconventional measure. It supported the banking sector and avoided a more detrimental credit crunch. However, the size of the monetary base declined significantly during 2013, when banks decided to start the repayment of their previous high borrowings. On the other hand, as shown in the table on page 21, total outright purchases of assets by the ECB under two different programmes were not behind the increase in the balance sheet, as they represented a relatively small proportion of total assets compared with other central banks.

Before the crisis, both methods of conducting liquidity management transactions (via outright asset purchases or lending to banks) previously mentioned had the objective of steering a short-term interest rate close to the policy rate decided by the central bank. It would therefore be misleading to interpret the increase in banks' balance sheets through LSAP or QE as just an increase in scale of the traditional outright purchases. There is a different objective of intervening directly in different asset markets and in longer maturities in order to influence the respective prices or yields. The intention and the composition of the assets purchased are thus relevant and different from what was previously done to manage short-term rates. QE has several transmission channels: besides the direct impact on prices or yields of the purchased assets (Treasuries or ABSs), it triggers portfolio adjustments on other assets, like equities or foreign assets, and is accompanied by wealth effects. While the theoretical debate on the exact channels of transmission remains active, many event and time-series studies have tried to measure the QE effects. John Williams (2013) presents a survey of several studies and reports that $600 billion of FED asset purchases achieved a result equivalent to a cut in the federal funds rate of 0.75 to 1 percentage point.[1]

The concerns expressed by various economists and the media that the extraordinary increases in the monetary base in many countries would lead to sig-

1 For a survey of results, see John Williams, President of the Federal Reserve Bank of San Francisco, "Lessons from the financial crisis for unconventional monetary policy", NBER Conference, 2013, October. See also Arvind Krishnamurthy and Annette Vissing-Jorgensen, "The Ins and Outs of LSAPs," presented at the Federal Reserve Bank of Kansas City's Jackson Hole Symposium on the Global Dimensions of Unconventional Monetary Policy, 2013; IMF Policy Paper on "Global impact and challenges of unconventional monetary policies", 2013, October; Christopher J. Neely, "Unconventional Monetary Policy Had Large International Effects", Federal Reserve Bank of St. Louis Working Paper 2010-018E, 2013, updated August; Michael Joyce, Matthew Tong and Robert Woods, "The United Kingdom's quantitative easing policy: design, operation and impact", Bank of England *Quarterly Bulletin* Q3, 2011.

nificant inflation rates never materialised. As Chart 2 illustrates, there was no transmission in the prevailing economic situation by banks to credit or broad money aggregates. Inflation did not respond, putting in doubt the quantitative vision about its origin. When asked about what Japan should do to overcome deflation, Milton Friedman answered in 2000: "It is very simple. They can buy long-term government securities and they can keep buying them and providing high-powered money until the high-powered money starts getting the economy into an expansion".[2] The more recent Japanese experience is still open to analysis but the channels envisioned by Milton Friedman have seemingly not been operating in the other advanced economies. As mentioned, the transmission channels at play in the recent QE experiences are indeed different from the traditional quantitative view.

The ECB Monetary Policy in the European Crisis

As the financial crisis led to the Great Recession and then evolved into the European sovereign debt crisis, the ECB started providing liquidity in fixed-rate full allotment mode, progressively and considerably extended the maturity of its loans to commercial banks, widened the set of eligible collateral, made medium-scale purchases of financial assets and announced the Outright Monetary Transactions programme.

As a result of these extraordinary measures, at the end of 2012 calm started to return in financial markets, leading to lower financial spreads and a reduction in volatility. The initial signs of economic recovery started to appear. Preliminary formal analyses indicate that non-standard measures were instrumental in supporting financial intermediation and economic activity in the euro area.[3]

Despite these encouraging developments on the financial side, real economy recovery has been weak and inflation outcomes have been surprisingly low. The new challenge we faced in the euro area in 2014 was to avert the risk of a pro-

2 See quote in Michael Woodford, "Methods of policy accommodation at the interest rate lower bound", Jackson Hole paper, 2012.

3 See Domenico Giannone, Michele Lenza, Huw Pill and Lucrezia Reichlin, "Non-standard policy measures and monetary developments", ECB Working Paper Series 1290, 2011; Michiel De Pooter, Robert F. Martin and Seth Pruitt, "The effects of official bond market intervention in Europe", Federal Reserve Board of Governors, mimeo, 2012; Fabian Eser and Bernd Schwaab, "The yield impact of central bank asset purchases: The case of the ECB's Securities Markets Programme", ECB Working Paper Series 1587, 2013; Eric Ghysels, Julien Idier, Simone Manganelli and Olivier Vergote, "A high frequency assessment of the ECB Securities Markets Programme", ECB Working Paper Series 1642, 2014; Carlo Altavilla, Domenico Giannone and Michele Lenza, "The financial and macroeconomic effects of the OMT announcements", CSEF Working Paper 352, 2014.

longed period of excessively low inflation. Euro area annual HICP inflation was 0.5 per cent in May 2014, after averaging 0.7 per cent in the first four months of the year. The June 2014 Eurosystem staff macroeconomic projections foresaw a gradual increase in annual HICP inflation towards levels consistent with our definition of price stability. The pace of the increase is, however, slow. From 0.7 per cent in 2014, inflation was expected to reach 1.1 per cent in 2015 and, more uncertainly, 1.4 per cent in 2016. All three figures had been revised downwards in comparison with the March 2014 ECB staff macroeconomic projections and portrayed a situation distant from our objective of keeping inflation below but close to 2 per cent in the medium term.

Inflation developments alone went a long way in motivating the combination of the measures announced by the Governing Council of the ECB on 5 June 2014, to provide additional monetary policy accommodation and to support lending to the real economy. This package included further reductions in the key ECB interest rates, new longer-term refinancing operations targeted to stimulate credit creation, and preparatory work related to outright purchases of asset-backed securities. In addition, the ECB committed itself to an extension of the fixed-rate full allotment regime in tender procedures and decided to suspend the weekly fine-tuning operation sterilising the liquidity injected under the Securities Markets Programme. Over time these measures will contribute to a return of inflation to levels closer to 2 per cent and safeguard the anchoring of medium- to long-term inflation expectations.

Nevertheless, with policy interest rates close to the effective lower bound and persistently timid growth prospects, there was a small, but non-insignificant risk that any additional adverse shock might open the door to a more protracted period of low inflation. Against this background, I would like to organise the rest of my remarks around three issues.

First, why did we find ourselves in such a low inflation predicament? I sustain that inflation fluctuations have been somewhat surprising ever since the beginning of the Great Recession. In part, they were the result of adverse exogenous shocks. To some extent, however, they were also connected with unwarranted variations in markets' expectations of the future stance of monetary policy.

Second, I will argue that the Governing Council meetings of June and September 2014 were important not only for the decisions that were actually adopted but also for the clear signal provided about the determination to do more in the future, in the event of additional downward pressures on inflation. I will develop these two points, which deal with the way the recent policy decisions should produce effects.

The third question is: how would the ECB react, should the risks of a protracted period of low inflation materialise? Outright purchases of a range of financial assets

would be effective in this situation, but structural reforms would also be essential to spur economic growth.

Inflation Developments since the Great Recession

Euro area inflation developments over the six-year period 2008-2014 have been remarkably volatile.

From the 4.1 per cent peak of July 2008, HICP inflation fell markedly at the trough of the recession and reached negative levels in the short period between June and October 2009. However, in the second half of 2009, prices started increasing again, also due to a rise in energy prices. In spite of a persisting level of economic slack, HICP inflation climbed rapidly and steadily up to a peak of 3 per cent from September to November 2011. Similar developments could be observed in the U.S., where inflation remained stable after a decline in the first months of 2009 and gave rise to a debate on the "missing disinflation".[4]

If those developments were somewhat surprising for their swiftness, more recent inflation dynamics have displayed a remarkably high degree of persistence. As of 2012, euro area inflation started falling again. Since October 2013, the year-on-year rate of growth of the headline HICP has oscillated between 1 per cent and 0.5 per cent, in spite of the slowly consolidating economic recovery. A situation of low inflation is now common to many advanced economies, creating a more general puzzle.

All in all, the lack of a tight relationship between inflation developments and estimates of slack in economic activity, such as the output gap, is not surprising from the point of view of modern monetary theories. The new Keynesian Phillips curve suggests that, net of erratic factors, inflation is determined by the whole path of expected future output gaps, not just its current level. Hence, economic slack at any given point in time need not be associated with a deflationary episode, if it is accompanied by expectations that the output gap will eventually turn sufficiently positive.

In turn, expectations of the future stance of monetary policy play a key role in determining expected future output gaps. The absence of persistent disinflation in 2009 may thus be ascribed to the monetary accommodation implemented by many central

4 See, for example, Olivier Coibion and Yuriy Gorodnichenko, "Is The Phillips Curve Alive and Well After All? Inflation Expectations and the Missing Disinflation," NBER Working Paper 19598, 2013, see also Robert E. Hall, "The Long Slump," *American Economic Review* 101, 431-69, 2011, and Laurence Ball and Sandeep Mazumder, "Inflation Dynamics and the Great Recession," Brookings Papers on Economic Activity, 337-402, 2011, Spring.

banks between the end of 2008 and 2009 through both standard and non-standard tools. The monetary policy easing was commensurate to the size of the shock, i.e. such as to roughly offset the disinflationary pressures produced by the recession.[5]

The fall of inflation in the first half of 2014 could equivalently be ascribed to unwarranted fears of a possible tightening of the monetary policy stance not too far into the future.

Such fears could clearly be observed in 2013, when the Federal Reserve announced the tapering of its large-scale asset purchases. In spite of clear Fed communication on the disconnect between this decision and the timing of "lift-off" of policy interest rates, the tapering announcement quickly led to a rise in forward interest rates on both sides of the Atlantic. The ECB's adoption of forward guidance in July 2013 was largely the result of these unwarranted developments. Recent studies confirm that our forward guidance was successful in reversing the previous increase in forward rates and in clarifying the persistently accommodative intonation of the ECB policy stance.[6]

The same market logic that led to the interpretation of the Fed's tapering announcement as a signal of a forthcoming tightening of policy interest rates may also have been applied to interpret the implications of the reduction in the size of the ECB balance sheet that occurred in 2013 and 2014. From a total size of over 26.2 per cent of GDP in June 2012, our balance sheet had shrunk to 17.6 per cent in December 2014, as a result of banks' decision to exercise the early repayment option for outstanding 3-year LTROs. The contraction in the ECB balance sheet is particularly striking when compared to the balance sheet of the Federal Reserve, which continued expanding to 24.5 per cent of GDP at the end of 2014.

The lagged impact of the marked euro appreciation played an important role in determining the low inflation outcomes over that period. Since mid-2012 the exchange rate appreciation is estimated to explain a decrease of 0.5 percentage points in the euro area inflation rate. Together with falling energy and food prices, it explains the bulk of the imported downside pressure on euro area consumer prices.

Of course, the euro appreciation may also have reflected other factors, for example changes in attitudes towards risk. Such factors can be expected to produce only temporary effects on inflation, and would therefore not normally require a monetary policy response. Unwarranted fluctuations in markets' perceptions over the future stance of monetary policy, however, could be a more persistent source

5 For a formal analysis of this point, see Marco Del Negro, Marc Giannoni and Frank Schorfeide, "Inflation in the Great Recession and New Keynesian Models", Federal Reserve Bank of New York Staff Report 618, 2013.

6 B. Schwaab, "The impact of the ECB's forward guidance", ECB mimeo, 2013.

of low-inflation risk. In that case, a monetary policy reaction would be necessary to steer perceptions away from unlikely future outcomes.

How Will Recent Monetary Policy Decisions Make a Difference?

Back in June 2014, there were three clear channels through which the decisions adopted by the Governing Council could be transmitted.

The first was the interest rate channel, related to the expansionary impact of the measures on the real economy and inflation.

The second channel was the credit channel, which was expected to be positively impacted by the new targeted LTRO facility and the extension of the ACC programme.[7]

The third channel was related to expectations. The announcement of the measures adopted at the beginning of June was accompanied by a clear communication concerning the future path of policy.

In the June 2014 press conference, President Draghi emphasised that "key ECB interest rates will remain at present levels for an extended period of time in view of the current outlook for inflation". He also added that "if required, we will act swiftly with further monetary policy easing. The Governing Council is unanimous in its commitment to using also unconventional instruments within its mandate should it become necessary to further address risks of too prolonged a period of low inflation."

With this statement, the ECB has left no doubts about its resolve to avoid any downward turn in the euro area inflation developments, because such developments would be extremely harmful. With interest rates at their effective lower bound and persistently timid growth prospects, lower than expected inflation rates would increase the real value of debt, slowing down the deleveraging process of borrowers, both public and private. If a low inflation outlook became entrenched in the expectations of firms and households, the real interest rate would rise, leading consumers and investors to postpone their expenditure plans. A vicious circle of lower demand and lower prices could ensue.

However, a little more than a month after these measures were adopted, the situation deteriorated further. GDP figures for the second quarter of 2014 surprisingly indicated a stagnation of economic activity. This accentuated the risk

7 The Additional Credit Claims (ACC) programme is an extension of the ECB's collateral policy to accept directly loans to non-financial firms as eligible collateral for banks to borrow from the ECB.

that the effects of slack in the economy could become more prolonged and have a depressing effect on inflation. The rate of inflation fell to 0.4 per cent in subsequent months and, more worryingly, inflation expectations started decreasing for all periods up to five years.

Central banks simply cannot run the risk of observing inflation expectations starting to become unanchored, given the challenges in controlling them *ex post*. Consequently, the risk related to inflation expectations considerably influenced our decision in September 2014 to add a new set of measures to complement and reinforce the package adopted in June.

In addition to cutting key policy rates by another 10 basis points, two asset purchase programmes were announced at the September meeting: the asset-backed securities purchase programme (ABSPP) and the covered-bond purchase programme (CBPP3). We thereby conveyed our objective to control more directly the increase in the monetary base rather than merely depend on the banks' behaviour in using our liquidity facilities. We showed our intention to use other channels of monetary transmission.

This further reinforced the expectations channel relating to a determined policy of using our balance sheet in a more direct way. It should also operate through portfolio effects, as the liquidity directly injected by our purchases can have spillover effects on all types of assets, from corporate bonds to foreign exchange. The effect of both programmes would thus go beyond their direct impact in reducing the interest rate spreads of the purchased assets.

Our purchases have not been specifically aimed at buying these securities mostly from banks. Nevertheless, in the present environment, direct purchases of private assets by the central bank can also support banks on the capital side. The broad effect that we expect to obtain in fostering growth will reduce the risk of firms' defaulting and through this channel also help banks' balance sheet repair, thus supporting credit flows.

How Would the ECB React, Should the Risks of a Protracted Period of Low Inflation Materialise?

What exactly could the ECB do in the face of a protracted period of low inflation and economic stagnation?

As I have already mentioned, the ECB has continuously indicated its readiness to deploy additional unconventional instruments, should the likelihood of this scenario increase. The policy response would involve a broad-based asset-purchase programme.

The experience of other countries with such programmes testifies that they can be effectively designed. As previously mentioned, various empirical studies suggest that the large purchases carried out in the U.S. and in the U.K. were instrumental in decreasing yields by several tens of basis points, with spillover effects on other asset prices, including mortgage rates and exchange rates. In turn, GDP growth and inflation rates also appear to have been significantly affected. After all, even if they have to use new instruments, central banks cannot avoid their responsibility in ensuring price stability, as long as inflation continues to be determined by monetary policy.

Broad-based asset purchases would allow the ECB to continue pursuing its mandate even under more adverse circumstances. It is, however, important that other policies also play their part. An extreme adverse scenario that has recently appeared in the public debate is that of a "secular stagnation".[8] This is effectively a situation where the "natural" long-run growth rate of the economy falls significantly and permanently, e.g. because of a fall in the growth rate of population or because of a fall in technological progress, or both. This scenario is only still a possibility, but it is illustrative of a broader need for structural policies to again unleash the growth potential of our economies. Public spending should be redirected towards public investment in infrastructures and education. International trade and labour mobility should be fostered. These are the best recipes to ensure that the secular stagnation will remain a purely academic hypothesis.

Conclusions

To sum up, the main challenge monetary policy faced in the euro area in 2014 and 2015 was to avert the risk of a prolonged period of excessively low inflation. The ECB adopted significant new measures in 2014 to ensure a return of inflation to levels closer to 2 per cent and to safeguard the anchoring of medium- to long-term inflation expectations. We are confident that these measures will also contribute to close the existent negative output gap, thus exerting upward pressure on inflation. However, as we have stated several times: "The Governing Council is unanimous in its commitment to using also unconventional instruments within its mandate should it become necessary to further address risks of too prolonged a period of low inflation."

8 See e.g. Paul Krugman, "Secular Stagnation, Coalmines, Bubbles, and Larry Summers" http://krugman.blogs.nytimes.com, 2013; Paul Krugman, "Inflation Targets Reconsidered", presented at the ECB Forum on Central Banking, Sintra, 2014; Lawrence Summers, "Remarks at the IMF Fourteenth Annual Research Conference in Honor of Stanley Fischer", 2013; Gautti Eggertsson and Neil Mehrotra, "A Model of Secular Stagnation", mimeo, 2014.

3

Monetary Policy After the Crisis: New Challenges and New Opportunities

Benjamin M. Friedman

It is no surprise that the financial crisis of 2007-9, together with its long-lingering aftermath, has elicited extraordinary responses from economic policy. In many countries the decline in production and the associated loss of jobs and incomes and profits have exceeded what occurred in any prior fluctuation since the Second World War. In some countries, six years later, output and employment have yet to regain their pre-crisis levels.

Monetary policy has been a particular focus of this emphasis on innovation in economic policymaking, and for easily understandable reasons. Many countries, having entered the crisis after a sustained period of low price inflation, soon found their short-term interest rates at or near the zero lower bound. In the United States the Federal Reserve System lowered its target for the federal funds rate from 5¼ per cent in early 2007 to 0-¼ per cent in late 2008. More than six years later, the target remains 0-¼ per cent. The European Central Bank was raising its main refinancing rate as late as mid-2008, but then quickly lowered it from 4¼ per cent to 1 per cent by mid-2009. One per cent is not the same as zero, of course, but the perception that the rate was about as low as the Bank could make it clearly shaped subsequent actions. After a confused flurry of moves in 2011, when the Bank raised the refinancing rate twice, it quickly returned it to 1 per cent. In a series of steps since then, it has cut the rate to just 0.05 per cent (beginning in September 2014) and reduced the rate on its deposit facility to *minus* 0.30 per cent (as of December 2015). Moreover, in addition to having to conduct policy for so long without the ability to lower short-term interest rates, many central banks have confronted the further challenges of broken debt markets, as well as of lending institutions and many borrowers that faced the urgent need to deleverage.

With conventional monetary policy unable to respond further once short-term interest rates had effectively reached the zero lower bound, many central banks sought out new ways of using the tools at their disposal to stimulate economic

activity in the face of the protracted downturn and then sluggish recovery. One way of doing so was, and for some central banks continues to be, further asset purchases on the central bank's account. A second was, and likewise for some central banks continues to be, "forward guidance": making public statements intended to influence market participants' expectations of future monetary policy actions. An important question, looking ahead, is whether central banks should regard these innovations in monetary policymaking as emergency measures, taken in time of duress and to be eschewed once the emergency is past, or instead make them part of the standard toolkit of monetary policymaking in normal times. I believe the answer should be different for asset purchases than for forward guidance.

Continue Using Asset Purchases – and Asset Sales Too

In retrospect it is astonishing how quickly, once short-term interest rates approached the zero lower bound, central banks began to purchase large quantities of assets. It is also striking how much they bought. At the beginning of 2007 the Federal Reserve System's assets totalled $880 billion. At year-end 2014 the balance sheet stood at $4.5 trillion, including $2.5 trillion of Treasuries and $1.7 trillion of mortgage-backed securities. The Federal Reserve was hardly alone in pursuing this course, nor was it the most extreme. The Bank of England nearly quintupled its balance sheet, from £85 billion at the beginning of 2007 to £415 billion at year-end 2012. Sweden's Riksbank almost quadrupled its balance sheet, and within a very brief period of time: from Kr 199 billion at the beginning of 2007 to Kr 763 billion at mid-2009. Even the European Central Bank, which was still raising its policy interest rate well into the crisis, expanded its balance sheet from just over €1 trillion at the beginning of 2007 to more than €3 trillion in mid-2012.

Central banks' reason for buying these securities was not to lower their policy interest rates, which already stood at or near zero by the time of the asset purchases, but to push down the interest rates that more directly matter for aggregate demand. By transferring securities from private investors to its own balance sheet, the central bank lowers the rates borrowers have to pay, and thereby stimulates demand for goods and services in the economy.[1] The evidence shows that these bond purchases indeed lowered long-term rates relative to short-term rates, and lowered rates on more risky compared to less risky obligations. A conservative estimate for the United States, for example, is that $600 billion of bond purchases (the size of "QE2") low-

1 See Friedman (2015) for an analytical discussion of this process.

ered long-term interest rates by about 25 basis points: not enormous, but a worthwhile contribution to the U.S. economic recovery. Many estimates are significantly greater. And the effect of lower long-term rates was probably reinforced by higher equity prices and a cheaper dollar.[2]

Further, the *composition* of the assets that the central bank buys matters too. The reason for the Federal Reserve to buy mortgage-backed securities was to narrow the rate spread between mortgages and Treasuries, and thereby arrest the downward trend in house prices as well as spur homebuilding. It worked too.

The value to monetary policy of this kind of influence, on long-term interest rates in general and specific rates like the mortgage rate in particular, will not vanish once short-term rates finally rise above zero. Moreover, there is no reason to believe that central banks should use this influence only in the direction of economic expansion. Asset *sales*, working to restrain economic activity, are potentially valuable too. But keeping this policy tool symmetrically available, so that the central bank can make either asset purchases or asset sales, depending on the needs of the economy, also means that central banks should not downsize their balance sheets to the pre-crisis level and composition once the effects of the crisis are past and their economies return to normal. A central bank can sell securities only if it owns them in the first place.

Further, the potential value of using the central bank's balance sheet in this way is not limited to stimulating or restraining aggregate economic activity. To point to a U.S. example, during the years leading up to the crisis many people urged the Federal Reserve to tighten policy so as to arrest the developing bubble in the mortgage and housing markets. The concern, however, was that raising short-term interest rates was a "blunt instrument" with which to attack an excess in one specific sector of the economy.[3] If the Federal Reserve's balance sheet includes mortgage-backed securities, which it can add to or pare back as warranted, it can take more directed action in a situation like what preceded (and, in the eyes of many, precipitated) the crisis.

What are the potential drawbacks associated with maintaining a balance sheet significantly larger than the pre-crisis level? The public discussion to date has brought out two. Neither is compelling.

2 See Williams (2013) for a summary of more than a dozen estimates of the effect on long-term interest rates attributable to Federal Reserve bond purchases. The empirical literature providing such estimates has continued to expand since then.

3 This language is associated, for example, with former Federal Reserve Chairman Ben Bernanke. See, for example, Bernanke (2013).

One is that the central bank may suffer portfolio losses from lower prices on longer-maturity obligations. So far, holding these longer-term securities has delivered record *profits* to the Federal Reserve and other central banks that pursued this course, and therefore record *gains* to taxpayers. Moreover, while such losses would impose costs on taxpayers, should they occur, there is no real risk to the central bank itself; unlike private banks, central banks do not need positive capital.

Second, because asset purchases require payment, the huge increase in central banks' asset holdings has meant an equally huge increase in their outstanding liabilities. Economists who view the economy's price level through the lens of "central bank money supply" therefore expected a hyperinflation. But no increase in inflation has yet appeared, in any of these economies. On the contrary, many express concerns that inflation is falling short of their targets. The central banks that increased their liabilities in this way have simply re-absorbed them by making it advantageous for banks to re-deposit reserves rather than lend against them, so that there has been no corresponding expansion of bank credit or of deposit money. There is no reason central banks cannot continue to re-absorb reserves in this way, even as short-term interest rates rise.[4]

For decades, the common understanding has been that monetary policy has only one independent instrument at its disposal, the central bank's policy interest rate. We now see that there are two: the policy interest rate and asset purchases or sales. I believe central banks should be prepared to use both.

Forward Guidance

A second policy tool to which many central banks turned in the crisis and its aftermath was forward guidance with respect to their own future actions. There is some evidence from the U.S. experience, before the crisis as well as after, of limited effects on market interest rates associated with this kind of announcement by the Federal Reserve.[5] As other central banks have taken up the practice, no doubt further evidence will accumulate. But there are familiar instances as well in which the effect of such statements of intentions regarding future central bank actions has been counter-productive, at least from the perspective of the objective apparently motivating the statements in the first place. Most prominently, when Federal Re-

4 Indeed, the Federal Reserve System has developed an expanded set of policy tools for just this purpose. See Martin *et al.* (revised version, 2014).

5 See, for example, Gurkaynak *et al.* (2007).

serve officials first referred publicly, in the spring of 2013, to the likely cut-back and eventual termination of the bond purchase programme, the immediate market reaction raised long-term interest rates by well more than what standard estimates suggested was the programme's total effect to that time.

The problem here lies in the nature of speculative asset markets. Economists often work with models in which the structure of the relevant expectations on the part of financial market participants, and of private economic agents more generally, is extremely simple. In some familiar models, the only aspect of monetary policy that influences economic agents' behaviour is the central bank's long-term inflation target. The world in which actual central banks operate is different. Even if the central bank steers its monetary policy according to a fixed inflation target, as in the case of the Bank of England, participants in the securities markets still want to know just how much departure from the target policymakers will tolerate, and under what circumstances, before they decide to raise or lower the bank's policy interest rate, or buy or sell assets, or engage in any of a variety of other policy actions. If the central bank follows a more loosely defined inflation targeting regimen, as in the case of the European Central Bank, or has explicit multiple policy objectives, as the Federal Reserve does, the opportunities for such speculation are all the richer.

The crucial point is that market participants are in the business of speculating, for profit, on the actions the central bank takes and the timing with which it takes them. No matter what level of transparency and disclosure the central bank provides, unless it locks its policy trajectory onto a rigid formula, which it publicly discloses and pledges to follow without departures, the market will inevitably want to know more than policymakers can possibly disclose. And even then, the central bank's no-departures pledge may not be fully credible, so that market participants will continue to speculate about policymakers' actions – although in this case the speculation will be framed in terms of whether, and, if so, under what circumstances, they will violate their pledge to adhere to the formula.

At some abstract level, forward guidance by central banks is merely an aspect of the widely hailed movement to bring these important policymaking institutions more closely within established notions of democratic governance by rendering their operations and decision-making more transparent to the general public, and in this sense it should certainly continue. But transparency for the sake of transparency is not the same as the deliberate attempt to shape market expectations for purposes of achieving specific monetary policy objectives. Owing to the nature of speculative securities markets, together with the inevitable uncertainty faced by policymakers as well as private investors, central banks may *never* be able to provide enough transparency to satisfy market participants. As

one astute market observer has put it, full transparency of monetary policy may simply be a will-o'-the-wisp.[6]

More Local Challenges and Prospects for Europe[7]

In addition to the common problem of short-term interest rates at the zero lower bound, and these common responses to it, central banks in Europe and America have faced differing challenges, although in both cases centred on economic heterogeneity. In the U.S. the principal dichotomy has been between the stronger recovery of the goods market (total output regained the pre-crisis level by mid-2011) and the much weaker trajectory of the labour market (total employment did not regain the pre-crisis level until mid-2014). Much of this problem is not cyclical in the usual sense – I fear that the United States faces a technologically driven long-run weakness in demand for labour – and it therefore lies outside the purview of monetary policy.[8] But it clearly makes the challenges facing the Federal Reserve more complicated and more difficult.

By contrast, in Europe the primary dichotomy has been between countries that face severe fiscal challenges and those whose government finances are strong. Moreover, as everyone has long understood, confronting this kind of heterogeneity is all the harder in Europe because of the lack of a common fiscal structure. Even so, the difference in policy philosophies is striking. In the United States, even with our federal fiscal arrangements, few people argue that monetary policy should be set optimally for the capital markets, leaving the labour market to fend for itself. In Europe the dominant point of view seems to be that monetary policy should be set optimally for the countries that are not facing fiscal difficulty, leaving to their own devices those that are. To be sure, economists can offer theoretical models within which the adjustments needed to bring the fiscally weak economies into line would take place smoothly and quickly. But here too, the models bear little relation to reality. As classic episodes like Britain in the 1920s and Argentina in the 1990s remind us, the principal contradiction is that prices and wages, especially outside the government sector, are far less flexible than economists would like them to be.

Even so, much of that particular discussion looks back rather than ahead. Despite numerous false starts and delays, the European Central Bank's policy stance has

6 Wojnilower (2014).

7 This section draws in part on Friedman (2014).

8 See Friedman (2013).

mostly been expansionary – indeed, innovatively so. In addition to reducing its main refinancing rate to nearly zero and the rate on its deposit facility below zero, the Bank has undertaken a variety of extraordinary measures including targeted longer-term refinancing operations, purchases of asset-backed securities and, beginning in 2015, significant further balance sheet expansion. The chief problem in this regard is simply that after six years of economic stagnation and slowing price inflation trending towards deflation, there is little monetary policy can do to strengthen the euro area's economy in a major way. The solution to sluggish growth and lingering high unemployment must instead lie either with fiscal transfers, in which the ECB would play no direct role, or with systematic debt restructuring and relief (which are implicitly another form of fiscal transfer), in which the ECB would presumably play at best a subordinate role, or with structural economic changes that are outside the ECB's purview altogether.

In fact, outright fiscal transfers are occurring within Europe, as are debt relief and restructuring, in both cases mostly in exchange for imposition of contractionary fiscal policies – and, supposedly, structural reforms – in the fiscally weak countries. The problem with the former is that, despite economists' ability to invent a theoretical case to the contrary, contractionary fiscal policy is indeed contractionary. The problem with the latter is not just that structural reforms are politically difficult to implement, but that even when implemented they take a long time to become expansionary. Moreover, even then they are often expansionary in a highly non-neutral way, exacerbating already unwelcome trends in income distribution.

The economic consequence of this overall policy stance is ongoing stagnation of incomes and living standards for the majority of the population in many European countries. To be sure, a parallel stagnation of incomes is taking place in the United States as well, but there the federal fiscal structure provides a variety of built-in ways of dealing with the problem that Europe does not have available. Further, in Europe's fiscally weak countries the usual frustration over stagnant incomes and living standards is today compounded by the sense of being dictated to by the fiscally strong countries. For historical reasons, this sense may be especially acute in Greece. Aristotle's treatise on *The Athenian Constitution* relates that in ancient Greece debt was secured "on the person of the debtor," often leading to loss of property and personal enslavement for debtors, alongside large accumulations of both land and slaves by lenders; but the practice was abolished under Solon, twenty-six centuries ago.

As has happened so often before, in many countries around the world, the all-too-familiar further consequence of economic stagnation is a turn away from liberal values towards xenophobic populism of either the right or the left. Europe today increasingly looks to be on the verge of repeating key aspects of the experi-

ence of the years between the two World Wars, with not only the ascendency of extremist political movements but also cross-border communication among them. There are differences, of course. In the 1930s the central node of that communication was the Nazi movement, and then government, in Germany; today it looks as if the facilitating communication nexus will be the European Parliament. But the effects are parallel, and so are parts of these groups' programmes, today including rolling back immigration and E.U. regulatory authority, not to mention the entire European Union project.

To repeat, as of 2015 the primary need for response on the policy front is not from monetary policy, but for debt restructuring and relief (and it is useful to recall that in real time it is often hard to tell the difference between the two). Again looking back to the 1930s, there is ample precedent, within Europe, for both – ironically, in light of today's positioning of the players, centring on Germany. There is no economic or moral ground for Germany to be the only European country in modern times to be granted both debt restructuring and debt relief on a massive scale.

At the same time, even though the immediate need is not for a different European monetary policy, the experience of the crisis and its extended aftermath highlights the need, once this protracted episode is past, for a different monetary policy *mindset*. As James Tobin often remarked, "there are worse things than three per cent inflation, and from time to time we have them." We just did.

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Forward Guidance: A New Challenge for Central Banks

Otmar Issing

Forward guidance is the most recent stage of communication in a long and ongoing process of central banks making their decisions and the underlying process increasingly transparent. Yellen (2012) even sees forward guidance as a revolution, marking a large leap forward in the previously steady evolution of central bank communication.

In the past, central banking was surrounded by what Brunner (1981) called "a peculiar and protective political mystique." Central banking was, in his view, presented as an esoteric art to which only the initiated elite had access. And as it is impossible to articulate an esoteric art in explicit and intelligible words and sentences, "communication with the uninitiated breaks down."

A striking case can be found in the 1928 testimony by the Deputy Governor of the Bank of England Sir Ernest Harvey, when he defended the bank's position before the Macmillan Committee (see Issing, 2005):

Harvey: "I confess I am sometimes nervous at the thought of publication unless it is historical. The question is whether, when it is merely historical, it is of any particular value, or whether, from the fact that it is issued from the central bank, undue importance may be attributed to certain things that are stated, more importance than perhaps they merit...".

Committee member Keynes: "Arising from Professor Gregory's questions, is it a practice of the Bank of England never to explain what its policy is?"

Harvey: "Well, I think it has been our practice to leave our actions to explain our policy."

Keynes: "Or the reasons for its policy?"

Harvey: "It is a dangerous thing to start to give reasons."

Keynes: "Or to defend it against criticism?"

I am grateful for valuable comments by A. Orphanides and W. White.

Harvey: "As regards criticism, I am afraid, though the Committee may not all agree, we do not admit there is need for defence; to defend ourselves is somewhat akin to a lady starting to defend her virtue."

Although this sounds as if it came from medieval times, the Governor's remarks are not as foolish as they may initially seem. The debate on the extent to which public information can crowd out sometimes better private information has not been resolved yet. And to say that "it has been our practice to leave our actions to explain our policy" touches upon a key problem of central bank communication. If a monetary decision were the mechanical outcome of a strictly rule-based strategy containing no discretionary element, and if the public were sufficiently well informed about the rule and could rely on strict adherence of the central bank, the communication problem would be solved satisfactorily by just publishing the decision. However, this is certainly not what Governor Harvey had in mind, nor what any central bank has ever claimed.

The Role of Communication

Communication of the central bank has two goals to fulfil. One is the obligation to be accountable to the public for its policy. In this sense, accountability is the counterpart of independence. The other is to make monetary policy as effective as possible. Monetary policy can only fix the central bank interest rate, and thereby control the very short end of the interest rate spectrum. The influence of the central bank on the long end depends on market expectations regarding future central bank decisions (and their impact on inflation etc.). Woodford (2005) goes so far as to say that very little else, other than expectations about policy, matters.

Only reluctantly did central banks react to the challenge of being transparent and using communication as a tool to guide expectations. Up until the nineties, the Federal Reserve (Fed), for example, did not even publish decisions taken by the Federal Open Market Committee (FOMC). The Bundesbank's main message was "Trust us, we will defend the stability of the Deutsche Mark under all circumstances."

Considering the high degree of credibility it had gained, one could argue in retrospect that this was a simple and clear form of forward guidance. The effectiveness of this approach stood the test of the turbulent phase after the German reunification, when there was considerable pressure on the Bundesbank to be – under these special circumstances – temporarily less "dogmatic" about the goal of price stability. As the development of long-term interest rates demonstrates, the markets were convinced that the Bundesbank would bring back the inflation rate from lev-

els of more than 4 per cent to its (implicit) "normative" rate of 2 per cent (see Issing, 2005).

In the nineties, central banks worldwide increasingly extended their communication. Since then, transparency has become a mantra and has triggered a kind of competition between central banks for the position of being "the champion." This reflected pressure by the media, markets, and academics. As a result, central banks internalised new strands of research.

One can distinguish two dimensions of steering market expectations. First, it includes short-term indications about policy inclinations in the run-up to policy decisions. Financial markets do not like to be surprised by such decisions. Central banks, reacting to those concerns, are confronted with the difficulty of making their communication on the expected decision conditional on the development of the situation.

The second dimension relates to the medium and longer term. The challenge here is to ensure consistency between the sequence of individual decisions and the mandate of the central bank. If this consistency is achieved, monetary policy is predictable in the short run and credible in the long run.

Over time, central banks have used all forms of communication to provide transparency in order to allow for accountability and contribute to the effectiveness of monetary policy. These range from published minutes or statements to press conferences, publications like monthly bulletins, and speeches by governors and other members of the decision-making body. Guaranteeing consistency between all these means of communication is obviously a tremendous challenge.

Forward Guidance

A few central banks, namely the Reserve Bank of New Zealand, Norges Bank and Sveriges Riksbank, went beyond the common practice and started to publish projections of the future path of the policy rate. The financial crisis and the zero bound were seen as a new challenge for central banks using communication to guide market expectations (Bernanke, 2013). Yellen (2012) diagnosed a revolution in thinking about central bank transparency, which has come to be known as *forward guidance*. Its key element was the announcement that the central bank expects a highly accommodative stance of monetary policy to remain appropriate for a considerable time after the recovery strengthens. Because the central bank rate was at (or close to) the zero bound, forward guidance tried to create an additional easing effect by signalling that the rate would be kept low for a longer period than the pub-

lic actually expected. This effect would be achieved by encouraging investors to shift their portfolios into longer maturities, thereby reducing long-term rates. In addition, forward guidance was expected to reduce volatility in the markets.

So far, different forms of forward guidance have been adopted by different central banks (ECB, 2014).

1. *Pure qualitative forward guidance*. This approach includes neither an explicit end-date, nor a numerical threshold, nor any explicit reference to the conditions which are relevant for a change in policy. A typical example is the announcement of the Fed in 2003 that "policy accommodation can be maintained for a considerable period."
2. *Qualitative forward guidance conditional on a "narrative" about the macroeconomic conditions under which the present policy will prevail.* This is the approach preferred by the ECB.
3. *Calendar-based forward guidance.* This form was applied by the Fed when, on 9 August 2011, the terms for keeping the federal funds rate at low levels "for some time" and "an extended period of time" were replaced by "at least through mid-2013."
4. *Outcome-based forward guidance explicitly sets numerical conditions for a future change in policy.* Again, the Fed can be taken as an example for defining an endpoint for the continuation of the present policy: "…at least as long as the unemployment rate remains above 6½ percent, inflation between one and two years ahead is projected to be no more than a half point above the Committee's 2 percent longer run goal, and longer-term inflation expectations continue to be well anchored" (December 2011). The Bank of England adopted outcome-based guidance in August 2013, conditional exclusively on a numerical threshold for unemployment, before announcing an update in February 2014 that would take into account a broader range of indicators.

Some Critical Remarks

There exists broad agreement that the financial crisis ended in an economic downturn which is different from previous ones, because it is deeper than just a "normal" recession. Central banks have reacted by extending interest rate cuts to the extreme (zero) and adopting unorthodox measures. Forward guidance is intended to make the accommodative monetary policy under these circumstances as effective as possible. But, can this new communication tool achieve this goal?

The great recession creates a huge challenge for central banks. Markets and agents are confronted with heightened uncertainty. Forward guidance is supposed to reduce the uncertainty. But how convincing is this as the central bank, too, is sailing through uncharted waters? All forms of forward guidance practised so far boil down to a kind of promise that the central bank will raise the policy rate (and reduce or stop quantitative easing) later than the public expects. In concrete terms this means that the central bank for some time will tolerate a higher rate of inflation than its implicit or announced goal.

The aforementioned intention of this communication – to induce investors to shift their portfolios into long-term assets, thereby reducing long-term interest rates – is expected to have an expansionary effect on the economy. The extent to which the interest rate will actually be lowered or economic activity will react to the policy, however, depends on various factors.

Announcing a date or a numerical outcome for the continuation or ending of the present accommodation depends on a model from which the central bank draws this conclusion. Two considerations have to be regarded here. One is of a general nature, namely that uncertainty about the result of forecasts increases with the length of the time horizon. How can a communication reduce uncertainty when its ambition is to extend the horizon to a longer than usual period? And how is the model constructed? In practically all models currently in use, the output gap (or other comparable measures of slack) plays a major role. However, Orphanides and others have demonstrated time and again that real-time data for the output gap are among the shakiest and most unreliable data. Since 1999, almost half the time, the sign (!) of the real-time estimates of the IMF on the output gap turned out to be wrong. Is it not astonishing that, notwithstanding this endemic problem (Orphanides, 2013), communication intended to *reduce* uncertainty is based on information which, with great likelihood, will turn out to be wrong (and biased to the downside)?

A fundamental problem is uncertainty about the equilibrium real interest rate. Without reliable information on its value, it is impossible to calculate a path for the nominal interest rate for some time ahead. As a consequence, communicating a medium- or even long-term interest rate path is dangerous. Whereas the bulk of the literature is based on the seminal work of K. Wicksell, it is often forgotten (or was never realised) that Wicksell himself recognised this uncertainty and did not suggest formulating monetary policy by starting from the real rate.[1]

A related problem is binding the path of monetary policy explicitly (output-based forward guidance) or implicitly (qualitative) to an unemployment rate

1 I am grateful to A. Orphanides for reminding me of this important aspect.

which is seen as a target of monetary policy. As practice has shown, data on unemployment – which are lagging indicators and exposed to short-term volatility – might be influenced, for example, by the labour force participation rate. A fall in the unemployment rate might therefore be anything but a signal that monetary policy "succeeded" in reducing unemployment. The need to adjust the figure for this or other reasons can be seen as *ex post* evidence that such an approach does not reduce uncertainty, but will rather create confusion. And, more fundamentally, M. Friedman's (1968) argument that monetary policy should not target real variables is still valid.

Basing forward guidance on the achievement of a specific goal for employment or unemployment is therefore problematic in several aspects. This is even more the case when such an announcement is connected with the message that the central bank will, for some time, tolerate an inflation rate higher than its long-term goal. Such an approach must be based on the assumption that inflationary expectations remain firmly anchored on the credibility of the central bank to steer inflation back to target.

An extended phase of low inflation is a valid argument that that might be the case, but is no guarantee. Expectations could just reflect current developments. When a central bank signals that it will tolerate – or even try to "produce" – higher inflation to foster employment (or growth), it obviously believes in a trade-off between inflation and unemployment. As a consequence, such a central bank implicitly signals that it might extend the period of higher inflation, or accept an even higher inflation rate, to promote employment in case the targeted level of unemployment is not yet achieved. If the central bank makes the trade-off *quasi*-official, there would be strong political pressure to apply an accommodative monetary policy to ensure the achievement of higher employment, whatever the consequences for inflation might be.

Here lies a fundamental problem of forward guidance: It suffers from the same sort of time inconsistency malaise that it seeks to remedy. Announcing that the policy rate will remain low well into the future does not imply that the central bank, from the perspective of a future date and in the face of rising inflation, will have an incentive to follow through on its commitment. The reason is, of course, that, at that future moment, the central bank will be confronted with all the costs associated with keeping its promise, while all the benefits will already have been reaped. Therefore, forward guidance will be very prone to time inconsistency.

It is extremely difficult to forecast the impact of the announced monetary policy (interest rate path) on the economy. New shocks might hit the economy. The time

dimension of those developments varies with the type and magnitude of shocks, the prevailing financial sentiment, the international environment and many other variables. Is it not therefore impossible to set the horizon for monetary policy and assess its impact in advance (Issing, 2002)? A central bank should hence under no circumstances make any unconditional commitments on its future policy.

Central banks have a tendency to ascribe an importance to market reactions that goes beyond their transmission interest. The reason for this bias lies in the fact that any misperceptions of the central bank's policy by financial market participants can create huge losses. Consequently, praise and complaints from financial agents have become permanent companions of monetary policy. Distinguishing between the perception of conditional and unconditional statements is therefore anything but a simple task.

This problem also arises when it turns out that, for reasons which may be due to confusing signals by the central bank – such as lack of clarity in communication, diverging signals by various members of the decision-making body, etc. – agents do not react in the way the central bank intended. Should agents then feel "punished" by decisions of the central bank following its initial intentions, or will the central bank "correct" its policy?

The more forward guidance triggers portfolio shifts into longer maturities, the more difficult the task of deciding on the timing and speed of exit. Rate increases will create losses on fixed income investments. In case the financial sector is not yet seen as robust enough, the central bank might delay the exit (or tapering). In combination with an ambitious goal for employment, the temporary tolerance of higher inflation might become entrenched.

Forward guidance has so far been a process of trial and error. This is demonstrated by the Fed, which has experimented with all forms. But, it is hard to believe that the sequence from qualitative to date-based and finally output-based forward guidance has brought an improvement.

Insofar as a new and dangerous situation, such as the great recession, is a strong argument for trying new measures, trial and error seems to be the appropriate approach. However, this is not an argument for trying measures which are extremely unlikely to bring progress, while implying substantial risks.

Forward guidance should be seen in the context of a long progression from opaqueness to transparency in central bank decision-making. Can forward guidance be seen as an improvement and does it bring us closer to a kind of optimum? Doubts are already fostered by experience gathered so far. But, more importantly, the approach suffers from two implicit fundamental flaws.

Optimal Policy?

First, forward guidance as a more or less pre-announced future interest rate path rests on the idea that monetary policy is a case for optimal control. All the models on which this approach is based are far away from integrating a financial sector accurately enough to adequately reflect the complexity of reality. Errors in monetary policy are, unfortunately, the logical consequence; central banks adopting this approach will end up undermining their credibility. Guidance of expectations based on this approach cannot deliver the expected results; uncertainty (and volatility) finally will not be reduced. By the way, this risk increases with the pretended degree of precision. The difficulty of identifying the proper interest rate path is intensified by the fact that the impact of past monetary policy decisions is stretched over probably varying periods. "Instrument instability" is the consequence (Holbrook, 1972).

This problem is aggravated by the fact that there is hardly full consensus (and might never be) on what the optimal policy should be – not in academia, not between central banks, nor within a specific central bank. An interesting case is reported in the minutes of the meeting of the Swedish Central Bank's Executive Board on September 1, 2010. Lars Svensson, then Deputy Governor, believed that the repo rate path in the main scenario of the bank was unreasonably high and "claimed that, if the repo rate path in the main scenario is supported by the majority of the board, one must hope that it is still not credible and this will not have very large consequences before it can hopefully be corrected at the next policy meeting."

There should be competition within the central bank among staff and board members for the best policy (Svensson, 2013). "In contentious issues, the side with the best support from theoretical and empirical research and practical experience should be allowed to win. If the dominant view cannot stand up to scrutiny, it does not deserve to be the main view" (p. 18). This is certainly the proper device for research and, in principle, also for finding the best policy in the central bank. But, transparent communication on this process is a daunting challenge.[2] Even especially good researchers might disagree, opinions and/or the composition of the decision-making body could change, or the unavoidable element of judgment could influence the outcome in a way which is by some seen as "unscientific."

And, aside from a few academics, who would fully understand an approach based on complex models? What would be the message to the markets and the general

2 Svensson (2013), after having left the central bank, claims that the majority indeed published an excessively high policy rate path, with the consequence of lower inflation and higher unemployment. "As a forecaster of the policy rate, *ex post* the market was right and the Riksbank was wrong."

public: trust us because we are basing our decisions on (pretended) infallible research? And, would not the claim for full transparency also include the right – even the obligation! – by those who disagree to warn that even insiders consider the announced future policy risky or even wrong? Is this kind of state-of-the-art forward guidance an instrument to reduce uncertainty and volatility?

Maximal Transparency?

Second, there is another fundamental aspect. The process of enhancing transparency can be interpreted as moving to a kind of optimum. However, this "optimum" often seems to be misunderstood as a "maximum." Society demands transparency from public institutions. For an independent central bank, this requirement is even more pressing. Any selection of information, any retention of knowledge could be seen as a violation of the principle of transparency.

From this perspective, absolute transparency seems to be a necessary counterpart of independence. Yet, demand for more information is almost unlimited. The requests from agents in financial markets (and the media) are insatiable. The experience gathered so far with forward guidance has already delivered a number of telling examples. Yet, maximum transparency is a mirage, it is theoretically a nirvana approach and practically impossible to achieve (see Issing, 2005).

Central banks communicate a lot of information, of very different quality. If the information is too noisy, too uncertain, and if the risk is high that the public might be distracted, it might be better to restrict communication (Dale *et al.,* 2011). It is, for example, a huge challenge to publish the forecasts of a central bank and the underlying uncertainty such that it can be properly understood and assessed by the public.

Not maximum, but rather some kind of optimum of transparency should be the final stage to strive for. The development of forward guidance must be seen as a dynamic process which is anything but fully controlled by central banks. It will be hard, if not impossible, to go back and reduce communication from what has been practised so far.

Outlook

The intention of forward guidance is to reduce the uncertainty of the public about future monetary policy. However, forward guidance risks giving the impression that the central bank can overcome the uncertainty to which the central bank itself is exposed. If the signal on future policy decisions is vague, but still called for-

ward guidance, the value of information is meagre and will trigger calls for "more." If the signal is strong, coming close to an unconditional commitment, the central bank is confronted with an unpleasant choice in case of new data or a new assessment of the situation. Either the central bank sticks to the decision on which financial agents have based their investment decisions, or it revises its communication, thereby causing immediate losses for investors. In the first case, the need for the central bank to change course increases over time; in the second case, forward guidance will immediately lose credibility.

Forward guidance was presented as the culmination of the idea of guiding expectations by pure communication. Practice has demonstrated that this is a misguided idea. This conclusion could have been drawn from sound analysis, without the need to test it in practice. What is presented as state-of-the-art monetary policy is but another example of pretence of knowledge – or, in simpler terms, a violation of the principle "Don't try to be too clever." Forward guidance tries to give the impression of a kind of rule-based monetary policy. *De facto*, however, it is an overambitious discretionary approach, which, to be successful, would need much more (or rather better) information than is currently available (for a general discussion see Brunner, 1981).

There is no easy way to overcome uncertainty, be it in the process of monetary policy decisions, or in communication. Forward guidance is anything but a magic tool. Transparency rests on two pillars. On the one hand, credibility is the foundation on which any attempt to successfully guide expectations must be based. A clear strategy, and an uncompromising commitment to the final goal of price stability, is essential. On the other hand, communication must be clear and honest about the limits of monetary policy in a world of uncertainty.

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5

Financial Stability, Forward Guidance for Interest Rates and Their Interaction

Donald Kohn

It is not hard to identify many challenges for monetary policy in the wake of the crisis. I have chosen to focus on two for my contribution – the role that financial stability concerns should play in monetary policy making and the provision of forward guidance to markets about future movements in policy interest rates. Although they may appear to be two different and unrelated topics, by the time I am finished I hope to convince you that they interact in some important ways, which central banks should take into account as they adjust monetary policy regimes to what we have learned in the build-up to and recovery from the crisis.

Financial Stability and Monetary Policy

In the years leading up to the crisis, I was in the camp of those skeptical that monetary policy should deviate from its focus on medium-term price stability and high employment to counter a potential build-up in financial risks or asset bubbles. I doubted the ability of central bankers to spot bubbles and imbalances in a timely way and the efficacy of a relatively modest adjustment in policy interest rates to counter any build-up in risks; and I was concerned about the costs in economic activity and inflation undershoots of a major policy adjustment to correct or forestall a possible increase in financial vulnerability. I still do not believe that low interest rates were a major contributor to the housing bubble in the United States or to the marked deterioration in credit standards, the build-up in leverage, and the increased reliance on short-term funding in the financial sector that made the housing correction so painful and so prolonged. But they may well have played some role, and certainly, given the costs of the crisis and slow recovery, it is worth thinking about under what circumstances monetary policy might in the future give more explicit weight to financial stability concerns.

Moreover, people have legitimate worries about future risks to financial stability that might be building right now as a consequence of a prolonged period of very low interest rates. Unlike the period leading up to the crisis of a few years ago, we do not see increases in leverage and maturity mismatches in the financial sector, or rapid growth of credit to households and businesses. In fact, among lenders, leverage has come down, reliance on short-term funding has been reduced considerably, and credit to private nonfinancial sectors is growing very slowly. But very low bond yields, compressed credit spreads, and easing non-price credit terms in a number of markets have raised questions about whether market participants are adequately allowing for tail risks – for surprises in the path of rates or the ability of borrowers to service their debts. Policy rates are likely to be low for some more time, given inflation tracking below target in many jurisdictions, output and employment still weak relative to the estimated potential and downward revisions to potential GDP growth. Investors may not have made the required adjustments to their expectations for returns and may be extending out risk curves in search of higher yields. Concerns about emerging asset mispricing have led to resistance by some central bankers to further ease when inflation has run below target and to calls by some policymakers and market observers for earlier rate hikes than might be justified by medium-term outlooks for inflation and employment relative to objectives.

But there are costs as well as benefits from "leaning" with monetary policy against potential threats to financial stability that should be taken into account when judging whether a firming in policy to counter stability risks is in the public interest. In particular, leaning against such risks is likely to lead to the undershooting of medium-term targets for inflation and output. We can think of the policy objective as trying to minimise the present value of deviations of inflation from its objective and output from its full employment level. Raising rates to deal with financial stability risks entails a trade-off between the costs of a high probability of missing the targets, at least a little in the near to the medium term, and the benefits of reducing the low probability of a major or bigger shortfall later. That judgment entails lots of difficult elements, including the size of the rate adjustment required to be effective and its short-run costs.

It has been argued by Jeremy Stein among others that monetary policy has an advantage as a financial stability tool because it "gets in all the cracks" – it affects markets broadly. It can counter risk build-ups without requiring the authorities to identify and take effective regulatory action when some of those risks may be occurring in markets or institutions for which the authorities do not have the regulatory tools or oversight roles. But the broad effect of monetary policy is a minus as well as a plus. Increases in interest rates will damp borrowing and spending in sectors not subject

to overshooting in prices or credit. For example, raising interest rates to contain housing inflation and borrowing would also tend to reduce exports, business investment and other interest-sensitive sectors that are not experiencing problems.

So, I still support using regulatory policy first, wherever possible, to counter emerging financial stability risks. Importantly and constructively in the wake of the crisis, there has been a renewed interest in macroprudential regulation aimed at the externalities of risk build-up. Such policies include structural measures to build safer systems less vulnerable to shocks, and countercyclical measures to bolster resilience and make credit more expensive in good times with buffers that can be drawn down when the cycle turns.

But we need to be aware of the current limits of our knowledge of the effectiveness of macroprudential policy. It is untested in the past few decades in highly developed financial centres of globally integrated markets; international cooperation and coordination will be required. The calibration of macroprudential tools to address risks is untested in these markets as are their effects on the macroeconomy that might have to be compensated for by monetary policy. And some countries have done a much better job than others at constructing institutional structures for coherently and transparently coordinating and explaining the interactions of monetary and macroprudential policies. I am afraid the U.S. has still some ways to go in this regard.

Given the uncertain effects and limits on the applicability of macroprudential policies, monetary policy may need to be used to address financial stability risks, but the burden of proof on steering away from medium-term inflation and output targets for monetary policy should be reasonably high.

Forward Guidance for Interest Rates

Offering considerable guidance to markets about the determinants of the likely path of its policy interest rate in the future is a potentially useful tool for the monetary policy authority. It is perhaps even a necessary tool when the policy interest rate is already at or very close to zero. In those circumstances, at the zero lower bound (ZLB), market misunderstanding or misinterpretation of the central bank's intentions might be especially costly in that the policymakers do not have the option of lowering their target to change or offset the effects of market expectations of a more rapid increase in the policy rate than they consider appropriate.

At the ZLB, then, markets should have a deep understanding both of the strategy of the central bank – how it intends to pursue its targets – and of the central bank's evaluation of the outlook – since the implementation of the strategy will depend on forecasts. Market participants, naturally, tend to extrapolate from past patterns of behaviour,

so forward guidance becomes particularly helpful when the central bank sees the economy as unlikely to follow past patterns – for example a slow rather than rapid rebound from a deep recession – or when the central bank itself is not intending to follow its past reactions to incoming data or projections. That latter might be the case because the central bank wants to compensate for time spent at the ZLB that has prevented desired easing or because it wants to speed up the recovery from a deep recession. Note that neither of these imperatives – more information about strategy and forecasts – dictates the publication of a specific expected path for short-term interest rates.

It is important for central banks and market participants to recognise the limits of forward guidance. In particular, central banks and others should not have a great deal of confidence in the ability of the central bank to predict the path of economic activity or inflation. Unanticipated developments and external events – for example problems in export markets or changes in fiscal policy or supply constraints for energy or other commodities – can throw the forecast off. More fundamentally, the experience of the past few years has underlined just how limited is our understanding of the most basic relationships in our economies. Those relationships include the effects of policy interest rates and other central bank instruments on financial conditions; the effects of financial conditions on demand and economic activity; the effects of activity on employment; and the effects of employment and activity on inflation.

The central bank cannot be more certain about future policy than knowledge allows. In its communication about future policy it should emphasise these limits and uncertainty. It can commit itself to a broad strategy dependent on progress towards its objectives; it can try to spell out how it will gauge such progress and how it would react to signposts along the way; but only rarely can it or should it commit to a particular path of rates. Markets should be encouraged to react to new information on the economy, inflation, and financial markets, based on their knowledge of the central bank's reaction function. And the central bank needs to maintain its flexibility to react to new information. For the most part, a central bank can commit to a strategy that, to be sure, may differ from its usual strategy, but not to a particular path of the policy interest rate.

Forward guidance in the time dimension, spelling out a path for the policy rate, can be troublesome for policy and for financial stability.

Forward Guidance and Financial Stability

Much of the discussion of the intersection of monetary policy and financial stability has focused on the level of rates – whether low rates have resulted in excessive

risk-taking through a "reach for yield" channel or through inducing greater leverage and maturity transformation. I want to focus on another dimension at that intersection – not the level of rates but the potential for rates to vary from their anticipated path. Perceived certainty around the path of rates – that the central bank will not be deflected from an announced path except in extreme circumstances – itself can contribute to an unwarranted build-up of risk positions. Certainty can encourage leverage and maturity transformation – for example if participants do not see risk in the short-term rate leg of the carry trade. Certainty about future policy can contribute as well to reduced volatility overall, and that volatility could then spike if changing circumstances induce the central bank to deviate from the expected path, with potential consequences for financial stability. And unwarranted certainty about short-term rates will damp market reaction to incoming news when those reactions could be stabilising for the economic system.

My regrets about the monetary policy we followed at the Federal Reserve in the 2004-06 period leading up to the crisis centre less around the level of rates – I see them as at most a little too low with 20-20 hindsight – and more about the promise of raising them "at a measured pace." That promise was made for good reason – to avoid the markets building in more rapid tightening than we thought would be appropriate to the particular economic circumstances, which we thought was likely as markets anticipated a repeat of patterns of past tightening episodes. But that phrase came to mean a fairly automatic and predictable 25 basis point tightening in each Federal Open Market Committee (FOMC) meeting and in so doing acted as a constraint on the FOMC, and gave market participants scope to engage in risky behaviour based on certainty about the path for the federal funds rate.

Central banks today in many economies emerging from prolonged slumps following the great recession face a similar situation. They are concerned that the bond market may build in too steep a rise in interest rates too soon to support the desired path of returning to high employment and inflation rates rising to targeted levels. But we now see the potential cost of the build-up of financial fragilities if a path is specified and it is too predictable and not adjusted to new information.

So, in my view, central banks should steer clear of commitments to explicit time paths for their target interest rate. They should explain their strategies for achieving their objectives, the economic variables they will be looking at to gauge progress towards those objectives and, as best they can, the values of those variables to which they will be paying particular attention, recognising that the relationships among these variables are poorly understood and can shift over time. And they should emphasise uncertainty about the likely path of rates – the date of first tightening, the subsequent trajectory, and the ultimate value of the longer-term steady state rate. In

her recent speeches and testimonies, the Chair of the Federal Reserve Janet Yellen has indeed been highlighting both the "data dependency" of policy actions and the uncertainty around Federal Reserve forecasts. This is a constructive approach to forward guidance and should help reduce the financial stability risks that can be associated with a prolonged period of very low interest rates and intensified guidance about future actions.

6

The Conquest of Japanese Deflation: Interim Report

Hiroshi Nakaso

I hope you will forgive my presumption in borrowing the title of my remarks today from Nobel laureate Thomas Sargent's influential book, *The Conquest of American Inflation*.[1] I would like to talk about the most important challenge facing the Bank of Japan at the moment, which is how to conquer deflation in Japan. However, before doing so, let me spend some time considering how we came to be struggling with this mild but persistent deflation.

Deflationary Equilibrium

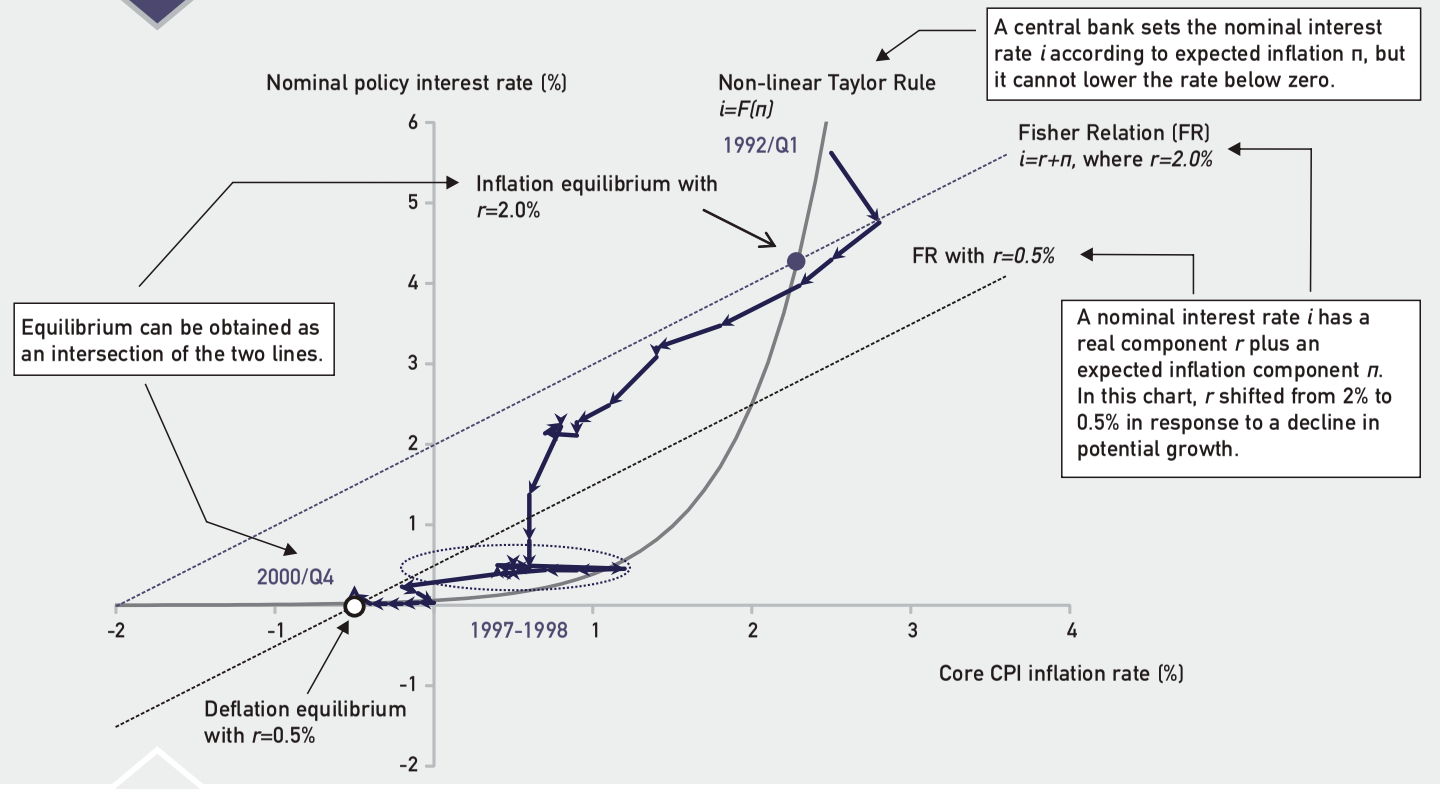
Japan's CPI began to dip into negative territory in 1998, and remained there on the whole for the next 15 years. This deflation has two distinctive features: one is its long duration, which clearly sets it apart from the usual business cycle frequency. The other is its mildness. For most of the time, deflation has remained at less than minus 1 per cent on a year-on-year basis, except for very short spells such as the period just after the Lehman crisis.

Given the length of this deflation, some economists naturally argue that this is not a temporary disequilibrium phenomenon, but an indication that the equilibrium itself has shifted so that deflation prevails (Chart 1).[2] I am inclined to believe that this is the case, and that the equilibrium shift was triggered by the two huge shocks that hit Japan simultaneously in 1997: the banking turmoil and the Asian currency crises. The combination of two such shocks would be a severe challenge

1 Thomas J. Sargent, *The Conquest of American Inflation,* Princeton, NJ: Princeton University Press, 1999.

2 Jess Benhabib, Stephanie Schmitt-Grohe and Martin Uribe, "The Perils of Taylor Rules," *Journal of Economic Theory* 96 (1-2), 2001, 40-69; James Bullard, "Seven Faces of 'The Peril' ", *Federal Reserve Bank of St. Louis Review,* 2010, September/October, 339-52.

Chart 1 Transition to the Deflationary Equilibrium in Japan



Note: Core CPI inflation rate, which is a proxy of expected inflation, is defined as CPI excluding food and energy.

to any monetary authority trying to protect its economy from the threat of serious deflationary pressures. The banking turmoil was a particularly severe blow in that the ability of the credit intermediary function of the banking sector to support economic recovery was seriously impaired, and this in turn exacerbated the deflationary threat. Worse still, there was very little room to cut the interest rate: the policy rate was already as low as ½ per cent prior to these shocks hitting Japan.

Given the magnitude of these negative shocks, the question arises as to why deflation was so mild in Japan. There may be several determining factors,[3] but I believe that a decline in potential growth played an important role. Even before we began to struggle with deflation, potential growth in Japan had started to show a secular decline due to both ageing and a falling trend in population, as well as a slowdown in capital formation. Thus, potential growth is estimated to have dropped to current levels of as low as ½ per cent from about 4 per cent in the early 1990s (Chart 2). This is not good news in itself, but it does help prevent the negative output gap from widening.

Lessons Learned

What lessons can we learn from this experience? To avoid falling into deflationary equilibrium, especially in the face of huge negative shocks, I think that it is important for the authorities to adhere to the following three principles.

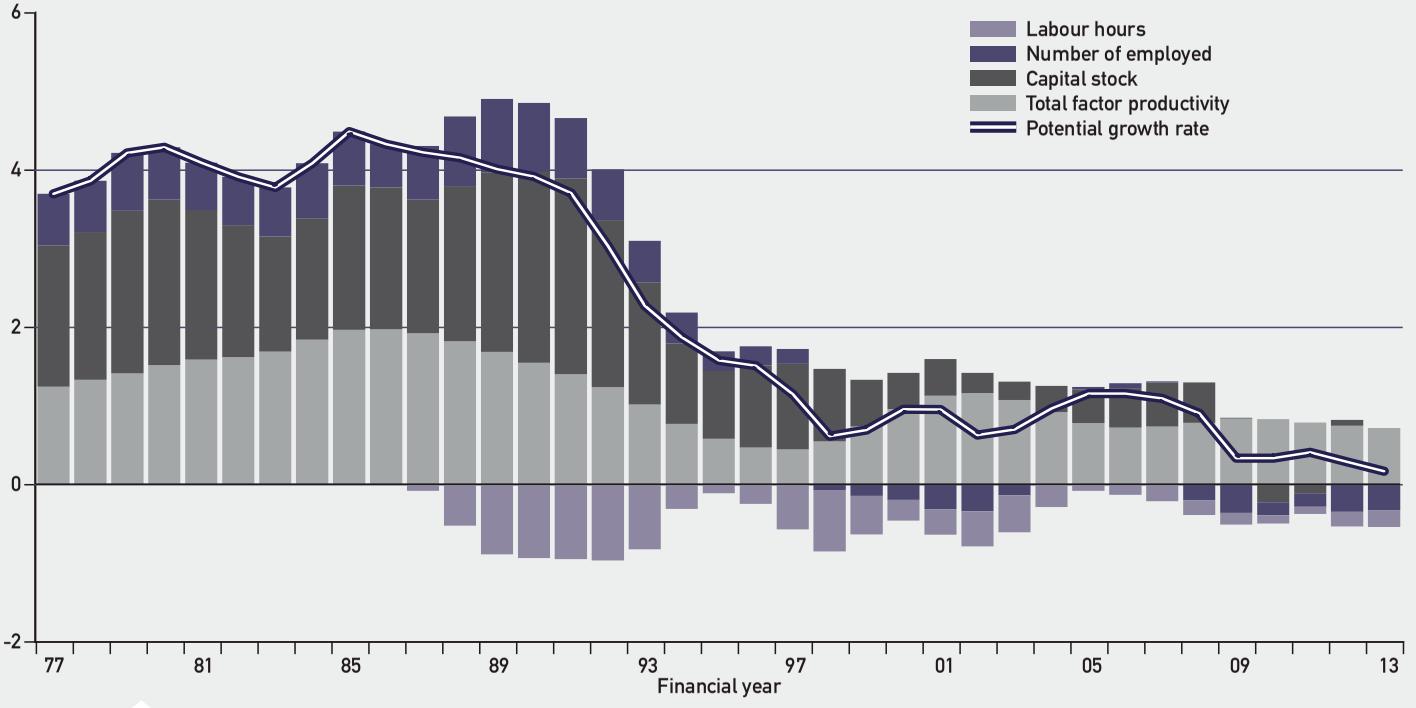
First, we definitely need to avoid a financial crisis. In 1997, we lacked a solid safety net such as a deposit insurance system and a bank resolution mechanism that could effectively deal with a systemic disruption. We failed to stop a large-scale banking crisis because these institutional frameworks were not in place. It was only in the wake of this painful experience that we set up a robust system for the prevention and management of financial crises.

Second, we need to keep a close eye on external events. In 1997, we underestimated the vulnerabilities of Asian economies, and it took some time for us to realise the depth, magnitude and interconnected aspects of the Asian currency crisis.

Third, anchoring inflation expectations is critical for monetary authorities. We must not become complacent about seemingly stable long-run inflation expectations. This is because inflation expectations are inherently difficult to measure accurately, and are susceptible to downward shifts once low inflation is observed for a certain period of time (i.e. inflation expectations are formulated in a backward-

3 Another important hypothesis is that inflation has become less responsive to the output gap.

Chart 2 Potential Growth in Japan



Source: BoJ staff estimate.

looking or adaptive manner). We should be careful not to confuse the benefits of falling prices with necessary relative price adjustments. We need to maintain our credentials as deflation fighters as much as inflation fighters by showing clear and unequivocal commitment to overcoming deflation; should these credentials be lost, experience suggests that they are extremely difficult to regain. Furthermore, it is crucial that we show a "whatever-it-takes" stance to prevent inflation expectations from falling in the face of negative shocks. This is one of the motivations underlying the Bank of Japan's quantitative and qualitative monetary easing. Moreover, as we have repeatedly stated, we will not hesitate to make any necessary adjustments to our monetary policy if downward risks to inflation materialise.

Some observers have argued that Europe faces a significant risk of deflation, or at least low inflation. In my view, however, as exemplified by recent decisive action, the ECB has already made considerable progress in the three areas I have mentioned.

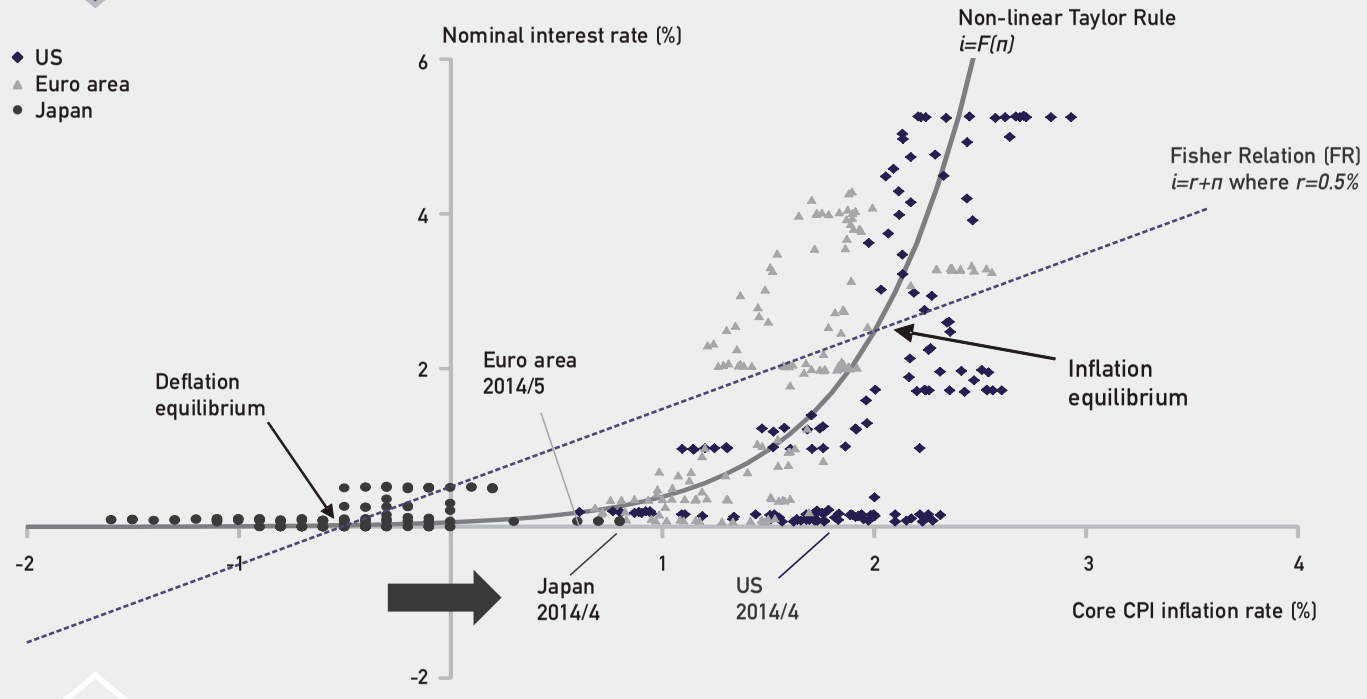
Getting out from Deflationary Equilibrium

The story so far has been about prevention, but, today, I also would like to talk about how far we have progressed in breaking free of the deflation trap (Chart 3). Inflation has risen steadily in Japan. Excluding food and energy, the April 2014 figure for CPI inflation is 2.3 per cent, or around 0.8 per cent if we subtract the effects of the hike in the consumption tax rate. Admittedly, this is still only halfway to achieving the target of stable 2 per cent, but the situation has changed dramatically from when we started the quantitative and qualitative monetary easing in April 2013.

As I have emphasised elsewhere,[4] we need to provide a sufficient escape velocity to the economy in order to break free of deflationary equilibrium. To achieve this escape velocity, we need to employ all the policy measures in our arsenal. As for monetary policy, the Bank of Japan introduced its decisive quantitative and qualitative monetary easing measures, which comprise a strong commitment to price stability and the powerful suppression of the entire yield curve. As for fiscal policy, the government simultaneously launched an expansionary policy, partly through a supplementary budget, while taking due account of long-term fiscal sustainability. In trying to escape from deflationary equilibrium, I believe that the monetary and fiscal policies that used to be conducted independently under an inflationary equi-

4 Hiroshi Nakaso, "What the Lost Decades Left for the Future", keynote speech at the 2014 International Conference held by the International Association of Deposit Insurers, Asia-Pacific Regional Committee, 23 April 2014. http://www.boj.or.jp/en/announcements/press/koen_2014/ko140423a.htm

Chart 3 Inflation and Deflation Equilibrium



Note: Dots are data plots of nominal interest rate and core CPI inflation rate from January 2002 to April/May 2014.
Core inflation is defined as CPI excluding food and energy.

Source: James Bullard, "Seven Faces of 'The Peril' ", *Federal Reserve Bank of St. Louis Review*, 2010, September/October, 339-52.

librium need to be pursued using a different approach. The joint statement issued by the Bank and the government in January 2013 may have been playing an important role as a *coordination device* to enable the collective conduct of monetary and fiscal policies. This joint statement is an important foundation of Abenomics.

Close cooperation between monetary and fiscal authorities can be observed not only in Japan, but also in other areas where unconventional monetary policy has been deployed.[5] For instance, when the Bank of England introduced its Asset Purchase Facility, a letter from the Chancellor made it clear that the British government would provide an indemnity to cover any losses arising from the Facility.

However, this close cooperation does not necessarily imply the loss of central bank independence, for the following two reasons: First, a clear mandate of inflation targeting guarantees active monetary policy down the road. The zero lower bound on the nominal interest rate ties the hands of central bankers when it comes to deflation. As for inflation, central bankers can and should adjust policy rates flexibly if inflation is likely to stay above the stated target. Second, governments well understand the importance of fiscal prudence. In the recent G20 communiqué, the respective governments made a firm commitment to maintaining fiscal sustainability. As the second arrow of Abenomics, the Japanese government has already made an important step forward in this respect by raising the consumption tax rate in April 2014.

Presumably because of this commitment to fiscal sustainability, survey figures for long-run inflation forecasts in advanced economies have not increased to levels much above targeted inflation rates, although these figures are subject to considerable uncertainty, as I mentioned before. These forecasts for Japan have not yet reached 2 per cent, although they do seem to be on a steady rising trend.

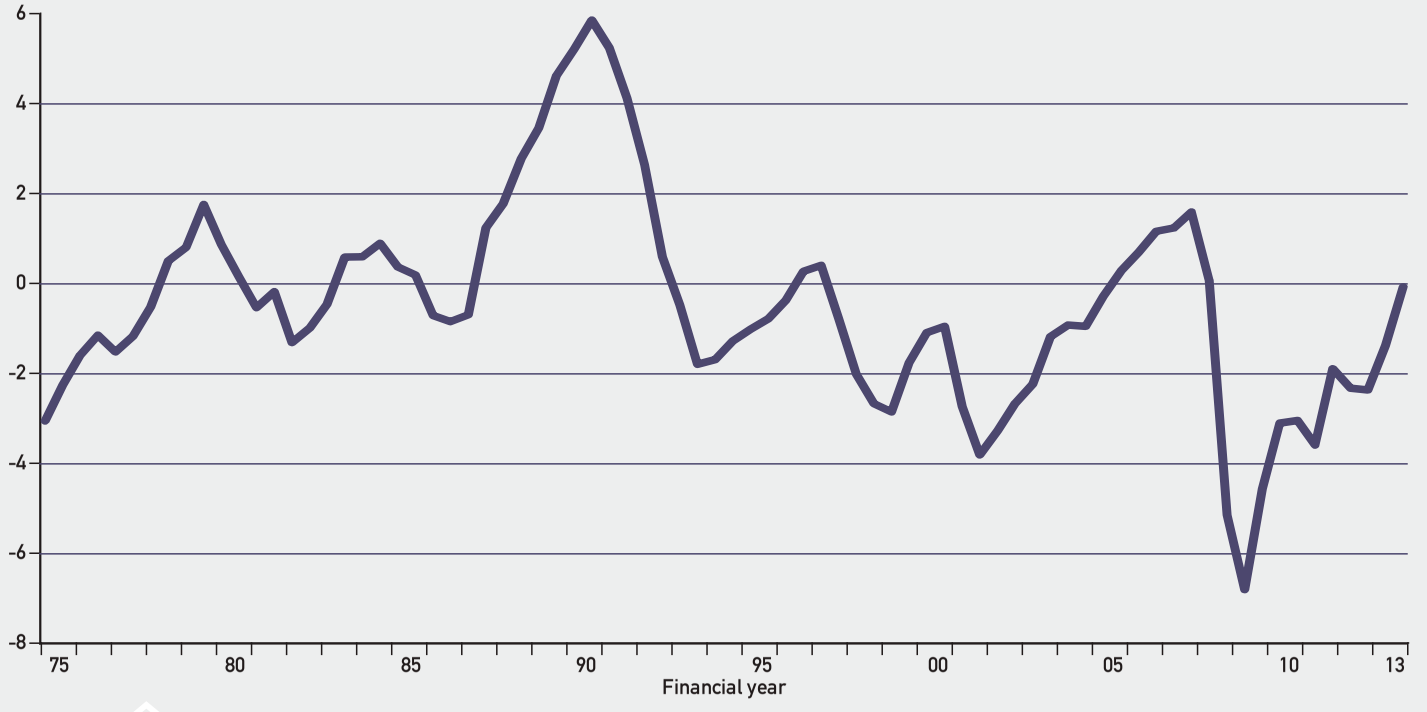
Importance of Raising Potential Growth

Since I have talked about the first and the second arrows of Abenomics, let me touch upon the third arrow before concluding my presentation.

As I mentioned, the decline in potential growth in Japan has limited the range of the negative output gap. Together with demand recovery, lower potential growth seems to be contributing to the recent rise in inflation through the tighter capacity constraint. In fact, the latest output gap is estimated to be largely balanced (Chart 4).

5 Donald L. Kohn, "Interactions between Monetary and Fiscal Policy in the Current Situation", speech at the Conference on Monetary-Fiscal Policy Interactions, Expectations, and Dynamics in the Current Economic Crisis, Princeton University, 23 May 2009.

Chart 4 Output Gap in Japan



Source: BoJ staff estimate.

We often hear anecdotes of capacity constraint, especially those related to labour shortages, partly because the current economic recovery is driven primarily by the non-manufacturing sector, which is inherently more labour-intensive and thus absorbs more workforce than otherwise.

Under these circumstances, raising potential growth is of vital importance. What we envisage by achieving price stability is the sound development of the national economy.[6] In other words, stable inflation should be attained with robust growth, accompanied by healthy job creation and reasonable wage hikes. Low potential growth does not bode well for this scenario, even if, *ceteris paribus*, it contributes to raising inflation through the capacity constraint.

This argues clearly in favour of supply-side policies such as the third arrow of Abenomics. Ambitious labour market reforms, decisive deregulation and strong governance reforms are all supposed to raise potential growth effectively through increasing both labour and capital inputs, as well as by improving total factor productivity. They are indeed what the Japanese government intends to deliver, and I think it has made steady progress in this respect, including its revised growth strategy announced in June 2014.

In the meantime, the success of our monetary policy in achieving the 2 per cent price stability target would help the transition from deflationary equilibrium, where disinvesting and saving used to be considered virtues, to inflation equilibrium, where the revival of *animal spirits* generates fixed business investment that in turn contributes to elevating potential growth.

Concluding Remarks

Perhaps we are getting a bit too far ahead of ourselves here. For us, the immediate challenge still remains how to deliver stable 2 per cent inflation, and discussion of the situation after that may be premature at this stage. After all, there is no point counting our chickens before they are hatched. That is why I put "interim report" in the title of my presentation, hoping that I can report to you "mission complete" someday, hopefully in the not too distant future.

6 The Bank of Japan Act states "Currency and monetary control by the Bank of Japan shall be aimed at achieving price stability, thereby contributing to the sound development of the national economy" (Article 2).

7

Central Banking for a Post-Crisis World: Some Thoughts on Independence, Democracy and Legitimacy

Paul Tucker

The ancient history of Athens provides a point of departure for my remarks today. You do not have to venture far from this conference hall to see two hills central to the foundations of western civilization – of liberal democracy. They carry powerful messages down the centuries.

On one hill, the Pnyx, the Assembly met sometimes: the inspiration for democracy. On the other hill stands the Temple of Athena, where one of the great stories making us who we are played out. In Aeschylus' Oresteia, there is an absolute catalogue of disasters – contingent disasters and moral disasters. Towards the end of the tragedy, the protagonists travel to the Temple of Athena seeking resolution, chased there by the Furies, who want and urge revenge. But the Furies are dispatched, because revenge and vengeance are no solution to anything. Instead, the answer is reason and justice. That remains as inspiring today as I expect it was to the Athenians 2,500 years ago.

It is worth hanging onto as the European Continent grapples with perhaps its most serious economic crisis since the Second World War, especially as the roots lie in ambition (to build a monetary union) and timidity (reluctance to complete the steps necessary to make that monetary union robust). It is worth hanging onto because as countries – citizens, elected politicians and officials – have confronted the crises of the past seven years, the anchors to which they have needed to hold are democracy, justice and reason.

If that seems like a rather highfalutin way to open some remarks on a subject as prosaic as central banking and monetary policy, I do so for two reasons. First, the citizens of Continental Europe, and nowhere more than here in Greece, have had to call on reserves of fortitude, patience and adaptability that no modern generation of democratic policymakers had remotely conceived of. But also, second, because, like

it or not, it has been central bankers – powerful, independent and unelected – who have been centre stage. No central banker expected to be making decisions with such profound effects on the livelihoods and well-being of the citizens they serve. And many have rightly felt acute discomfort at being, as some have put it, the "only game in town".[1] If the innovations and, as some see it, mandate-extensions have been necessary, first, to contain the crisis and, more recently, to try to put the economy on a path to recovery, many central bankers would be towards the front of the queue pleading to have their mandates reaffirmed or reframed, on a proper constitutional basis, for the future. Indeed, some of that has been underway, including the ECB being given a much bigger role in bank supervision.

Political economy is, therefore, my subject. I will talk about three things: first, monetary policy, including lessons and more or less where we are currently; secondly, banking policy and how that relates to the euro area's monetary union and to the advent of macroprudential policy regimes; and thirdly, the future of central banking and, in particular, policy on interventions in financial markets.

Monetary Policy: Sticking to the Mandate

On monetary policy, I will start by emphasising that it is tremendously important that central banks distinguish between, on the one hand, those of their policies that are directed towards stimulating demand – spending in the economy – and, on the other hand, those that are directed towards fixing the transmission mechanism of monetary policy – fixing the credit system, fixing the things that are impeding the effectiveness of monetary policy.

That distinction is not quite as clear cut as in normal circumstances, due to the problems in the euro area's so-called "periphery" economies (a dreadful expression, by the way). Nevertheless, it remains important.

The euro area has been experiencing inflation outturns considerably below 2 per cent. More important, for some months now there has been a threat of deflation. That does not mean that deflation is the most likely or central prospect, but it means that there is a significant probability of deflation occurring. Given the costs of deflation, the case for additional monetary stimulus was apparent during 2014, and has of course since come in various forms.

1 For a broader review, see Paul Tucker, "The Only Game In Town? A New Constitution for Money (and Credit) Policy", Myron Scholes Lecture, Chicago Booth School of Management, 22 May 2014.

But this is not to do with fixing the problems in the periphery economies. It is not to do with the economies that are or have been in crisis – Greece, Ireland, Portugal, Spain, to some extent Italy. This has to do with deficient demand in the euro area as a whole, and thus taking into account its largest economies. The case for monetary stimulus is to increase demand and bring inflation back towards the target of around 2 per cent, and to head off the risks of deflation. The publication of probabilistic forecasts of inflation and of output growth would, I suspect, have made that case more apparent by highlighting the downside risks.

Achieving the inflation mandate for the euro area as a whole entails, in this cycle, that inflation in Germany should run at somewhat above 2 per cent, with inflation elsewhere somewhat below 2 per cent. Let me stress that that should be fine – that is to say, acceptable – if the euro area as a whole is to have around 2 per cent inflation, because the legal objective of achieving price stability, and thus the ECB's operational target, are for the euro area as a whole. If anyone were to argue that the target must be achieved in any particular country, rather than in the euro area as a whole, that would raise questions about commitment to the rule of law.

Separately, however, there is a risk, and one which weighs with many central bankers, of active monetary stimulus blunting the incentives of others to pursue the more fundamental reforms needed to improve longer-run economic performance. Crudely, there is a risk that central bank policy will relieve elected politicians of the incentives to fix the underlying problems in the economy – in this economy here in Greece, in France, Italy and elsewhere. That risk is real, and, if it crystallises, a serious problem. But I do not see how central bankers can have a right to succumb to this argument. Let me explain.

Some argue that central banks should provide less stimulus – less than is needed to achieve the inflation target – so as to increase the pressure on politicians to get on with the heavy-lifting of structural reform. But this is a dangerous argument, where central bankers start to play God. None of the current or former central bankers speaking at this conference was elected. Each of us, when we were in office, was given a mandate from elected politicians – acting on behalf of the people – to pursue an inflation target, and that is what we were bound, by the rule of law, to do; and it is what our successors must do. And if that means that the politicians succumb to the temptation of not making necessary reforms, then it is they who have to be accountable to the people.

To a large extent, central bankers have resisted the temptation to play strategic games with the politicians. That does not mean, however, that they are precluded from airing concerns, or even warning the public, of risks ahead if reform were not pursued. That can be done quite drily, in the language of economics.

Lessons for Monetary Policy: Principled Policy and the Forward-Guidance Debate

None of this is to say that the operation of monetary policy has been without blemish. Perhaps striking a slightly different note from my friend and former Bank of England colleague Don Kohn, I think there are lessons from the operation of policy in the run-up to the crisis.

It will probably be 20 or 30 years before economists pin down what happened. But I do think that loose monetary policy – or, more particularly, the promise of persistent loose monetary policy – partly fuelled the search for yield that inflated asset prices and stretched the balance sheets of lenders and borrowers alike.

I do not think, by any means, that that was the main cause of the 2008/09 crisis being so deep. Nor do I think the global imbalances associated with the rise of China were the main cause, even though they too fuelled credit market exuberance by driving down the world real rate of interest and so driving up asset prices. Both those macroeconomic factors contributed to an exuberant credit boom that left many borrowers over-indebted. But, in my view, the main cause of the depth of the crisis in 2008/09 was absolutely woeful regulatory policy, which left the banking system so thinly capitalised that it was blown over when the economic weather turned.[2] Nevertheless, I think monetary policy played a part.

Looking back, therefore, one possible lesson is that central banks should be less bothered about short-term volatility in asset prices. By making promises or appearing to make promises about a smooth or gradual adjustment in policy interest rates, central banks can find themselves in a trap where, if they appear to diverge from perceptions of a "plan", the markets become horribly volatile, with a risk that policymakers retreat from doing what they otherwise think they should do to achieve their mandate.

If, as I think they should, central banks set their interest rate policy (or their monetary policy instruments more generally) on the basis of judgments about what is prospectively happening to the amount of slack in the economy and the outlook for inflation, sometimes markets will make incorrect predictions about the course of policy. When markets make those mistakes, they are liable to overshoot in the short run. By losing money, market participants sometimes find themselves incentivised to learn about the central bank's reaction function and about the fallibility of central banks' own forecasts. Central bank policy should not twist itself to the mar-

2 Paul Tucker, "Capital regulation in the new world: the political economy of regime change", Yale Programme on Financial Stability, Yale, 1 August 2014.

ket's desire or demands for "certainty". That was a hazard a decade or so ago, and perhaps remains one. This will be important over the coming few years when, at different times, central banks withdraw the exceptional monetary stimulus provided in recent years.

This relates, of course, to the debate about forward guidance. My starting point is that policy should be principled. The principles should be clearly articulated and comprehensible – not just to experts, but to those members of the public who want to engage with the issues.

That is what judges have been doing now for hundreds of years. And whether it is under civil Roman law or the common law that my country uses, judges are expected to stick to principles, and they are expected not to depart from those principles.

Principled policy should turn out to be systematic. In some ways, I think that is a more honest way of thinking about monetary policy than describing it as "rule-based" – where the truth is that, over a quarter of a century, central bankers and economists have twisted the hermeneutic meaning of the expression "rule-based" away from what the general public would understand into a term of art that builds a bridge from Harvard and MIT to Chicago. But I think that everybody agrees that policy should be principled and systematic.

By and large, central banks have found a way to deliver that over the past 20 years or so. They forecast the outlook for demand relative to the path of supply; they explain the things that are driving that outlook and explain how it is likely, in a probabilistic way, to affect the outlook for inflation; they explain how their policy settings feedback from those forecasts; and, finally, they increasingly try to explain why some of their forecasts proved wrong.

One of the things to be welcomed about this general approach to policymaking is that it invites intelligent scrutiny and challenge, which is essential to democratic legitimacy. Thus, in the U.S. we have people like John Taylor arguing that the Federal Reserve has departed from its past practice. In my book, this is a good debate in the sense that it is precisely those kinds of challenges that give central banks the opportunity, and indeed a duty, to explain whether they have had to adapt their principles in the light of what they have learnt about the world or, indeed, whether the accuser or the challenger has misunderstood some consistent element in policy. For example, do the parties to the debate simply have different views of what is happening to the short-run equilibrium real interest rate or of the amount of slack in the economy?

So I think my big message on this is that, in many ways, central banks should stick to what they had already learnt before the crisis about the merits of principled, systematic monetary policy, but should probably fret less about short-term market volatility.

Monetary Policy and Banking Policy: Banking Union is Incomplete

Let me now say something about how monetary policy interacts with banking policy, where there has been a lot to learn. I will first address the design of the euro area's monetary union and banking union and then, secondly, the framing of macroprudential policy regimes.

The monetary union was badly designed. Citizens throughout this continent are suffering as a result. A lot of people are very angry about the circumstances in which they and their families and friends find themselves. But those original mistakes cannot be undone. There is no going back. Reason, not vengeance, is the way forward, but that requires politicians and policymakers to confront those design faults. So where does that leave us on banking union? After broadly welcoming this vital initiative, I will flag a concern about how it leaves the broader architecture of EMU incomplete.

It is tremendous that banking supervision is moving to Frankfurt, to be under the ECB. There is not time to elaborate on this here, but I do not at all agree with people who think there is a conflict of interest between supervision and monetary policy when supervision is in the central bank, provided that there is a visible group of people responsible for supervision. Further, I think the EU's new Directive-based regime for resolving banks – even very big banks, provided they restructure themselves – is good. The decision-making structure for resolutions within the euro area itself is, yes, somewhat cumbersome. But I think national authorities will be most unwise if they do not defer to the centre.

The component of the new regime that worries me is deposit insurance. Think of it this way – a monetary union is a union of money. There are two types of money. There is the money that the central bank issues. That is a relatively small fraction of the money that circulates and gets used in the economy. Secondly, there is deposit money with banks, which is nearly all the money that people and firms use. If you are to have a monetary union, that second type of money – deposit money – needs to be homogenous as well. The deposit insurance package is problematic in this respect, as each Member State has its own separate system. Better either not to have deposit insurance – which is surely infeasible in modern democracies – or, alternatively, to have a unified deposit insurance scheme for the euro area as a whole. Without it, EMU has a series of national moneys. That is problematic, and will leave a fault line in the euro area even after the current crisis has passed.

Addressing that design fault requires policymakers and the people to address what form of fiscal union they want to adopt and how to get there. This is the great

question that the euro area will have to confront in the years ahead. The designers of banking union have done a good job, but it will not be enough to ensure the sustainability of the monetary union over the long run. Eventually, there will have to be some kind of fiscal union.

Since the beginning of the crisis, I have believed that it ought to be possible for the governments of Member States to default within the euro area, just as states of the United States can default within the federal union of the United States. But the people should not be victim entirely of the mistakes of their own governments and authorities. For the continent of Europe – the euro area – to have solidarity, I think there has to be some kind of catastrophe cyclical unemployment insurance system. That would help address the underlying problem of how to handle asymmetric shocks within a single-currency area; by kicking in only during catastrophes, it would preserve Member-State self-insurance during normal fluctuations; and it would not reduce incentives to reduce the intolerably high levels of structural unemployment in some countries.

The challenge is to match the unavoidable economics of a currency union to its politics.

Macroprudential Policy: A Broader Mandate for Stability

Even were that to be done, exuberance in the financial sector and beyond will recur. While the monetary, banking and fiscal union of the U.S. helped America handle the crisis, it did not prevent the crisis. As the next session will focus on financial reform and the euro area banking union, I will say something only about the part of that programme that bridges to macroeconomic policy: the design of macroprudential regimes.

In my view, macroprudential policy cannot sensibly be engaged in some incredibly ambitious fine-tuning of the credit cycle. In other words, I think monetary policy should be used for macroeconomic demand management, and macroprudential policy should be used to ensure the resilience of the financial system. That will have the effect sometimes of leaning against the boom phase of the credit cycle, but it is not the same as trying to manage the credit cycle. I shall explain, and I hope that an analogy might help.

The benchmark instruments of the dynamic part of a macroprudential policy regime are the capacity to vary capital, liquidity and collateral requirements in the light of evolving threats to the stability of the financial system. In an important sense, this is not about changing the regulatory goalposts. Rather it is about dynamically

recalibrating, as needed, to maintain a broadly unchanged degree of resilience in the system.

This is analogous to the operation of monetary policy. In order to keep the path of aggregate demand broadly in line with the economy's productive capacity, the central bank changes its policy rate of interest in a way designed to keep the short-term real rate of interest (r) in line with the underlying equilibrium rate of interest that would maintain the economy in balance if prices and wages were flexible (r^*). Thus, in the face of shocks to the economy, the policy rate might change in order to leave demand conditions broadly unchanged after a lag. Returning to the prudential sphere, the parameters of the base regulatory framework are, if only implicitly, determined on the basis of two judgements: the degree of resilience desired, and an assessment of the riskiness of the world. One could think of these as a normative confidence interval for systemic distress, i.e. a minimum acceptable probability of a crisis, together with an assumed underlying stochastic process generating systemic threats.

But, crucially, the risk environment is not stable. For purposes of exposition, one can think of the underlying stochastic process as having three variants: normal, exuberant and depressed. If the regulatory regime were permanently calibrated to "exuberant", there would be a risk of the supply of financial services being impaired. If, however, it is calibrated to "normal", that will not be sufficient to deliver the desired degree of resilience during exuberant phases. Thus, since an exuberant boom in credit and asset markets might temporarily alter the riskiness of the world (change the underlying stochastic process), capital (K) requirements (or minimum collateral requirements) might need to be increased temporarily in order to maintain system resilience in line with an unchanged degree of resilience desired by society. (In summary notation, if monetary policy is trying to keep r in line with r^*, macroprudential policy is trying to keep, in this case, K in line with K^*, defined as the capital level expected to deliver the desired degree of system resilience.)

In other words, build up an extra buffer during periods of stability-threatening exuberance because, on a forward-looking basis, the resilience of the system would otherwise be eroded. When the "bubble" bursts, a debt-overhang would still impede the subsequent macroeconomic recovery, but the downturn would be less severe if banking (broadly defined) did not collapse because its resilience had been maintained when the environment was unusually threatening.

This way of conceiving of macroprudential policy has implications for the design of the regime. First, it is consistent with the responsibility for macroprudential policy being delegated to an independent agency because, as with monetary policy, a political decision-taker would be tempted to substitute her or his own interests (re-

election) for the country's interests, allowing a potentially destabilising asset bubble or credit boom to persist in order to harness the "feel-good factor".[3]

Second, on this view, a central bank would be endowed with a remit and powers only to safeguard stability, not to intervene in those market malfunctions, including some asset-price booms, that jeopardise the efficient allocation of resources in the economy but do not materially threaten stability itself. Of course, in practice that distinction involves difficult judgements, but the power of central banks needs to stop somewhere if they are to enjoy substantive legitimacy (as opposed to solely the procedural legitimacy conferred by a legislative act). This is a field where some boundaries are definitely needed.

Third, macroprudential interventions would typically be preferred to the central bank actively using its balance sheet to intervene in specific asset markets. In normal circumstances, it is better for credit risk premia and, therefore, credit-supply conditions to be influenced by dynamic regulatory policy than for central banks to deploy the fiscal capacity of the state to shift asset prices through weight of money.

Central Banking in the Future: Framing Balance-Sheet Policy

So where, finally, does this leave us on how to frame principles for how central banks should use their balance sheets in the future? This is a big issue.

As others here have said, central bank balance sheets are going to be bigger for quite a while. But even when monetary conditions have returned to normal, their balance sheet management is likely to be richer, with more dimensions than in the past.

Most of the main central banks now remunerate balances that banks hold with them ("reserves"). Some, like the ECB and the Bank of England, adopted that regime before the crisis. Others, such as the Federal Reserve, adopted it to help manage the crisis. Combined with the use of so-called "corridor systems" for setting interest rates, where the central bank acts as both the marginal provider and the marginal taker of overnight funds, this means that central banks are, in principle, going to be able to choose the size of their balance sheet as an independent matter. Further, the composition of the asset portfolio they hold represents a third dimension of choice. Crudely, they will potentially have three instruments: the short-term risk-free nominal interest rate; the size of their balance sheet; and the assets they buy or lend against.

3 There is not enough work on time-consistency and political-preference problems in macroprudential policy. Something as pared down as the Barro-Gordon model of the inflation bias is needed.

There is no denying that the innovations that have been employed during the crisis have opened up new avenues for central bank interventions in our capital markets. Indeed, I am proud of the innovations that I was associated with in the U.K. But the question is whether or not they should be deployed routinely in normal circumstances. I would prefer them to be kept in the locker during normal times. That is for a number of reasons, which I shall do more than sketch here.

The first is that it is tremendously important that parliaments, and citizens themselves, should be able to make sense of what central banks are doing. That is necessary if they are to be able to criticise central banks or support them. Accountability would be harder if central banks were always using lots of different instruments. This points to a principle of parsimony: central banks should use only as many tools as they need to. If they can get the job done with only the short-term interest-rate instrument, they should do so.

Secondly, central banks need to prepare the ground carefully before buying private-sector paper because, depending on how the operation is designed, it can affect the allocation of credit, just as buying only sovereign paper can subsidise governments. Any outright-purchase operations entail a risk of loss (or profit). As Benjamin Friedman quite rightly said in his speech at the conference, taking a loss does not automatically undermine the central bank, but it does mean that the seignorage income that goes to the government will be smaller, and therefore taxes will be higher or spending will be lower. Whilst any recapitalisation should in theory be routine, in the real world there is a risk of it politicising the central bank. This is why, looking beyond the crisis, the operational flexibility of central banks warrants debate.

Arguably more important than whether central banks should be free to employ their newly discovered toolbox in normal circumstances is who decides. If they are to employ these tools, it needs to be under a mandate given by elected governments. Central banks cannot create their own legitimacy, however good a job they do. Legitimacy requires a mandate from the elected representatives of the people. Even in today's continuing crisis, one would, I think, want broad support for innovative interventions.

As the crisis gradually passes, these issues will need to be addressed. Innovating in the midst of a crisis is one thing. But it would be quite another thing for a future generation of central bankers to find itself making a substantively similar set of innovations to contain a future crisis without the discipline and support of an articulated regime framed in the light of this generation's experiences.[4]

4 For a somewhat more detailed account of these points, see Paul Tucker, Myron Scholes Lecture 2014, *op cit.*

Conclusions

Summing up, while some central banking functions will survive into the post-crisis world intact, some need to be reframed as regimes. Whether it be banking union or financial regulation or new macroprudential policies or central bank balance-sheet policies, much has been done but much remains to be done to build firm foundations – effective but also democratically legitimate foundations – for the future. Some of that work is advanced, some underway, and some can perhaps wait until the crisis is truly behind us.

Public debate will be needed as public anger, eventually, subsides. Democratically elected governments will need to do what only they can do – both in forging and implementing fundamental reforms; and in ensuring that unelected, independent and powerful central bankers operate within clearly understood mandates and policy frameworks. As those tasks are confronted, the most important principles to hold onto should be democracy, justice and reason. Those ancient Athenian hills, the splendid backdrop to this conference, carry messages down to us that are as burningly relevant today as they ever were.

Part II Banking Union

8

Banking Union, Financial Stability and Economic Growth

Ignazio Visco

Returning to strong, sustainable and balanced growth is Europe's overarching priority. In this article, I will first provide a few background thoughts on the sovereign debt crisis in the euro area, as well as on the state of the economic cycle. After touching upon what I consider to be the key preconditions for achieving a sustained recovery, I will then focus on the contribution that banking union provides to financial stability. Subsequently, I shall examine the relationship between financial stability and monetary policy, highlighting the rising role of macroprudential policy and its possible trade-offs and complementarities with other policies. In my concluding remarks, I will emphasise the role of crisis prevention, while sketching out some of the main challenges for central banks going forward.

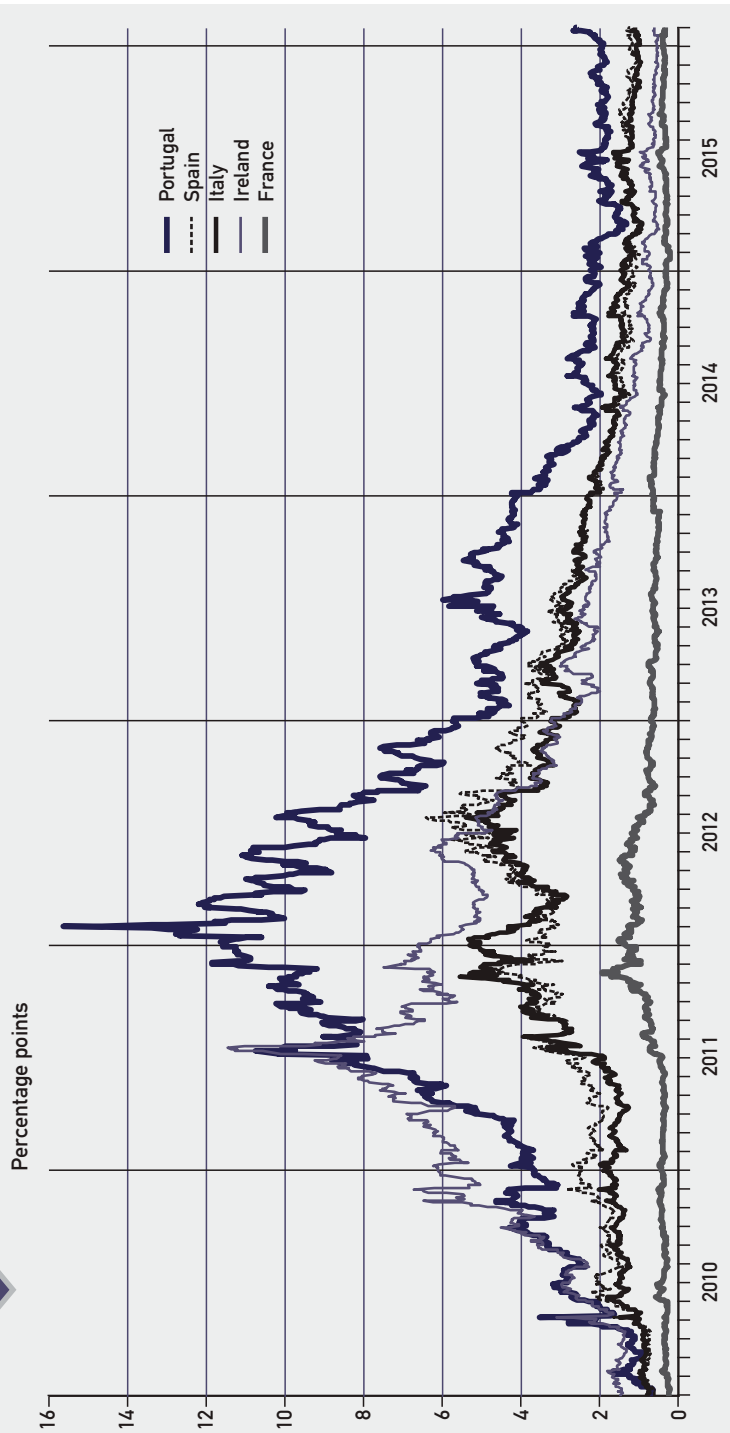
Economic and Financial Conditions in the Euro Area: Contributing Factors and Policy Responses

In the aftermath of the 2007-2009 global financial crisis, Greece, Ireland and Portugal were forced to request, between 2010 and 2011, joint IMF-EU financial aid to support macroeconomic adjustment programmes aimed at redressing major imbalances. In the second half of 2011, following the European authorities' decision to involve private-sector investors in the restructuring of Greece's public debt, the euro area sovereign debt crisis became systemic, with its extension to Italy and Spain.

Very large yield differentials between government bonds threatened the euro project at its very heart. They reflected two components: a national one, linked to the weaknesses of some countries' economies and public finances ("sustainability

I wish to thank Francesco Spadafora for his help in finalising this article, which updates my lecture at the Athens Symposium.

Chart 1 Ten-year Government Bond Yield Spreads over the German Bond



risk"), and a European one, related to the incompleteness of the institutional architecture and the attendant fears of a break-up of the monetary union ("redenomination risk").

The relevant pre-crisis progress towards the integration of the euro area financial system, most evident in the case of wholesale markets such as the interbank market, was reversed and gave way to a fragmentation of financial markets along national lines. Fragmentation impaired the uniform transmission of the single monetary policy across member countries, ultimately posing risks to the stability of the area as a whole.

A two-pillar strategy was deployed to counter the above risks. On the one hand, resolute action by the European Central Bank (ECB), also via unconventional monetary policy measures, supported major reforms of the European governance (including instruments to manage a sovereign crisis and the decision to establish banking union); on the other hand, member countries made significant progress towards advancing structural reforms and consolidating public finances.

This multifaceted response to the crisis has laid the groundwork for the stabilisation and recovery of the euro area. Since the announcement of the Outright Monetary Transactions (OMT) in the summer of 2012, financial conditions improved impressively up to early 2016 (i.e. in the period examined here). After Ireland, Greece and Portugal were also able to place government securities in international markets in 2014. In the period examined, yields on Italy's 10-year government bonds fell to 1.5 per cent, an almost five-fold reduction from the peak reached in November 2011. The yield spread with 10-year German government securities dropped to 100 basis points by November 2015 and averaged about 120 in the immediately following months; it had hit 550 points in November 2011 and was still around 470 points in July 2012 (see Chart 1). Financial fragmentation was massively reduced.

Market-based bank funding conditions improved, underpinned by the continued repair of banks' balance sheets and decline in sovereign debt yields; improvements related to both the availability and cost of market funding: banks' debt issuance activity was more broad-based and average spreads on bank debt tightened across instruments.

While recovery had been underway since the spring of 2013, activity in the euro area remained fragile and consumer price inflation was still excessively low. The ECB staff projections published in December 2015 foresaw a strengthening of economic activity in 2016. But downside risks increased in that period, mainly related to heightened uncertainties about developments in the global economy. Consumer price annual inflation dropped below 1 per cent in October 2013, continued to decline in 2014 and became negative in December of that year; it had been hovering

close to zero since then and up to early 2016. Declining inflation reflected not only the fall in energy prices but also the persistent weakness of the economy: core components were in fact proving to be increasingly sensitive to the prolonged slackness in domestic demand. Since the summer of 2014 and up to early 2016, medium-term inflation expectations decreased to below 2 per cent.

With declining, even negative, inflation rates, the consolidation of public and private debt was more difficult, while nominal rigidities hampered the adjustment of relative prices in some countries. This situation was aggravated by persistent divergences across Member States. As mentioned, fragmentation of financial markets along national lines in the euro area started to recede progressively following the announcement of the OMT programme in the summer of 2012, but in stressed countries firms' and households' borrowing costs remained higher than average, mainly reflecting the larger credit risk. In December 2012 the cost of new bank loans for Italian non-financial corporations was about 1 percentage point higher than the euro area average; in May 2014 the difference was still close to 65 basis points.

In order to counteract these developments, the ECB response was once again wide-ranging. To enhance the functioning of the monetary policy transmission mechanism and provide further monetary accommodation, between June and September 2014 the Governing Council decided on a package of measures, which included a series of Targeted Longer-Term Refinancing Operations (TLTROs), two further cuts of the policy rates to new, unprecedented low levels, essentially reaching the zero lower bound for the Main Refinancing Operations (MROs), and the adoption since June 2014 of negative interest rates on the Eurosystem deposit facility; it also launched an Asset Purchase Programme entailing asset-backed securities and covered bonds, which together with the TLTROs aims to further facilitate the provisioning of credit to the broader economy.

Given weaker than expected inflation dynamics and increased risks of too prolonged a period of low inflation, in January 2015 the Governing Council expanded the Asset Purchase Programme to include securities issued by euro area governments and agencies. Because of new downside risks to the inflation outlook and growth weaknesses in emerging market economies, in December 2015 the programme was recalibrated to secure the price stability objective. The impact of the programme has been broadly successful, most notably in terms of further declines in bank lending rates – particularly in stressed countries – to an extent that is comparable to a 100 basis point rate cut.

The comprehensive monetary policy response has been complemented by progress in reforming the euro area's institutional architecture. The first step has been the establishment of banking union. The Single Supervisory Mechanism

(SSM), its first pillar, came into operation in November 2014; it provides an area-wide perspective on supervision, while addressing concerns about the asset quality and capital strength of euro area banks. The Single Resolution Mechanism (SRM), the second pillar of banking union, became fully operational on 1 January 2016; it aims at improving crisis prevention and the resilience of the financial system by allowing for a harmonised and effective resolution of banks.

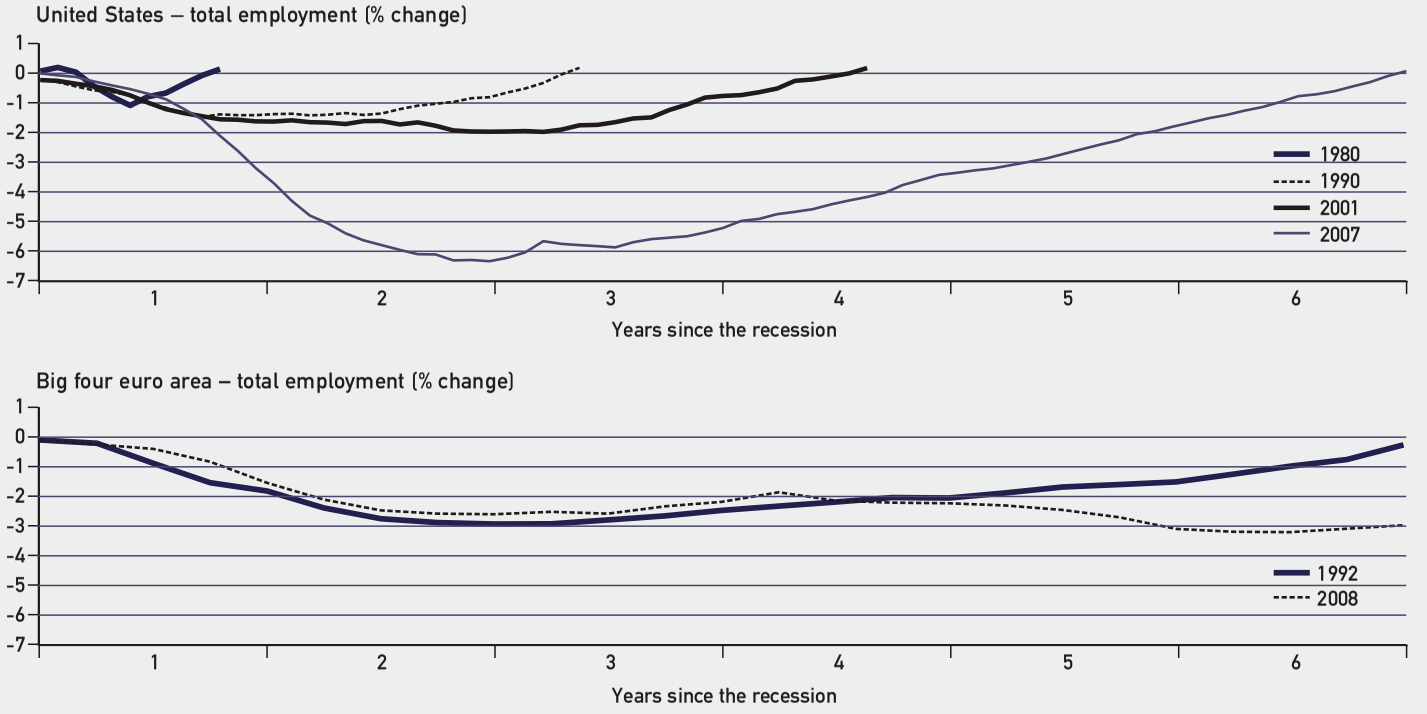
However, despite several positive developments, the legacies of the crisis are still evident: modest growth, unacceptably high unemployment, high private and public debt levels and inflation well below the 2 per cent value consistent with the ECB definition of price stability. Moreover, credit conditions have improved but still remain subdued, with the annual rate of change for loans to non-financial corporations (adjusted for loan sales and securitisation) having become only moderately positive since July 2015.

Preconditions for Sustained Growth and the Role of Banking Union

On the basis of ample empirical evidence, it has been established that financial crises are followed by slower recoveries, with employment taking a longer time to return to pre-crisis levels. A clear example comes from the U.S. when we compare the pace of labour market recovery across the most recent recessions: following the global crisis, it took six years for employment to return to the pre-crisis peak of January 2008, whereas the recovery was much faster in the aftermath of previous recessions, also because of differences in the fiscal policy stance; in the euro area, employment is still below the pre-crisis peak (see Chart 2 on the next page).

These developments are also shaped by major underlying forces such as globalisation, the ICT revolution and digitalisation, and demographics; they all combine to exert dramatic consequences on labour markets, workers' skills, job opportunities and income distribution. On the policy front, a key lesson to be learned from the crisis is that price stability is a necessary but not sufficient condition for stable and sustained growth; the latter also requires financial stability, along with sustainable public finances and structural reforms that support investment. Boosting public and private investment is indeed critical at this juncture. Both have collapsed since the beginning of the global crisis, in the euro area by 20 per cent in real terms over 2007-2013. Ensuring adequate credit flows to the real economy is also of paramount importance to reinforcing growth. To this end, in the euro area, given its stronger dependency on bank financing, completing the repair of banks' balance sheets is a

Chart 2 Employment Recovery in the Aftermath of Recessions



priority in order to fully overcome impaired credit conditions and financial fragmentation and to consolidate financial stability.

In order to eliminate the redenomination risk and to ultimately sever the adverse links between sovereigns and banks, further progress must be made in strengthening the institutional architecture of the European Union. Banking union is an important step towards achieving this goal: its two established pillars need to be complemented by a European Deposit Insurance Scheme along the lines proposed by the European Commission in November 2015. Other complementary actions should aim at broadening the sources of financing through a Capital Markets Union; reviving a market for "high quality" securitisation needs to be part of this effort.

Maintaining financial stability is also a precondition for stable and sustained growth. To this end, the contribution of banking union is clearly critical. By strengthening the euro area's institutional architecture, it helps break the perverse loop between sovereigns and banks and thwarts the redenomination risk that unfoundedly raised sovereign spreads during the crisis; at the same time, banking union helps overcome financial fragmentation.

Moreover, the SSM reinforces crisis prevention, as more effective and uniform supervisory practices, a single rulebook and macroprudential instruments and powers entrusted to the ECB, as well as to the national competent authorities, help to better identify and counter emerging risks at an early stage.

The objective of the SRM, building on the Bank Recovery and Resolution Directive's rules and tools, is to make banks' recovery and resolution credible alternatives to publicly-funded bailouts, while also promoting market discipline. Finally, the European Stability Mechanism's instrument of direct recapitalisation of banks can also contribute to breaking the bank-sovereign adverse links, but its activation might be held back by the procedures agreed upon by the Eurogroup.

The new European supervisory system relies on some basic but effective principles: emphasis on close integration of on- and off-site controls, quantitative and qualitative assessments of risks, and close linkage between the results of analyses and remedial action.

The comprehensive assessment of the most important euro area banks has enhanced the transparency and credibility of banks' balance sheets and reinforced market confidence in the soundness of the European banking system, thereby contributing to the recovery of lending to the economy. The completion of the exercise has been a major achievement, given its unprecedented complexity, both in terms of the volume of activities carried out and of their concentration in time. It has covered about 130 "significant" banks, involving a wide set of bank assets, ranging from

loans to households and firms, to government securities and, to a more limited extent, complex financial instruments.

The asset quality review and the stress tests of banks' balance sheets paved the way for the start, in November 2014, of the new system of unified supervision in the euro area. The capital shortfalls identified by the exercise have been addressed by means of thoroughly-assessed capital plans. Further adjustments will be needed in the banking sector over the medium term also to cope with the major technological developments that have been taking place over the last two decades.

Within the SRM, the handling of banking crises will involve numerous national and European institutions participating in the Single Resolution Board. Provision will be made for recourse to a fund made up of contributions paid in by the banks themselves. Even though the decision-making process appears rather complex and the pooled resources are limited, the compromise reached is a further step towards the completion of banking union.

Financial Stability and Monetary Policy

Following the global financial crisis, much closer attention is now being devoted to the responsibilities of monetary policy for financial stability, as this is a key precondition for price stability, a primary goal of central banks in most cases. This sharpened focus on financial stability should come as no surprise, since it has historically been a dominant concern of central banks and indeed, in many countries, was a fundamental factor in their original establishment. Moreover, it is hard to imagine any instance of financial instability, arising in any segment of the financial markets, that does not eventually impact in some way on the transmission mechanism of monetary policy and, ultimately, on price stability. As a result, greater attention is being paid to interactions and possible conflicts between policies that foster price and financial stability.

Two main elements of novelty stand out. First, the crisis has dramatically demonstrated that price stability alone may not suffice to prevent the build-up of financial imbalances and systemic risks, even in conditions of steady economic growth. Second, "non-standard" (or "unconventional") monetary policies have been adopted by major central banks in advanced countries to fend off unprecedented threats to the stability of entire financial systems and to sustain the very functioning of financial intermediaries and markets.

The widespread use of unconventional monetary policy, to different degrees and in various forms, constitutes a breakthrough in the relationship between financial

stability and central banking. While they are tailored to the specific circumstances and problems of the various economies, unconventional policies ultimately aim at ensuring the proper functioning of the monetary transmission mechanism, and considerations of financial stability have undeniably come to play a critical role in their design. Indeed, the increasing importance of financial stability for monetary policy decisions has not only resulted in major innovations in central banks' toolkits and operational procedures; it has also revived a long-standing debate and raised a number of institutional and operational questions.

On the former, the discussion focuses on whether central banks' mandates should be broadened to make financial stability an explicit objective alongside price stability. While this may appear to be a controversial subject, it is likely unnecessarily so, if we recall that the first is a precondition for the second. Besides, the crisis has not called into question the assumption that, over longer periods of time, there is no trade-off between the objectives of price stability and financial stability – rather, there are synergies.

In my view there is no need to question the current objectives of monetary policy – in the case of the Eurosystem, maintaining price stability over the medium term. In particular, I do not think financial stability should become an explicit objective on a par with price stability, for two main reasons: first, our monetary policy framework helps to maintain longer-term inflation expectations well anchored (as was the case throughout the crisis), even if it is undeniable that too low inflation for too long a period also ends up affecting longer-term inflation expectations, as observed since the summer of 2014; second, adding this explicit objective might blur responsibilities, increase moral hazard and create potential conflicts.

At the same time, however, I do believe that preserving financial stability lies fully within central banks' responsibilities, and this view holds even in cases where other authorities may share tasks in this area. Even in the absence of a formal mandate for financial stability, central banks have indeed long factored developments in money, credit and asset markets into the conduct of monetary policy. The ECB has traditionally addressed risks for financial stability by closely monitoring monetary and credit aggregates within the monetary pillar of its strategy. This attention reflects the fact that banking crises have regularly been preceded by unusually rapid and sustained increases in credit aggregates and their typical consequence: asset price bubbles, most notably in the real estate sector. The 2007-2008 global turmoil provided stark confirmation of these empirical patterns. However, severe risks to financial stability can build up even in the absence of credit or asset price booms, as evidenced by some euro area countries hit by the sovereign debt crisis, notably Italy. These risks materialised through adverse sovereign-bank links prompted by

doubts about the sustainability of the public finances, not only because of the lack of fiscal restraint but also as a consequence of weaknesses in competitiveness and real growth potential.

The crisis has thus strengthened the view that the preservation of financial stability falls among the responsibilities of central banks, regardless of whether they have been given a formal mandate. This consensus on the institutional front clashes with the much more diverse opinions concerning the operational consequences of a closer relationship between monetary policy and financial stability. To begin with, the crisis has challenged the conventional view that asset price movements should induce a monetary policy response only insofar as they affect future output and inflation.

This pre-crisis "Jackson Hole Consensus" questioned the use of monetary policy to counter asset price booms on the basis of a few well-known objections: the difficulty of timely and reliable detection of asset price bubbles; the lags in the transmission of monetary policy impulses; and, more crucially, the policy rate as too blunt a tool. This latter feature would imply the need for fairly sizable rate increases in order for them to have a material impact on credit growth and asset prices: in this context, the bluntness of the policy rate would mean a risk of causing collateral damage to the rest of the economy. These arguments underpinned advocacy of the "clean" view on the use of the policy rate, namely cutting it aggressively to mitigate the economic fallout once the asset bubble bursts.

The enormous economic and social costs of the crisis have greatly reinforced the alternative view, which I share, that in some circumstances central banks may need to act pre-emptively to defuse risks to financial stability that can morph into a systemic crisis. In practice, this "macroprudential" orientation would be implemented by conducting monetary policy in a more symmetric way (i.e. through the cycle): not only easing monetary conditions in downturns but also preventively tightening them in upturns that feature rapidly growing credit volumes and asset prices, even when price stability does not seem to be immediately threatened, as it eventually will be.

Once we agree that central banks should not limit themselves merely to taking account of systemic financial stability risks but may need to respond to them directly, then the attention turns to identifying the most appropriate tools to be used. And here, notwithstanding the broader endorsement of a more pre-emptive approach, opinions are no less diverse than before the crisis. The most controversial question boils down to whether the monetary policy rate, i.e. the one directly controlled by central banks (the ECB's MRO rate or the Federal Reserve's federal funds target rate), should be used to "lean against the wind", i.e. to directly address risks to financial stability or, rather, whether the risks are more appropriately tackled by

microprudential and, above all, macroprudential policies, conducted either by the central bank itself or by a separate authority.

The case for pre-emptive use of the policy rate – the "lean" view bolstered by the crisis – rests on three main reasons. First, recent research on the risk-taking channel of monetary policy transmission offers theoretical arguments and empirical evidence that the impact of the policy rate on credit is stronger than had been previously thought, as it varies over the business cycle through shifts in banks' leverage. The policy rate is indeed seen as a key determinant of leverage, in that the balance-sheet liabilities of financial institutions consist mainly in short-term borrowing whose cost is closely linked to that rate.

Second, although there is some preliminary evidence that macroprudential policy can mitigate the consequences of unravelling financial imbalances, its ability to prevent the build-up of these risks in the first place, and thus to serve as a true alternative to policy rate increases, is more dubious. This asymmetry is also recognised by the Basel Committee on Banking Supervision in its guidance for the use of the countercyclical capital buffer, one of the new macroprudential tools that have been made available as a result of recent global regulatory reforms. Moreover, like the policy rate itself, macroprudential measures too may suffer from a "dosage" issue; that is, magnitude appears to be crucial to effectiveness. Third, unlike the more narrowly targeted macroprudential tools, the policy rate would actually have superior macroprudential power because of its unique capacity to affect aggregate financial conditions – to "get-in-all-of-the-cracks" in Jeremy Stein's fashionable characterisation of monetary policy.

Although the macroprudential use of the policy rate is gaining theoretical ground, the "clean" view continues to have highly authoritative advocates. It is worth noting, in fact, that the policy rate's presumed "crack-filling" power, perhaps the strongest rationale to justify a more proactive use of monetary policy, is also put forward as a counterargument for not using it. The fact that higher interest rates would permeate the entire financial system is seen by some as an alternative way of admitting that raising interest rates is too blunt a tool.

While the practical difficulties of a pre-emptive use of the policy rate are no less relevant now than before the crisis, when they were generally seen as decisive, the fact that a "leaning-against-the-wind" use of this tool no longer captures only a minority of views owes less to stronger theoretical arguments than to the greater importance now assigned to crisis prevention in light of the very painful experience with the economic and social costs of the financial crisis.

The merits of a more active use of the policy rate are still being debated, but one important legacy of the crisis is the broad consensus that macroprudential policy

should complement monetary policy, ideally by acting as a first line of defence, in countering financial imbalances that may pose systemic risks. Macroprudential policy, in this view, would serve to address both the cross-sectional dimension of systemic risk, strengthening the resilience of the financial system to adverse real and financial shocks, and its temporal dimension, containing the accumulation of risk over the business or financial cycle (although we should be aware of the policy's possible limits in this regard).

Therefore, insofar as countercyclical macroprudential policy is effective in moderating the financial cycle, it can support monetary policy in stabilising the economy. However, the development of a macroprudential framework is still at an early stage, and several aspects, most notably its operationalisation, require further analysis. As a rule, monetary policy and macroprudential policy should best be thought of as complementary to, rather than substitutes for, each other. This desirable feature is recently gaining practical prominence: for example, having identified risks to financial stability from rapidly rising house prices, in June 2013 the Bank of England's Financial Policy Committee issued a recommendation limiting banks' ability to extend new mortgage loans to borrowers with high loan-to-income ratios. Other macroprudential measures targeting the housing sector have been adopted in several countries, including Belgium, the Netherlands, Sweden and Switzerland, in the latter case by means of a sectoral countercyclical capital buffer. These measures help preserve financial stability and reinforce the focus of monetary policy on price stability.

Despite these complementarities, one major issue that I want to highlight is the potential for conflicts – what economists usually call "trade-offs" – between monetary, macroprudential and microprudential policies:

– In recessions, macroprudential policy can be subject to a lower bound similar to that faced by monetary policy. For example, if "good times" are not successfully exploited to build up macroprudential capital and liquidity buffers, these will not be available for countercyclical release in downturns. In this case, monetary policy would be left to shoulder most of the burden, precisely as in today's circumstances in the euro area.

– In recessions, the macroprudential policymaker may want to release banks' capital buffers, while the microprudential authority may prefer to strengthen them.

– From a governance viewpoint, the key question is whether there is a case for allocating monetary, macroprudential and microprudential policies all within central banks.

The ECB provides a concrete case of an institutional setting aimed at addressing interactions and trade-offs between macroprudential and microprudential policies and monetary policy by ensuring the necessary euro-area-wide coordination in the

application of these policies, so as to adequately address potential spillover effects. The regulation establishing the SSM assigns to the ECB not only microprudential tasks but also specific roles for macroprudential policy, notably the implementation of macroprudential measures set out in EU legislation, the Capital Requirements Regulation and the fourth Capital Requirements Directive (the CRR/CRD IV package), along with national authorities.

The SSM poses issues for the design of the framework for macroprudential decision-making. How should the macroprudential and microprudential functions be organised at the ECB so as to exploit complementarities and minimise potential conflicts?

The agreed upon decision-making framework for macroprudential policy within the SSM takes a pragmatic approach to these issues, striking a balance between different considerations. It takes into account both the synergies that exist between macroprudential policy and monetary policy and also the strict interrelation of macroprudential policy with microprudential policy, not least in view of the legislative basis provided by the SSM Regulation. The conflicts of interest that may arise between macroprudential and microprudential policies can be quite relevant and should be recognised.

Concluding Remarks

Exit from the crisis in the euro area cannot be achieved by isolated actions of individual economic policy authorities. In particular, monetary policy alone cannot guarantee the financial stability of the area if the problems underlying the sovereign debt crisis are not resolved at both national and European levels by further reforms of the European governance as well as by fiscal and structural policies that complement the monetary lever in consolidating growth.

Looking beyond the immediate issue of securing price stability and a strong and self-sustained recovery, one of the critical consequences of the crisis has been the much greater prominence of crisis prevention, which pertains not only to central banks but to the entire spectrum of macro-financial policies. This emphasis requires reliance on the broadest possible set of policies and tools, together with careful consideration of the interactions, complementarities and potential conflicts between them, with the ultimate goal of building a more resilient financial system.

As far as monetary policy is concerned, I believe that central banks should lean against the formation of financial imbalances and should not be timid in reacting to early signs of systemic financial instability. The pre-emptive use of the policy rate at

some point cannot be ruled out *a priori*. However, framing the discussion exclusively on whether the policy rate should be used to counteract an asset price or credit boom may be too narrow an approach. Crisis prevention should begin well in advance by closely monitoring leverage and credit aggregates, which more often than not are the immediate cause of soaring asset prices. Macroprudential policy can be most helpful in this regard; but microprudential policies too must be retained as instruments of choice for crisis prevention. The relaxation of lending standards is normally a major contributor to rapid credit growth.

And it is certainly not a coincidence that a strong microprudential regulatory framework, accompanied by effective supervision – sufficiently intrusive and capable of "saying no" – is a distinguishing feature of the financial systems, including those of some large euro area countries, that did not display such vulnerabilities as exposure to unsustainable booms in the real estate sector and large investment in toxic structured finance products, which proved to be the main causes of many bank failures and the resulting large government bailouts.

Banking union is a major step towards preventing systemic financial crises. Following the completion of the comprehensive assessment, since 4 November 2014 the ECB has assumed responsibility for banking supervision in the euro area. The favourable financial conditions that monetary policy is ushering in must not be missed. The strength of the economic recovery that was underway since the spring of 2013 varied across countries and regions but downside risks increased in that period, although in December 2015 the ECB expected a strengthening of the still fragile recovery in the euro area in 2016. The return to sustained and balanced growth requires broader economic policy action centred on investment – private and public, national and European – which is the linkage between demand and supply. Concerted measures must be rapidly taken to accelerate the building up of infrastructure.

Current macro-financial conditions are posing a number of delicate challenges for central banks, notably how to walk the fine line between maintaining accommodative monetary conditions as long as necessary to support the recovery and preventing excessive risk-taking that could subsequently generate macro-financial imbalances. As growth gathers momentum and labour market conditions continue to improve, monetary conditions have begun to progressively return to a more neutral stance in the U.S. Here, monetary normalisation nowadays is distinctly more complicated than in past episodes such as those of 1994 and 2004. It involves not only gradually raising the policy rate in due course but also (and perhaps above all) exiting from unconventional measures like quantitative easing and forward guidance. What is more, normalisation must now be achieved in a global environment characterised by the substantial debt overhang created by the crisis.

In the euro area, inflation is still well below the European Central Bank's definition of price stability. In a situation of modest economic growth, very low rates of inflation make it more difficult to adjust imbalances and reduce debt-to-GDP ratios. Since June 2014, the ECB Governing Council has adopted a combination of measures, centred on a more active use of the balance sheet, to provide additional monetary policy accommodation and secure price stability. In particular, the Asset Purchase Programme provides the flexibility to adjust its size, composition and duration in order to counteract unwarranted price developments. This policy response is underpinning improvements in the real economy and credit provision despite less favourable external conditions. The Governing Council has reiterated its unanimous commitment to act if necessary to further address weaker-than-expected inflation dynamics and the attendant risks.

Financial and monetary stability are necessary conditions to achieving strong, sustainable and balanced growth; but they are not sufficient conditions. It is paramount to ensure actual and perceived fiscal sustainability and to implement much-needed structural reforms.

9

Banking Union: Rationale, Architecture and Policy Implications

Yannis Stournaras

The roots of the euro area crisis are complex, resulting from an interaction between inadequate institutional architecture and ineffective policies, or ineffective implementation of policies, within the structures that had been put in place.

Banking union is a step towards a new architecture of economic governance in the euro area. In fact, it represents an unusually ambitious institutional change in the European Union (EU).

The move towards the establishment of banking union was agreed at the European Council of June 2012 in an effort to deepen Economic and Monetary Union (EMU). It came as an EU response to the global financial crisis and the subsequent euro area sovereign crisis, which uncovered the weaknesses of the initial architecture of EMU. Few years after the inception of this ambitious project, progress has been considerable, but serious pending issues also remain.

In my remarks, I would like to focus, first, on why banking union is necessary in a monetary union; second, on the form that the architecture is taking, and, third, on its implications for growth and stability in the euro area going forward.

The Need for Enhancing the Architecture of Monetary Union

Beginning with the seminal work of Robert Mundell on optimum currency areas,[1] the theory of monetary integration has outlined the conditions under which it would be optimal for a group of countries to adopt a common currency. These conditions included:

– similar economic structures to reduce the likelihood and mitigate the implications of asymmetric shocks among the union members, and

1 Robert Mundell, "A theory of optimum currency areas", *The American Economic Review*, 657-65, 1961.

– the existence of adequate adjustment mechanisms to smooth out the effects of asymmetric shocks.

The theory of monetary integration, as it had developed by the time of the inception of the euro in 1999, paid little attention to the role of banks in a monetary union. It was thought that nominal convergence along with a single monetary policy would gradually promote real convergence. Banks had no special role in transmitting financial market shocks to the real economy or in producing spillover effects across union members.[2]

Yet monetary union has to go hand-in-hand with financial integration. Indeed, financial integration did proceed apace with increasing capital flows between the countries of the euro area, leading to increased interdependence between financial institutions and markets. Such interdependence is necessary for the smooth operation of the single monetary policy, as it facilitates the transmission of monetary policy throughout the euro area.

However, increased interdependence between financial institutions and markets was not accompanied by a more unified regulatory framework. Moreover, policy measures related to financial stability and the financial cycle (what we call today "macroprudential measures") were largely absent, in spite of the fact that financial institutions were aware and had noted the potential implications of increased inter-dependence for financial stability. The original architects of monetary union chose to keep financial sector supervision and regulation, largely, at the level of the nation state.[3] The prevailing view was that persistent capital flows from the North to the South, which financed the current account deficits of the South during the early years of EMU, would be an equilibrating force – capital moving from countries where the rate of return on investment was low to those where it was high. The elimination of exchange rate risk was often interpreted by markets and financial institutions as an elimination of all risk. Credit risk was effectively ignored.

Following the outbreak of the international financial crisis in 2008 and the re-pricing of risk, the ample capital inflows to the periphery were subsequently reversed and, in certain Member States, they were reversed very abruptly. This reversal led to a negative feedback loop between banks and public finances, exacerbating the effects of financial instability on the real economy. In some Member States, such as Spain, the reversal led to a collapse in demand, a collapse in asset prices and bank distress. The

2 See, for instance Paul de Grauwe, "The economics of monetary integration", Oxford University Press, 1997; and Richard Baldwin, "Market integration, regionalism and the global economy", Cambridge University Press, 1999.

3 Vitor Constâncio, "The European crisis and the role of the financial system" speech delivered at the Bank of Greece Conference on "The crisis in the euro area", Athens, 23-24 May 2013.

resulting bank distress then fed back into a fiscal and, ultimately, a sovereign debt crisis. A similar narrative can be told for Ireland. In other Member States, such as Greece, the reversal, which actually became a sudden stop, initially affected the financing of the, already very high, government budget deficit and the refinancing of debt, and subsequently inflicted damage on the banking system following the haircut on Greek government debt and the impairment of bank loans due to the ensuing recession.

Six years after the outbreak of the euro area crisis, it is important to fully understand why the interconnections between banks, the real economy and sovereigns were so strong in the euro area and why the establishment of a banking union was necessary.

First, the size of the banking sector in the euro area, measured either in absolute terms or as the share of bank assets in GDP, is about five times larger than in the U.S. These data underline the importance of banks as financial intermediaries in the euro area. Firms in the euro area are much more reliant on bank credit compared to the U.S., where capital markets play a much more important role in financing investment.

Second, although large banks in the euro area and the U.S. are of roughly similar magnitude, large banks in the euro area represent a much bigger share of the economy of any individual Member State in the euro area. This implies that bank failures in the euro area can easily call state solvency into question.

Third, euro area banks typically hold large volumes of government bonds in their portfolios, making them more vulnerable to sovereign crises. And the capital flows from the core to the periphery that characterised the early years of monetary union also led to concentrations of peripheral sovereign risk in the core.

A consequence of the euro area crisis and the negative feedback loops between banks and sovereigns was the so-called "balkanisation" of the euro area banking system, i.e. the retreat of banks behind national borders. As a result, financial conditions diverged between euro area Member States. The fragmentation of financial markets deepens the divide between core and periphery, hinders the smooth transmission of the single monetary policy and is harmful for real economic convergence.

The foregoing analysis clearly highlights the need for a centralised, European responsibility for financial market and banking supervision; the establishment of banking union was perceived as a logical next step in the advancement of EMU.

The Three Pillars of the European Banking Union

Banking union is built on three pillars: the Single Supervisory Mechanism (SSM), the Single Resolution Mechanism (SRM) and a harmonised system of Deposit Guarantee Schemes.

The Single Supervisory Mechanism gives the European Central Bank (ECB) responsibility for supervision over banks in the euro area and in EU countries which participate in banking union. This ensures the application for all banks of a common supervisory model.

In November 2014, the ECB assumed the direct supervision of about 130 significant banks, in close cooperation with national supervisory authorities, which retain responsibility for day-to-day supervision of less significant banks.

The ECB ensures a truly European supervision mechanism that is not prone to the protection of national interests, weakens the link between banks and public finances and takes into account risks to overall financial stability.

A necessary complement to a supervisory mechanism is a resolution framework to deal with non-viable banks. The Single Resolution Mechanism constitutes the second pillar of banking union. Orderly and prompt resolution of non-viable banks is essential in order to avoid costly rescues by sovereigns that may impact on their fiscal position.

The SRM Regulation created a Single Resolution Board, responsible for the resolution of banks in the euro area and participating EU Member States in order to ensure swift and effective resolution decisions, especially in the case of large and complex cross-border banking groups. From the 1st of January 2016 onwards, any resolution of a euro area bank is being decided in the context of the SRM.

Resolution of non-viable banks also requires a credible backstop. This backstop is provided by the Single Resolution Fund (SRF). The Fund will be financed via *ex ante* and *ex post* contributions by the banking sector, which will be gradually mutualised. By mutualising the costs of bank resolution, the SRM will reduce the link between domestic banks and their sovereigns and contribute to a level-playing field for banks. The use of the SRF funds is conditional on the application of the "bail-in" tool, which ensures that shareholders and creditors are the first to carry the costs of a failing bank before the use of public funds is allowed.

A prerequisite for the functioning of the Single Resolution Mechanism is the Bank Recovery and Resolution Directive (BRRD), which provides for a complete framework for the crisis management of banks in the EU and lays out specific measures for bank recovery and resolution. In particular, this directive specifies the conditions under which public funds may be used for the recapitalisation of a bank. These conditions mainly refer to the "bail-in" of a percentage of the bank's liabilities before the use of public funds is allowed for that purpose. The same directive specifies the exceptions to this rule.

The third pillar of banking union is the EU harmonised framework for European Deposit Guarantee Schemes, which includes provisions to ensure the es-

tablishment of sufficiently robust national deposit insurance systems in each Member State, and an appropriate degree of depositor protection in the European Union.

The first two pillars of banking union are already in place. Legislative work has been completed, its implementation has already started, while the first practical and political problems of the BRRD have already appeared in certain Member States. On the contrary, the third pillar has witnessed limited progress so far.

Implications for Financial Stability and Growth

Let me now turn to the major implications of banking union for financial stability and growth. I will first focus on financial stability. The implications of banking union for economic growth mainly follow from its beneficial impact on financial stability and integration.[4]

One of the most important goals of banking union is to help safeguard financial stability through the creation of a safer banking system in the EU.

Common supervision and convergence of rules and standards will improve the reliability of banks' internal models, ensure that the same weights are assigned to similar risks, and that non-performing exposures are treated in a harmonised manner across Member States.

A centralised framework and a vigorous supervision will help prevent the build-up of excessive risk-taking by banks and reduce national distortions, while better addressing cross-border issues.

The Comprehensive Assessment of banks' balance sheets carried out in 2014 strengthened banks' balance sheets by ensuring effective enforcement of prudential requirements, obliging banks to keep sufficient capital reserves and adequate liquidity, thereby improving their risk management capacity and their ability to absorb losses. As a result, banking union will go a long way towards restoring confidence in the European banking sector.

Moreover, banking union will contribute to reducing the negative feedback loops between banks and sovereigns. Failing banks will be resolved promptly and efficiently through a centralised mechanism, while the implementation of the "bail-in" tool and the use of the Single Resolution Fund will limit the negative effects on governments' fiscal positions. The operation of the common Fund will create over time

4 Mario Draghi, opening speech at the European Banking Congress "The future of Europe", Frankfurt am Main, 22 November 2013.

a cross-border risk-sharing mechanism, an important element in the new EMU architecture. Importantly, by 2024, the common Fund will be a purely market-based risk-sharing mechanism.

The application of uniform supervisory and resolution rules will also improve the funding conditions of banks. Funding will be more dependent on the specific risk profile of each bank and less on the financial strength of the Member State where the bank is located. This again weakens potential vicious circles of rising sovereign and bank borrowing costs.

Stability itself is a necessary condition to promote growth. But banking union will enhance growth conditions even further. Growth will benefit from the consequences of banking union for the reversal of the fragmentation of EU financial markets, observed after the crisis. This reversal is necessary to put in place the conditions for further integration. Through common supervision, trust among cross-border banks will be enhanced, enabling them to operate more efficiently across borders, to the benefit of consumers and firms.

Moreover, banking union may reinforce the consolidation dynamics in the EU banking system, leading to a restructuring of the European banking sector, while enhanced cross-border competition through integration in the retail banking sector will lead to lower prices and better services for consumers.

A key characteristic of the euro area economic recovery has been the decline in loans to the private sector. The recovery has been "creditless" in both the euro area as a whole and, particularly, in many individual countries for a long period after the crisis.

Because the euro area economy is bank-based, bank lending is especially significant for companies and, in particular, for SMEs, which produce the bulk of goods and services and account for a large share of employment.

Consequently, credit contraction raises the question: can the recovery be sustained in the presence of negative loan growth?

Throughout the crisis, the Eurosystem has put in place both standard and non-standard policy measures with the objective of increasing confidence and further restoring the smooth operation of the monetary transmission mechanism. In particular, the targeted longer-term refinancing operations is a measure that aims to support lending to the real economy. A potential lack of collateral could limit the usefulness of this measure for the periphery. It would be beneficial if attention were to be paid to this issue.

There is, however, still more work to be done. This is where banking union again comes in. Banking union represents a crucial step towards restoring confidence in the banking sector, which will contribute to financial and economic stability in the future. Lower volatility in the real economy will be positive for economic growth.

This is in line with evidence of the growth literature, which documents a negative correlation between growth and economic volatility.[5]

One lesson of the global financial crisis is that disruptions of financial intermediation play an important role in business cycle fluctuations. Credit constraints amplify economic fluctuations and banking crises contribute to deepening economic recessions.[6] This is particularly true in bank-based economies, where capital markets are less developed. The creation of a banking union will restore confidence in the banking sector with beneficial effects on the real economy.

Overcoming the fragmentation of financial markets will loosen tight credit standards in Member States of the periphery, allowing banks to finance investment. Financing corporate investment is currently of utmost importance for economic growth both in the euro area as a whole and in periphery countries in particular, which have suffered from deep and prolonged recessions. Remarkably, private investment in the euro area has declined from 20 per cent of GDP in 2008 to about 17 per cent of GDP in 2015. The decline was much more pronounced in periphery countries such as Greece, Spain and Portugal, where private investment declined by between 6.5 and 13.5 percentage points of GDP.

In the longer term, economic growth will benefit from deeper financial integration and development. Financial market integration will boost long-term economic growth by supporting an efficient credit allocation process. This will contribute to a better allocation of physical resources in the economy, boosting total factor productivity and potential output.

Conclusion

To conclude, the long process that started with the de Larosière Report in 2009,[7] which proposed the establishment of a single European supervisor and a single European resolution authority, is nearing its conclusion. This, however, is not the end of the journey. The legislative work has ended, but the implementation period has

5 See Garey Ramey and Valerie A. Ramey, "Cross-Country Evidence on the Link Between Volatility and Growth", *The American Economic Review*, 85(5), 1138-51, 1995; and Philippe Aghion, George-Marios Angeletos, Abhijit Banerjee and Kalina Manova, "Volatility and growth: Credit constraints and productivity-enhancing investment", National Bureau of Economic Research 11349, 2005.

6 Carmen Reinhart and Kenneth Rogoff, *This time is different: eight centuries of financial folly*, Princeton University Press, 2009.

7 Jacques de Larosière, Leszek Balcerowicz, Otmar Issing, Rainer Masera, Callum Mc Carthy, Lars Nyberg, José Pérez and Onno Ruding, Report of the High Level Group on Financial Supervision in the EU, chaired by Jacques de Larosière, Brussels, 25 February 2009.

just started, with the policy implications and the political problems of the BRRD, especially the "bail-in" tool, already appearing in certain Member States. In addition, the third pillar of banking union, that is the EU harmonised framework for the European Deposit Guarantee Schemes, which includes an appropriate degree of depositor protection in the European Union, is still pending. Without it, banking union is incomplete. All these imply that the journey will be long and challenging.

I said at the beginning of my speech that banking union was an unusually ambitious change to the EU architecture. I hope that, in what I have said, I have convinced you both of the magnitude of the challenge and the value of banking union.

10

Reflections on Banking Union

Tassos Giannitsis

The destabilisation triggered by the euro area crisis has put in motion changes aimed at strengthening the institutional framework of Economic and Monetary Union (EMU) and responding to the severe challenges of the years 2011/2012. The close interconnection between the banking sector and the public sector exerted a very adverse influence on fiscal deficits, yields, confidence and behaviour of markets, which put into question the stability and credibility of the euro area. One of the key lessons of those years is that the effectiveness of the single European monetary policy will be limited if significant aspects (micro- and macroprudential supervision for banking and credit markets, resolution, insurance) stay outside the scope of the competent European monetary authorities, but also if other policies (e.g. the fiscal component) remain the responsibility of national authorities or are insufficiently coordinated. As a consequence, many important initiatives have been undertaken to underpin the strength of the euro area regarding the efficient functioning of both the financial and the public sector.

Based on the experience of the crisis, the creation of "bail-in" reforms and banking union won the unanimous backing of governments and markets as an institutional change which could protect the banking industry from adverse developments. The experience of the euro crisis which resulted in significant losses of income and interest revenue, as well as of capital assets in the crisis-hit debtor countries, made decisions urgent. Creditors might have been largely protected through the reallocation of the risky assets from the banking sector to their public sector, but this approach converted short-term risks of creditor countries to long-term ones and increased the debt position and the related potential risks of their public sector. Under these conditions, the main aims of the banking union established would be to substitute national and/or supranational bailouts by national bail-ins and to introduce a different allocation of the resulting costs between bank stakeholders and sovereigns. In particular, the rationale of the banking union project is to better pre-empt weaknesses in the national supervisory systems and prevent an unravelling of the euro area – through the introduction of a single European supervisor, a single res-

olution authority, a common deposit-insurance mechanism, increased transparency, and common standards regarding the distribution of costs between shareholders, bondholders and depositors in the case of failing banks. These issues have already been analysed and discussed in the literature.

The questions on the creation of a banking union can be approached from a micro- and/or a macro-point of view. The micro approach focuses on the internal structures and institutional rules of the new system and its relations with other institutions, such as the ECB, the ESM or the national supervisors. The macro approach concerns broader policy issues and in particular the merits of banking union from a systemic point of view, its interrelationships with the macro-management of the economy, its impact on trust or the functioning of the production system, on the allocation of costs and benefits among the banking industry or among the public sector and the private savers and investors within a national economy and between national (banking or financial) constituencies in the euro area. The two approaches can give very different answers to specific questions.

Two types of questions can be distinguished: firstly "technical questions", such as the architecture of a banking union, the structure and competences of the supervisory authorities, efficiency issues regarding the banking system, the resolution mechanism and the deposit-insurance scheme, the handling of legacy problems; and, secondly, "political-economic" questions, which focus on the efficacy and the ability of banking union to meet the expected goals. The latter questions include:

- What is the expected impact of banking union on growth, stability and confidence in the European economies and societies, on the prospects of the euro area? Would this make a difference between the North and the South of Europe or between economically stronger and weaker euro area countries?
- Given a range of structural asymmetries and asymmetrical adjustment efforts within the euro area, will banking union lead to visible improvements with regard to the weaker sides of the asymmetrical partnership?
- Is the current blueprint of banking union apt to function efficiently under crisis circumstances and address systemic risks which have been at the root of the euro crisis?
- To what extent can the present banking union blueprint really be depoliticised,[1] in the sense of fostering the efficiency-led rationale of the regulatory framework of the European Central Bank and weakening the link between banks and the pursuit of political, non-macroeconomic goals which proved to be a significant crisis factor for the banking system?

1 On the term see Avaro and Sterdyniak (2012).

– What are the weaknesses and the risks of the current banking union blueprint from the point of view of the weaker countries, which are expected to make tremendous efforts to overcome the effects of a deep crisis?
– What is the rationale for shifting the cost of the bail-ins to depositors, without introducing additional transparency and disclosure, which however could have a destabilising impact on the banking sector?

The Systemic Importance of Banking Union

The creation of a banking union is one further step towards making crisis prevention and management more effective, mitigating the impact of the crisis on financial stability and growth, enhancing the resilience of the financial sector, preventing moral hazard and addressing a number of broader institutional weaknesses of the euro area, which triggered instability during this period. Equally, a banking union offers a possibility to pre-empt the effects of unsupervised cross-border lending on the real economy, growth and employment.[2]

From a systemic point of view, the creation of a banking union means a significant improvement in the macroprudential instruments aimed at enhancing the robustness of the European financial system, the management of the banking sector and the adverse interactions between ailing banks and sovereigns. Hence, the stabilising impact of banking union has to be assessed not only in terms of its own architecture, internal consistency, completeness or effectiveness, but also with regard to its interrelationships with governance and other policy issues, such as the conduct of fiscal policy, the degree of political integration,[3] the competitiveness and growth of the European economies as well as the convergence or divergence between the Member States of the euro area. The combined effects of all these factors affect significantly the overall efficiency of the whole policy mix.

The drawbacks of the institutional architecture of EMU and the legacy of the crisis have shown that the performance of a new system such as banking union has to be assessed not only under normal but also under stressed conditions. Hence, the identification of potential gaps in the new rules in view of future challenges is important. The history of financial crises and the sub-prime crisis taught us that very often the institutional framework evolves as a reaction to past drawbacks and,

2 Constanzio (2013).
3 Véron (2012).

hence, is backward- rather than forward-looking,[4] while markets are always ahead in finding innovative ways to bypass features of the regulatory framework and decisions of regulatory authorities which are often influenced by broader economic or political considerations.

Given the adopted design of banking union, a number of issues and potential weaknesses should be considered:

First, the fact that a common system of deposit insurance has not been included in the present scheme. In addition, in some countries a significant part of the banking sector has been excluded from the rules of banking union. From a systemic point of view, this part of the banking system, which is external to banking union, could affect banks, savers, investors and sovereigns that are an internal part of it.

Second, the question whether the new institutional framework can be effective in preventing the financial sector from becoming once again a destabilising factor in the euro area and in reducing the probability of a next crisis. Can banking union deal with a potential serious financial crisis? Can the Single Resolution Fund (SRF) or the European Stability Mechanism (ESM) provide a credible backstop for euro area ailing banks or is their endowment very weak to ensure effective support in case of significant bank failures? To the extent banking union would fail to meet the challenges of a broader banking crisis in a country, the principle that "taxpayers' money should not be involved in rescue operations" will probably not be possible to preserve, and the whole resolution approach will be challenged.[5]

It seems that, despite the ambition of the original concept, the current banking union cannot prevent risks resulting from wider systemic macro-asymmetries between the euro area countries, which have been at the root of the economic and financial crisis after 2008. Significant and deep national divergences regarding competitiveness, fiscal imbalances, internal demand or under-performing loans will continue to impact the euro area. Even before the crisis, such asymmetries led to the overexposure of banking systems to risky placements, causing heavy costs for investors and taxpayers because of the bailouts that became necessary.

If, despite the new framework, banking union proves to be insufficient to prevent a new destabilisation of the common currency, a broader confidence crisis could emerge. Depositors, investors and other market participants expect that the new rules will enhance the strength of the euro area financial system, even if individual banking failures cannot be avoided. However, new failures associated with wider

4 Ubide (2013a).

5 Schoenmaker (2015) presents a formal scheme pointing on the superiority of the outcome in banking union in comparison to home country resolution.

costs and confidence losses could trigger further unpredictable reactions affecting the monetary and financial stability in the euro area. In such a case, the consequences will probably have to be addressed by national fiscal authorities, which leads back to the question of the impact of financial crisis on sovereigns.[6] In addition, each new negative development, beyond its impact on the economy, could also lead to wider social and political disruption in the European Union, even in countries not hit directly by a future crisis.

Third, according to the present concept of banking union, in case a bank becomes insolvent, the responsibility for bank resolution is shifted from the taxpayer to the bank creditors. In some respect, the rules concerning a default of non-banking firms are extended to banks. Depositors become co-responsible and are regarded as investors who by definition have to carry the risk of their choices, probably because they benefit from higher yields reflecting the higher risk of banks' assets. Indeed, investors are expected to examine *ex ante* the different risk factors associated to their investments, based on the available information. However, the case of depositors is very different from that of investors. Depositors could diversify the risk among banks to which they trust their savings once the supervisory authority provides sufficient information on crucial financial aspects of each bank. In such a case depositors could indeed become co-responsible for their choices. However, because of the sensitive place of the banking sector in the economy, the disclosure of information on the state of a bank is much more sensitive than in the case of other sectors. An extensive disclosure of such information by the supervisor could allow investors and depositors to adjust timely their bank choice, but could also endanger the stability of individual banks and, under certain conditions, even of the banking system. National supervisors have been often accused of political capture and of regulatory forbearance of their national banks, while banking union organs are expected to take a more hard-headed view on the issue. The argument that the European supervisor will take more account of externalities than national supervisors seems to be strong, but only in the case of individual troubled banks. The extent to which this neutrality would shape the decisions of European supervising bodies in case of systemic risks remains an open question.

Consequently, while the co-responsibility of depositors requires sufficient information from the supervisory authority, the introduction of such a mechanism could potentially become a destabilising source for the banking industry. This dual outcome introduces an element of potential conflict between the responsibility to prevent or at least reduce the risks of bank failures and the obligation to inform

6 Ubide (2013a).

depositors and investors of the risks they face. If, despite the new stricter supervision rules, a bank gets into trouble, the question arises why the responsibility has to be placed on depositors and not on the supervisory authority or on both and why the average depositor is supposed to be able to detect risks, when the responsible authority failed to recognise them, despite the much more extensive information it possesses.[7]

Fourth, in a country with capital controls, savers do not have the choice to shift their savings to a more secure bank in another euro area country. They may be enforced to share the costs of a bank failure because of the rules applied to a system of cross-border banking, which has been suspended in their case.

A *fifth* issue concerns the relation of banking union to growth, in particular with regard to countries in crisis. The relation to growth leads to the question of the long-term rationale for banking union. The standard story is that a banking union is expected to impact positively on growth through the limitation of financial risk and funding costs and the boost of confidence and credibility. Under extraordinary economic conditions, however, and in particular in the absence of a credible deposit insurance mechanism and the fear of uncertainty and unravelling of the financial sector, banking union is rather enhancing expectations of risk increases. As a result, costs borne by domestic taxpayers are rising, investment activities are affected and the liquidity crunch and deposit outflows seeking safe havens in other euro area countries are exacerbated, representing a hindrance to a re-integration of the national financial sectors of the euro area. Alternatively, a banking union, which would introduce a properly designed insurance mechanism for depositors in crisis countries, would prevent large outflows of deposits and, hence, would facilitate fiscal adjustment, recovery and the building up of new competitive production structures.

The question cannot be considered in isolation from broader complementary factors, such as the governance framework and the policy efficiency in both the European Union (euro area) and individual countries. Policy failures in crisis management cause a deterioration of the economic conjuncture, boosting non-performing loans and the risk of bank bail-ins. Hence, weak governance efficiency is an endogenous factor, which cannot be disregarded when discussing policy issues. Nevertheless, inter-country differences regarding policy efficiency are not changing the fact that banking union is likely to aggravate an already significantly widened imbalance between core and periphery countries.

7 Many authors also point out the eventual conflict in case the European supervisor allowed a bank to take too much risk, while national authorities have to pay up for the costs of this mistake. See, *inter alia*, Visco (2017), Schoenmaker (2012).

In fact, the recent crisis led to the rupture of a process of continuous convergence between the economically or fiscally weaker and the stronger countries of the EU. All Southern European countries entered a process of divergence from the other members of the euro area. Their relative position worsened and each one fell back to the relative position it had ten or even more years ago. Banks in these countries face significant difficulties to fund themselves and to provide liquidity and loans at competitive terms to the business sector.[8] The banking union that has been established is an answer to the question "how to allocate the cost of successive policy failures among citizens, firms and states". However, this is a defensive strategy, which is associated with a downward spiral. The crisis-hit countries can hardly benefit from such a banking union. In some of them the banking sector is still in a fragile situation, which generates periodically new pressures and uncertainties. Possible new major pressures in countries with high national risk could have a significant impact on their whole banking system. Coupled with the risk that the new rules and the weakness of resolution mechanisms will not suffice to safeguard guaranteed deposits from being bailed-in, the combination of these factors could trigger capital flights from the weaker countries into safer banks and countries, which, today, for some crisis-hit countries is not only a probability but a reality. As a further consequence, the business sector in these countries will continue to be faced with short liquidity and higher funding costs, hindering the restoration of normal economic conditions.

As a final point, banking union has indeed to fulfil different functions for different players within the euro area. Its creation and structure has been decided in the aftermath of a severe financial and fiscal destabilisation and was considered as a central instrument to prevent bank fragility. Further, banking union was one among many other fiscal and financial initiatives to fill the gap from the structural weaknesses in the set up of the euro area and to strengthen the short- and medium-term prospects of the euro. In addition, banking union is a pre-emptive instrument in the light of the significant resources used in the bailout cases in Greece and other crisis-hit countries. As a European response to the crisis, the banking union that has been established is an incomplete construction, linked to diverse risks and failing to deal with the current dire situations in the weaker countries in the euro area. The crucial requirement of building up credible complementary mechanisms to reverse the divergence trends within the euro area, to restore convergence and solidarity policies and prevent long-term destabilisation risks to the common currency goes beyond banking union.

8 Ubide (2013b).

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11

Monetary Union, Banking Union: Money and Credit, Inexorably Linked

Hans-Helmut Kotz

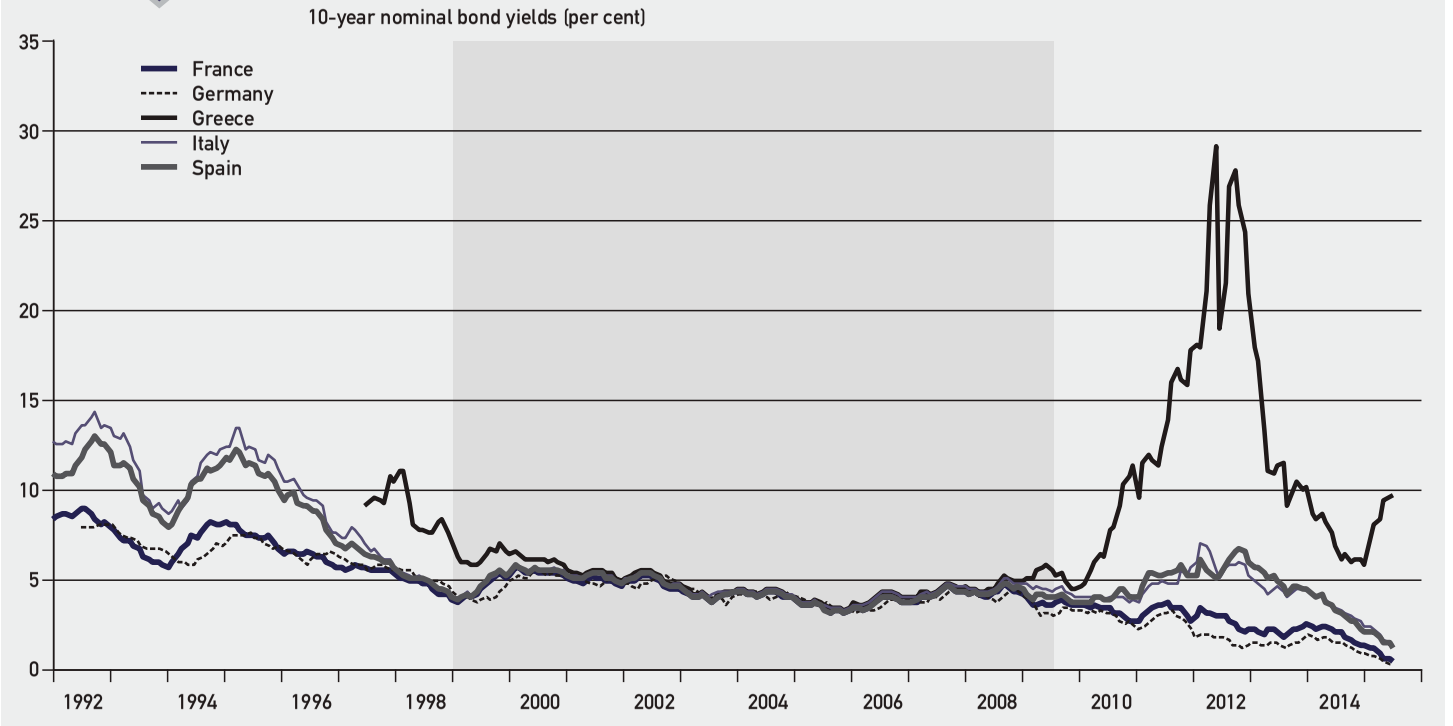
Where Did We End Up?

In the wake of two, obviously closely intertwined, crises, Europe's financial architecture has changed substantially. Since November 2014, the supervision of large, cross-border banking institutions has been discharged by a "mechanism" located under the roof of the European Central Bank. From the beginning of 2016, a dedicated institution to deal with banks in trouble is up and running. This restructuring and resolution authority (Single Resolution Board) is backed by a funding structure which is about to become (quasi-)federal – a mutualised (sort of) Single Resolution Fund. And, going forward, deposits up to an amount of €100,000 should be insured euro-area wide, in a federal (sort of) Europeanised set-up.

Slowly but surely (inexorably?), Europe is moving towards a cohesive regulatory and supervisory infrastructure – in particular, the link between sovereigns (nation states) and banks should be severed. With hindsight, this appears to be the blueprint on which euro area (EA) institutions should have been built in any case. Centralising, that is: de-nationalising monetary policy (the introduction of the single currency) should have been accompanied by a shared regulatory environment as well as a common execution approach with regard to those institutions and markets which primarily mediate monetary policy implementation. And in Europe's case these are its banks – providing, for example, some 4/5ths of external funding to the corporate sector. But it took the near-unravelling of Europe's banking systems (plural intended) to bring this home – and then, only barely.

I would like to express my gratitude to Lucas Papademos not only for inviting me to the Athens Symposium but for all the support and encouragement he gave me over the years, when we were working under the same institutional roof, as well as ever since.

Chart 1 Government Bond Yields



Source: OECD.

This Athens Symposium hence addresses a literally topical problem. This holds particularly true for the Single Supervisory Mechanism, the centrepiece of Banking Union (BU), which is not only essential to underwrite safe and sound banking in the EA but also, as a corollary, crucial for making monetary policy function in an effective and reliable way.

This contribution starts with illustrating background conditions in banking and financial markets leading up to the two financial and then, soon, the real economic crises (2007/2008 and then 2010 onwards) the EA had to face. In the second crisis it became evident that sovereigns matter monetary-wise and that EA Member States are but *sub*-sovereigns. As argued in Section II, money and credit are inexorably linked. Section III sketches why going for BU was politically so difficult and why the current BU is still an imperfect set-up. Section IV concludes with portraying an alternative – a credible no-bailout mechanism, even more difficult to accomplish.

I. Crisis-driven Institutional Learning

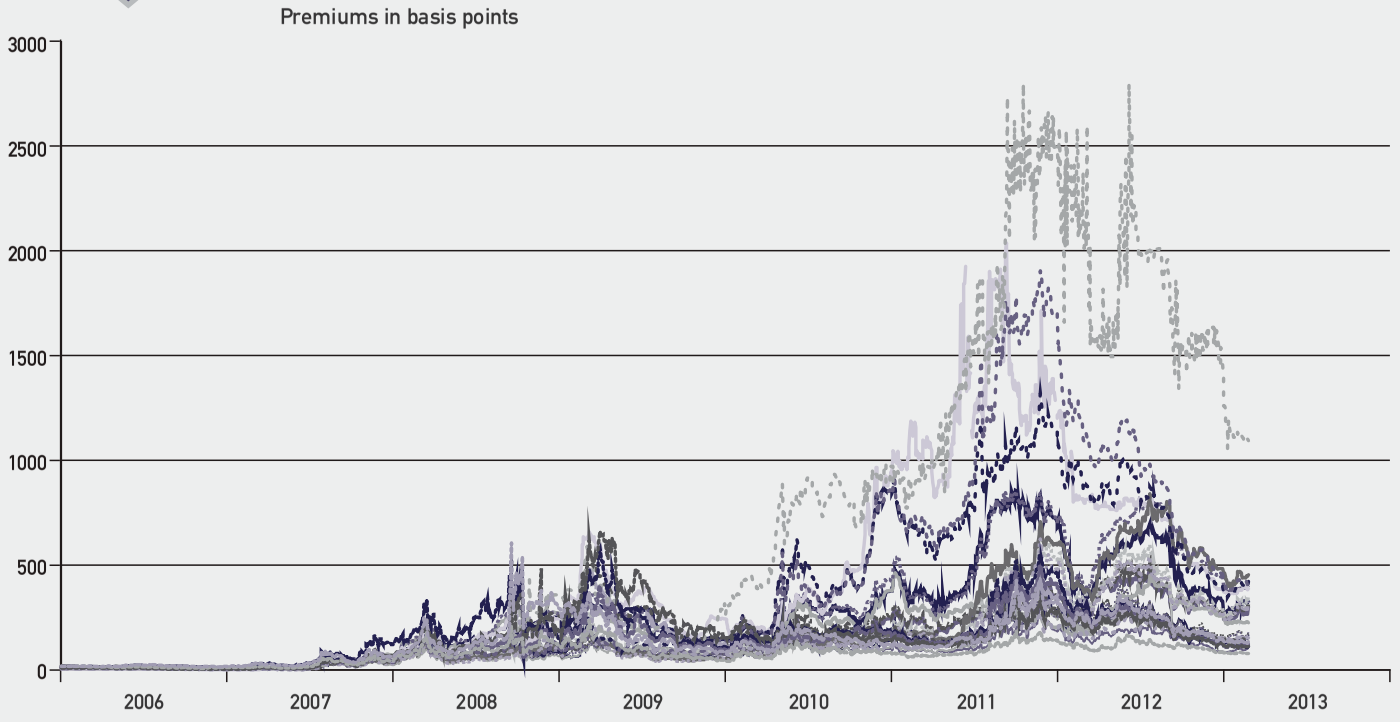
The most glaring evidence that something was going wrong, which we now have seen so often, is depicted in Chart 1, portraying the ever increasing bond yield spreads (default premiums) between EA member sovereigns and, contemporaneously, as shown in Chart 2, the deteriorating credit assessments of their respective banks.

The possessive pronoun is used on purpose. Investors' confidence in their claims against a specific bank shrank in line with the credit standing of the country of origin (the headquarters) of this institution. Concurrently, premiums to insure against default went up (Chart 2). Higher bank funding costs, obviously, translated into increased user costs of funds for, in particular, bank-dependent firms – an important reason to hold back on capital expenditures.

(1) Segmentation of EA financial markets

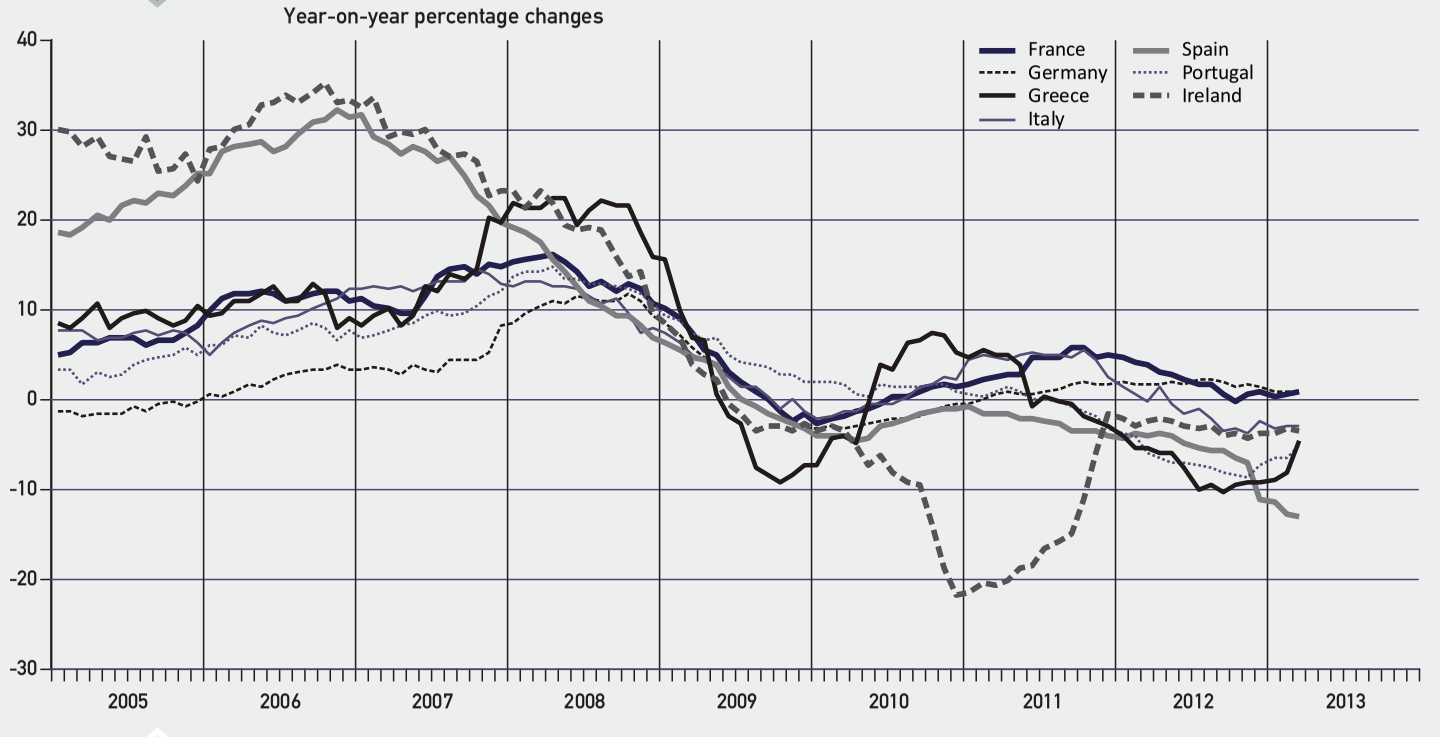
The financial market segmentation implied nationally diverging volumes of loans extended as well as differences in interest rates (cost of credit), as illustrated in Charts 3 and 4. A case, sometimes referred to for illustrative purposes, was, for example, the differential costs of funds for owners of hotels in Bolzano (South Tyrol) or Innsbruck (Tyrol). While being identical in all pertinent attributes, at the height of the crisis these spreads could amount to over 600 basis points (b.p.).

Chart 2 CDS Premiums, Euro Area Banks



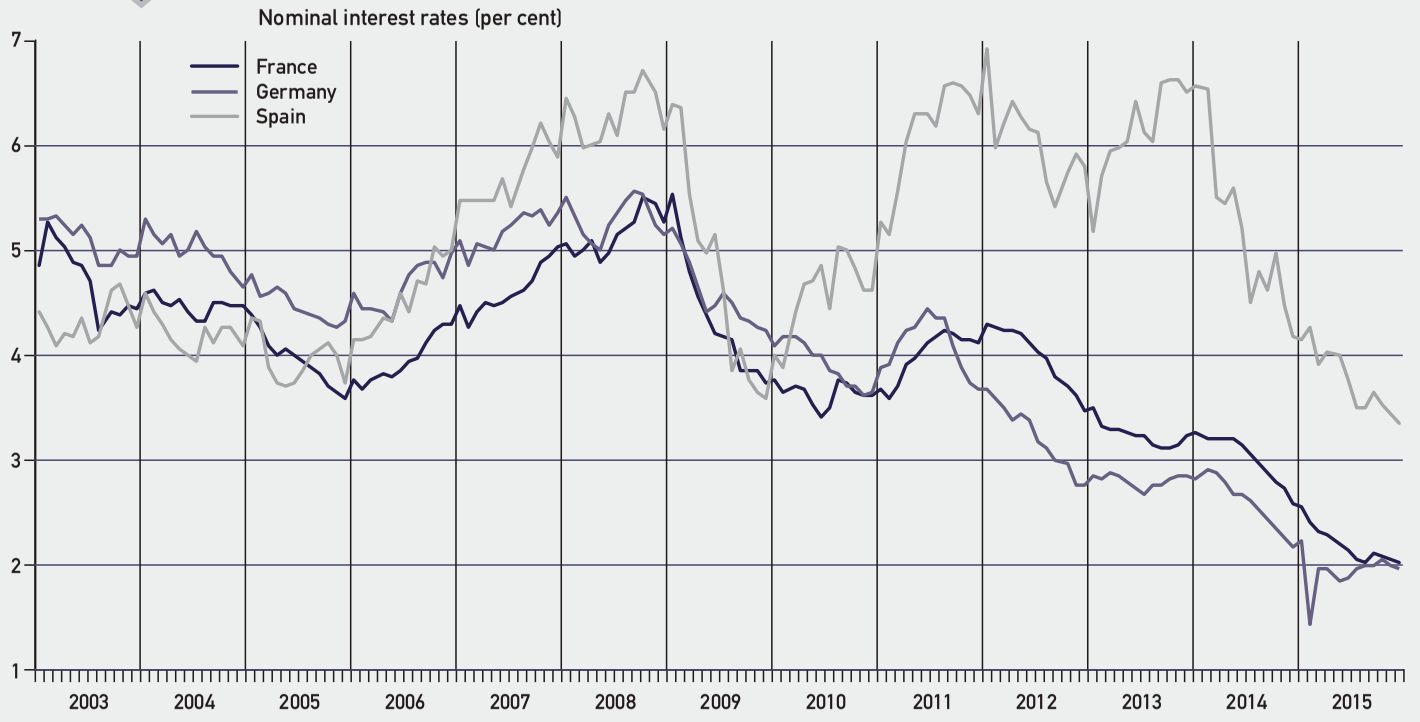
Source: Deutsche Bundesbank.

Chart 3 Credit to Non-financial Firms



Sources: ECB, SDW.

Chart 4 Cost of Credit for Non-financial Firms



Sources: ECB, SDW.

Such hurdle rates are particularly detracting in a crisis context. But, before passing judgement, one would obviously have to account for all pertinent attributes, which investors do of course care for: Innsbruck is embedded in Austria's institutional context, whereas Bolzano is part of Italy. Hence, there might be a reason for such differences in spreads – but 600 basis points, even higher than when Austria and Italy did not share a common currency?

Such heterogeneity of background conditions of course blunts the effectiveness of a common monetary policy. Impulses, as they are intended by changing policy rates – working through interbank money markets – produce regionally differentiated responses. The monetary transmission mechanism, working chiefly through bank balance sheets, loses its singleness, displays significant regional characteristics and becomes distorted. This "impaired" (an appropriate qualifier, invented by the ECB) transmission mechanism led the ECB to deploy its version *of non-standard* monetary policies (Cour-Thimann and Winkler, 2012): Enhanced credit support reflects the EA's financial-institutional background conditions: for most firms, it is access to banks which ultimately counts. This is key for investments. Capital expenditures have been apparently dampened by credit conditions, especially in the EA periphery. While it is difficult to separate out demand or supply causes, BU is a structural policy initiative to reduce financial fragmentation and increase fungible capital and liquidity over the EA.

(2) A difficult context for supra-national monetary policy

When faced with regional adjustment needs, arising from current account imbalances (i.e. ultimately unsustainable net asset positions), it is not only the well-known (and often highlighted) Mundell criteria which count for the functioning of a monetary union. The crisis made also palpably clear that financial market conditions are as important. And this dimension has been underappreciated in the traditional view. Hence, in Europe's mainly bank-oriented systems, the state of credit institutions –as it shows in households' and firms' access to credit as well as terms of funds (cost, covenants)– is particularly pertinent. While lending was generally weak in the EA, during the course of the crisis strong regional (national) differences became evident. Shrinking loan books reflected a regionally diversified response to local conditions.

And those conditions were largely determined by the perceived capacity of the sovereign to provide a backstop in times of trouble. It is telling that in particular one indicator became pertinent: the size of banks (stock of assets) relative to na-

tional GDP (a flow quantity). This was deemed to be a pertinent indicator, since it would ultimately be the national tax base which could provide a backup, not an EA-wide revenue pool. At the same time, this implied that the common monetary policy had to face ever more fragmented banking markets.

A simple – but politically very ambitious – solution would have been to draw a logical conclusion: the supra-nationalisation of monetary policy has to be completed with a de-nationalisation of banking policy. Otherwise, life in times of crises would always be dangerous, in particular for small states with large banking sectors. In crisis environments, banking politics and monetary policy become closely intertwined. Crisis containment or emergency liquidity assistance, the lender of last resort role, is dependent on access to bank individual data. Monetary and banking policies do have to interact closely (Papademos, 2009).

II. EMU – a Union with Stateless Money

Against this background – recall the example of Bolzano and Innsbruck – it is instructive to briefly ponder a conceptual point which was highlighted by Charles Goodhart in the run-up to EMU. In a very instructive article, Goodhart (1998) differentiates between two concepts of money – a functionalist (Menger) and a statist (Cartalists). And those concepts have important implications for the politics of money as well as, as we claim, for the politics of banking.

(1) Two concepts of money: Mengerians vs. Cartalists

Following a prominent remark by Sir John Hicks, "money is what money does", hence money is regularly understood functionally.

According to an influential perspective, rooted in the work of Karl Menger, money is the commodity with the widest range of "saleableness" – both in time as well in space.[1] This derives from money's capacity to economise on transaction costs. Money, a transactions vehicle (a *Zwischentauschgut*) or an exchange facilitator, comes with the lowest identification costs (Alchian, 1977).

Genetically, if money were all about facilitating barter, there would hence be no need for a state to intervene. However, law or legal recognition potentially enhance, as Menger also stressed, money's "saleableness". Legal standards reduce un-

1 The time dimension refers to the preservation of purchasing power into the future (low inflation). The geographical reach captures the usefulness, mainly within national borders only.

certainty. Standards (broadly defined) add to money's intrinsic value, its usefulness. And, quite obviously, this "stateliness" of money (its regal character) has been *historically* a defining characteristic. Money is a state affair. Its geographical reach – Menger's spatial dimension – is regularly closely aligned with the nation state, except for the case of the euro, which, in this sense, was conceived and launched as stateless money.

(2) Banks and inside money

However, most of the modern transaction means are created by the stroke of a pen (or a keyboard) – by banks. The latter extend loans and *uno actu* credit deposits, which are subsequently used to conduct transactions. Money reflects, in line with the Cartalists' reasoning, the credit of the backing institution, the state. In the EA's case, however, this state – in the sense of a political union of its Member States – does not exist. At best, it is defined, in a very austere or minimalist way, by a set of rules (the ECB Statute, the pertinent articles in the Treaty on the Functioning of the European Union).

More prosaically, the consequences of this lacuna surfaced in full vigour during the European sovereign debt crisis – when some sovereigns stopped being perceived as indubitable creditors. In fact, doubts arose earlier: as soon as roll-over (banks' access to funding liquidity) was deemed to become more complicated, credit spreads rose. With confidence eroding, in some cases probably for the right reasons, the attraction power of a bad equilibrium rose. De Grauwe and Ji (2012) have convincingly made this case. They, in particular, highlighted the differential treatment of Spain and the U.K. by investors. Whilst the U.K. enjoys the backing of *its* Bank of England, Spain (like any other euro area Member State) is only a sub-sovereign.[2] It has no central bank in a traditional understanding, that is, being endowed with unrestricted, full lender of last resort powers (for banks), not subject to approval. Historically, this capacity often at times also involved providing a backstop or roll-over facility to the bonds issued by their sovereign, in a way a "market maker of last resort" (in the apt phrasing of Willem Buiter and Anne Shiebert). As a consequence, in a monetary union a liquidity crisis of sub-sovereigns can swiftly morph (most propably will) into a solvency crisis.[3]

2 The announcement of an outright monetary purchase programme has partially remedied this flaw.

3 It can, of course, be fiendishly difficult to tell the difference between illiquidity and insolvency.

III. Banking Union: De-nationalisation of Banking Politics

To summarise our point: banking politics and monetary policy are inexorably linked.[4] This has not been conventional wisdom, at least not before the crisis or during the debate about the success conditions of Europe's single currency. In fact, when suggestions in this direction surfaced (Padoa-Schioppa, 2004), they were strongly rejected. And, initially, the pushback was apparently confirmed. Europe's banking and financial markets became integrated ever more strongly. Prices converged and cross-border flows expanded. Most evidently, this could be seen in the barely existing spreads between government bonds (see again Chart 1, the shaded time period) – rather different background conditions notwithstanding.

(1) Banking union – slow, reluctant acceptance

In the run-up to EMU, debates focused on the Maastricht criteria, with their, at best, tenuous relation with theory (Buiter et al., 1993). Economists mainly took an optimal currency union perspective, concluding that this would be an ambitious project. Some, however, held that time might do away with problems, the currency area criteria being endogenous. There was only a minority which pinpointed at adjustment needs in the financial sphere. This was somehow puzzling, since existing currency unions over time had created integrated financial markets. The most important case in point is, of course, the U.S. And this was also the case from which Gary Schinasi and colleagues derived the need for much deeper, structural financial market integration (see, for example, Prati and Schinasi, 1999).[5]

However, the concept of a joint, common-currency-wide supervision – christened banking union by Nicolas Véron in 2009 – was strongly rejected. It took a series of quasi-existential crises, involving a euro break-up scenario, to make it a politically palatable idea, and then only barely.[6] In fact, it took two crises to bring this point home. The initial response, as conceived in the blueprint outlined in the De

4 In the German speaking world, monetary policy courses used to be taught as *Geld- und Kreditpolitik*. This still holds true in the U.S., where numerous courses are offered under the heading *Money and Banking*, with the appropriate supporting textbooks. Over the last couple of decades, with the 'decline of traditional banking', chapters on capital markets were integrated.

5 And, of course, in particular the McFadden Act (of 1927) kept banking markets regionally separate, as did the fragmentation of supervision.

6 In ECB lingo, this became the re-denomination risk. From an investor's perspective the threat was tantamount to debt restructuring. Only the potentially prohibitive costs of a monetary union break up provided the cover for the four presidents of major European institutions (Commission, Council, Eurogroup and ECB, not yet the Parliament) for suggesting the banking union project in 2012.

Larosière Report, with its network of European Supervisory Authorities, went as far as deemed politically feasible, but, of course, shied away from centralisation (de-nationalisation) of banking supervision. Academics, enjoying the privilege of being irresponsible, began with calling for substantially more – or less.[7]

There exist the obvious political-economic reasons for reluctance towards more Europeanisation. Banking politics has always been an important lever of national politics more generally – banks were seen as the commanding heights of capitalist nation states. And the EA features a rather diverse set of capitalisms (see on this, in particular, Hall and Soskice, 2001). Those varieties are to a substantial degree defined by banking philosophies. Consider, for example, the *Hausbank* principle, institutionally deeply embedded in the German model. And there is a substantial degree of complementarity (and consistency) with other domains. This has been emphasised almost a generation ago in Michel Albert's *capitalisme rhénan* – with its connotation of long-term orientation, patient investors, vocational training schemes, co-determination (*Mitbestimmung*) etc. Closer to our topic, it comes with public-sector owned *Sparkassen* with a local focus (regional principle) or cooperative-sector institutions and their dominance in funding bank-reliant *Mittelstand* firms, often highly productive and therefore competitive.

On the other hand, the French Financial Revolution of 1983 (under President Mitterand) pursued a different objective. Reforms came with a strong emphasis on dis-intermediation. For example, money market mutual funds (SICAV monétaire) were conceived as (tax-subsidised) substitutes for bank deposits. And then, there was of course the famous Livret A, historically overcome. Italy showed yet another trajectory, reorganising in particular its public sector savings banks in the early 1990s under Prime Minister Amato (see e.g. Angelini and Cetorelli, 2003).

To be brief, there have been different degrees of public sector (which must not mean "state") involvement in EA banking, different background characteristics, societally deeply embedded, and different policies on how to handle capitalism's "commanding heights" (as they have often been understood, in light of Rudolf Hilferding's *Das Finanzkapital* from 1910).

Against this background, different supervisory philosophies arose. In the German case, with its peculiar (from an international angle) *Ordnungspolitik*, competition in banking was for a long time seen as an "exception". The political objective was to provide for an environment of "workable" competition, implying low net-

7 The privilege alluded to here means that it is undemanding to be courageous (and straightforward) when you are not in charge, in this sense: irresponsible.

interest margins but potential benefits for both debtors and creditors. In other EA markets, banks were substantially more profitable, also reflecting a different philosophy. According to this orientation a healthy, stable banking industry calls for sufficient margins. This stood for a more industry-oriented philosophy.

For the EA's new supervisory landscape, a number of interesting consequences follow. First, banks cannot bank on "their" state anymore, at least not in concept. This implicit guarantee was obviously quite valuable (e.g. Denk et al., 2014, or Santos, 2014). Secondly, national champions should be a thing of the past. European champions are, in any case, barely imaginable. Thirdly, given banking's societal embeddedness, this change of model has potentially significant repercussions in other policy areas. And this spells, going forward, substantial resistance to change by those negatively affected (and too easily derided as vested interests).

(2) …and still not accomplished

Initially, BU rested on a three-pillared structure. A single supervisory mechanism, a common recovery or (in case of irreparable damage) unwinding scheme and deposit insurance. The SSM is the centrepiece. It is about examiners reading from the same script book. In particular the Joint Supervisory Teams should provide for a consistent implementation across Member States.[8] Implicitly, this came with the acknowledgment that the previous, de-centralised set-up had been found wanting, in particular, but not exclusively, in this dimension. While it apparently had worked before the crisis, it was incapable of addressing the cross-border externalities in a number of important and potentially systemic cases (Schoenmaker, 2010).

BU – in particular the SSM – is seen as an instrument to get the EA's banking system going again. It should underwrite the safety and soundness of European banks. And, concurrently, restore a smoother transmission of monetary policy. Initial steps have been encouraging. The comprehensive assessment of European banks (reviewing asset quality and stress testing their balance sheets) was particularly important, since it applied a consistent EA-wide approach. Thereby it dealt effectively with the, otherwise to expected, uncooperative outcome in a cross-jurisdictional perspective.

But, of course, the SSM is barely a third of the story. The proof of the pudding is ultimately how EA institutions deal with stressed banks. In case of systemic problems, the promise not to bail out will be honoured in the breach. It is therefore not credible. Authorities, faced with a crisis (new background conditions and hence

8 For an excellent summary about how the pre-crisis system was supposed to work, see Houben et al. (2008).

new challenges or incentives), will re-optimise (Dewatripont, 2014, Kotz, 2014). Therefore, regularly, whenever sovereigns had the capability and leeway, bailing-out had been a standard operating procedure – also in the U.S. Hence, without cross-jurisdictional burden sharing, when push comes to shove, the EA's resolution scheme is a fundamentally vulnerable construct.

Nonetheless, BU has already substantially improved the institutional architecture of the EA. But it is of course not sufficient to overcome the lingering EA crisis. It has been in particular monetary policy – the announcement of outright monetary transactions (OMT) in June 2012 – which broke the "vicious circle" between banks and sovereigns. But OMT place the ECB in a difficult position. It shoulders an ever larger burden –which fiscal policy declines to take charge of. This could be rightly seen as *financial dominance*– monetary policy action enforced by fragile, systemically threatening banking systems.

Here is not the place to delve deeper into the bail-in philosophy. But it clearly amounts to a radical re-thinking of who bears the ultimate costs of the operation of a fractional reserve banking system. The public guarantee is replaced by a system of private sanctions/penalties. Bail-in means the participation of bank creditors in restructuring a failing bank. But losses flowing from bank failures entail externalities – quite frequently of a systemic dimension. This would justify public involvement. But it comes with a cost, being a source of moral hazard. And it quite explicitly – and inevitably – erodes market discipline. Bailouts, think of Ireland, can have massively destabilising impacts on public finances. But what are the costs of the alternative: financial instability?

IV. Conclusion: Monetary and Banking Policies, Joined at the Hip

The BU's objectives are laudable. De-nationalised supervision should ensure banks' sound and resilient functioning, independent of their location within the EA. Self-amplifying (positive) feedback loops between banking sectors and sub-sovereigns, threatening their solvency, should be stopped in their tracks. To mitigate the risk of "zombification", banks should be obliged to provision fragile loans or recognise pending losses promptly. A robust resolution and restructuring mechanism should allow orderly unwinding of banks as well as reduce the need to bail out junior bank creditors. And, as a corollary, a proper functioning of the monetary transmission mechanism should be re-established.

The fragmentation of EA financial markets had as a necessary corollary an impaired transmission mechanism of monetary impulses. This implied a differential access to funds – and a regionally-rooted variance in costs thereof. Monetary policy's singleness was undermined.

That is why we ended up here, at BU – a place not foreseen when EMU was launched.

BU – in particular the SSM – is meanwhile largely accepted since the alternative would be an ever deeper re-segmentation of intra-EA financial markets. However, the de-coupling of banks and sovereigns has been achieved only imperfectly. This is, of course, an ambitious objective, more ambitious than the single currency. Banks are, inescapably, characterised by their local background conditions. They sport home bias. Results for the great majority of banks show a closer co-movement with regional than with European developments (regional betas are larger than European ones). And the strength of those relations is decreasing with distance. In the final consequence, a complete de-linking might turn out to be illusionary.

In any case, what became glaringly evident in the EA's crises is that the ECB is a stateless central bank. In non-crises environments such a set-up can work. Also, it fits hands in gloves with the objective of a neutral monetary policy. The crisis has, however, again demonstrated that the border between monetary policy and budgetary policy is a precarious one. History should of course have reminded us of this.

The SSM aspires to deliver stateless banking policy (politics). Again, this is a laudable objective, in light of the importance of a robust banking system for monetary policy. Also, this is why a credible assessment of banks was so crucial (lacking fiscal backstop, risk of financial dominance) when embarking on the venture. Therefore, the SSM has been an important, logical step. It can contribute to a reintegration of EA's financial markets, and a more robust at that. But it is no panacea for differential costs of access to funds. Those, appropriately, reflect differences in regional background conditions. The SSM is also a crucial prerequisite for implementing a consistent (de-nationalised) supervisory philosophy. And supervision will be, going forward, more intrusive, with a higher degree of discretion (Viñals and Fiechter, 2010). But, ultimately, that calls for more sharing of sovereignty – a decisive step towards completion of EM/BU.

Monetary Union (MU) without BU was a flawed set-up, at least under prevailing circumstances of modern banking. Given that monetary and banking policies are joined at the hip, the optimal institutional division of labour between monetary policy and banking policy remains a bone of contention. European policymakers have opted for a policy of separation within one institution. Given the joint-product features of banking policy and monetary policy (the strong, inevitable interdependency in policy implementation, most particularly in crisis environments), this can lead to within-institution target conflicts. Such trade-offs arise inevitably. A different approach has been chosen by the Bank of Eng-

land, adroitly named "one mission, one bank". Balancing conflicting but inherently joint objectives might be done more effectively with less "siloing". But this would command different political background conditions. Banking policy is banking politics.

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12

Banking Union and Economic Growth

Jan-Pieter Krahnen

Motivation

Banking union denotes a collection of legal and institutional reforms, aiming at the restoration of market governance in European banking. In particular, bank debt is supposed to become loss-absorptive once again and banks are supposed to be wound down if they fail – both are properties lost during the global financial crisis since 2007. While there is wide agreement about these objectives of a banking union, there is much less accordance on how to achieve bail-in ability and resolution capability. The banking union project with all its ambitions has to remember its *raison d'être* – namely the prevention of a systemic banking crisis.

A microeconomic perspective on financial markets and their operations is equally essential as a macroeconomic perspective, for assessing the factors influencing their stability, as well as their potential for fostering economic growth. The macroeconomic view of banking and the financial sector often is that of an engine, with the help of which policy can be transmitted to the real sector. In this view is embedded the 'magic' assumption that the allocative engine will operate in an efficient way, almost automatically. But this is a myth. Rather, a detailed understanding of financial sector mechanics is crucial as far as its effectiveness in achieving economic growth is concerned.

This can also be exemplified by the financial sector's role in the transmission of monetary policy, which has become an important area of research at the interface of macroeconomics, banking and finance. Another example of the significance of detailed financial sector knowledge in macroeconomic considerations is its role in the design of appropriate regulatory rules for the operation of banks and markets. The aftermath of the Western financial crisis of 2007 *et seqq*. has reminded us that the process of setting regulatory rules should not be considered mechanically as an institutional repair shop. It is more effective, from the point of view of policymakers, to understand the details of a bank's business model and its objective function well before formulating new rules and behavioural restrictions. This is because new

rules or restrictions concerning e.g. financial products are likely to motivate the development of new products or of modified business models whose implications for financial stability need to be compared with those existing hitherto.

If we want to illustrate this sort of dynamic interaction between regulatory activity and the institutions and markets representing the financial sector, the players of an elaborate chess game come to my mind. These players, if they meet at eye level, both think deeply about future moves of their respective opponent, when deciding about their own next activity. And indeed, this is what a thoughtful regulator will do before initiating a new rule: try to anticipate how banks will react in accordance with their profit-maximising objective and their vested business. This will help the regulator to assess realistically the longer-term effect of new regulatory measures and decide accordingly.

However, most macroeconomic models – if they consider banking at all – oversimplify the financial sector and do not take it seriously as an actor that understands the system, understands the monetary policy debate and may even be one step ahead of policymakers. It is worthwhile to think more seriously about the inner logic of the banking system and to be more modest with what policymakers can achieve in changing the behaviour of the actors in this system. This is a general insight, which can equally be applied to small regulatory projects, like rules for compensation of managers, as well as to big projects, like the construction of banking union.

I want to turn to the latter and recapitulate its basic storyline before focusing on a seemingly small, yet fundamental instance of anticipatory thinking in the banking union's regulatory design. Going back to the recent crisis, we note that today's financial markets apparently suffer from a structural market failure resulting from the enormous complexity of its overall banking network. The banking systems of many countries face what we call systemic risk, being connected to each other through direct financial links via the interbank market, and through correlated values of their assets, particularly their securities portfolios. This risk – though well-known conceptually for a very long time – had not been considered very seriously by supervisors and market participants before the beginning of the 2007 crisis.

But today we know better. A highly leveraged and interconnected banking system is either a shock absorber, if shocks are small, or, if shocks are large enough, a shock amplifier leading to the failure of many financial institutions simultaneously. This latter event is a systemic banking crisis, which, if it occurs, leaves the government few alternatives but to rescue the functionality of the banking system through a system-wide bailout. It is worth mentioning that it is not only the role of banks in the payments system of the economy that forces governments to invest taxpayers'

money in such a situation, but also their role in liquidity provision, beyond the payment function. The role of liquidity provider, in turn, is largely embedded in the maturity transformation that banks generally offer to their clients, and which constitutes an important part of the creation of value added by the banking system.

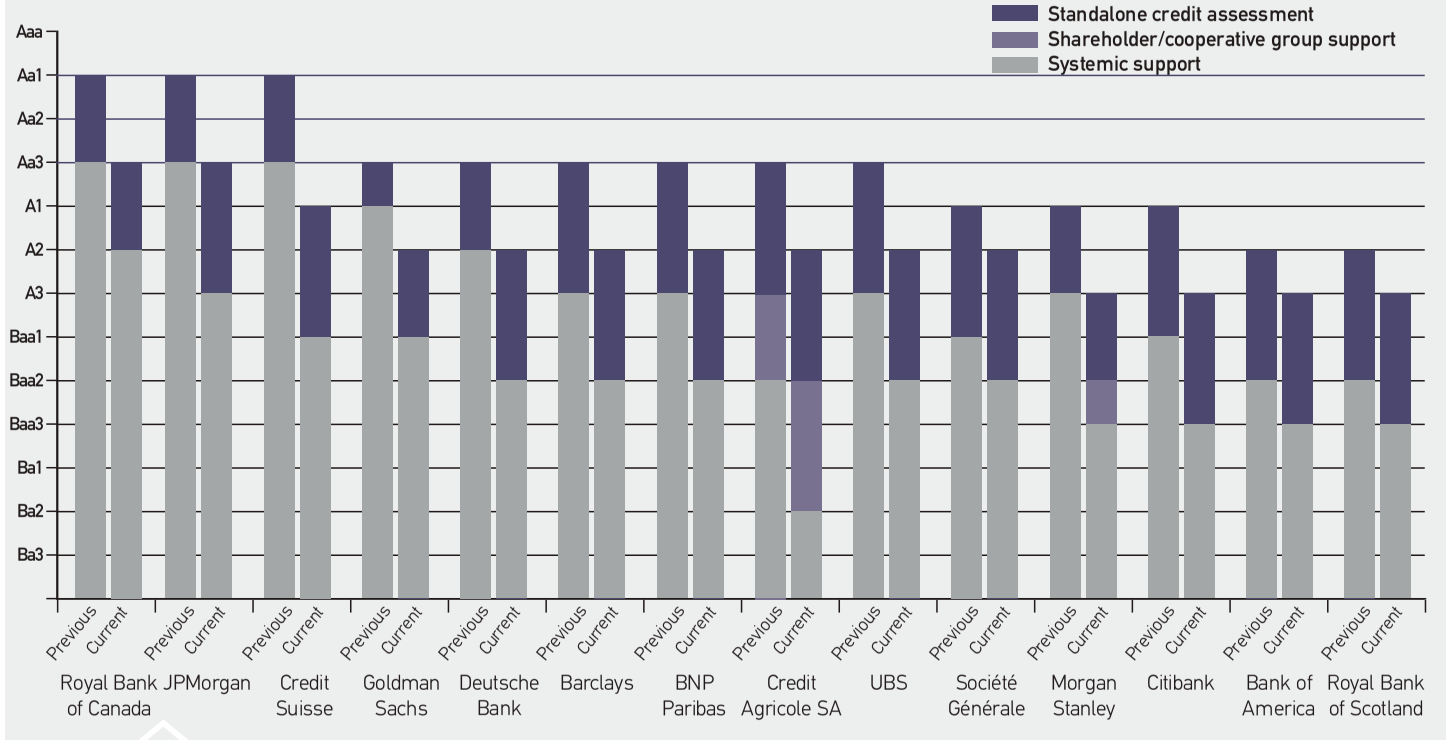
Clearly, would the banking system be separated into two distinct and detached parts, one for the provision of liquidity (at a cost to consumers) and another one for the provision of investment capital (at a cost to borrowers and with maturity matching for all funds), then the banking system would not engage in maturity transformation and the risk of an overall run on bank assets and a consequential systemic risk event would be much smaller. However, with no maturity transformation, the value added of the banking system would be severely diminished.

Be it as it may, in today's financial markets we do not see a segregated financial system, as was just described, but rather we find liquidity production to be a defining element of its operation. As such, financial institutions benefit from the implicit government guarantee that follows from the bailout expectation. Chart 1 (next page) illustrates one measure of the implicit guarantee existing today. It shows the ratings of major international banks in the year 2012. The height of the bars corresponds to the individual rating notch of each bank in that year, as assigned by S&P, where higher bars correspond to higher rating notches, signifying lower expected default risk. The upper, dark blue segments of the bars are the so-called systemic uplifts in credit ratings associated with implicit government subsidy, as assessed by the agency.

The government subsidies to banks, implied by the prospect of being bailed out should a default ever occur, can also be observed when analysing debt market prices. Chart 2 is taken from an important paper written by Schweikhard and Tsesmelidakis (2012) when they were researchers at Goethe University Frankfurt. It compares two estimates of bank default risk, where both estimates are derived from current market prices. The first one is taken from the price of a credit default swap written on the bank as the underlying asset. The second is the default probability derived from the market prices of bank equity, using a Merton model-type of calculation (see the cited paper for details). Both default risk estimates measure the same thing, namely the probability of default, under the risk-free measure.

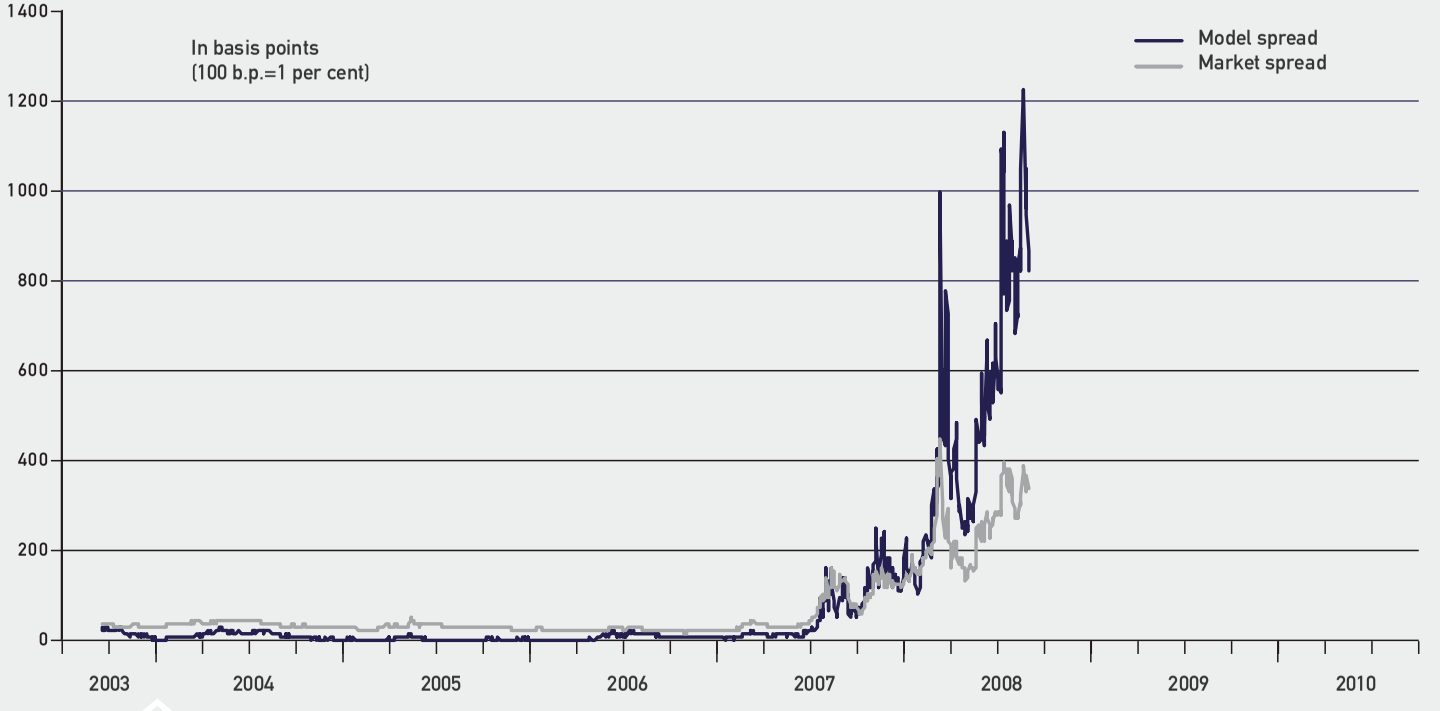
Therefore, both estimates should come up with the same numerical value for the daily default probability. In fact, as can be seen in Chart 2, the two curves are largely identical – and very low – up until August 2007. In that month, the possibility of failure of a few large, complex financial institutions became visible for the first time in these years when entities set up and run by Bear Stearns, an investment bank, suddenly were subjected to a run and failed. The similarity of these entities with the activities of some of the large international banks was apparent. From then onwards,

Chart 1 Implicit Subsidies: Credit Ratings and Systemic Support Uplift for a Sample of EU and US Banks (2012)



Source: Data from SNL Financial.

Chart 2 Lehman Brothers: Pricing of Debt and Equity During Crisis



Source: Schweikhard and Tsesmelidakis (2012).

the two estimates of bank default risk diverged and they have continued to do so throughout the sample period investigated by the authors (see Chart 2).

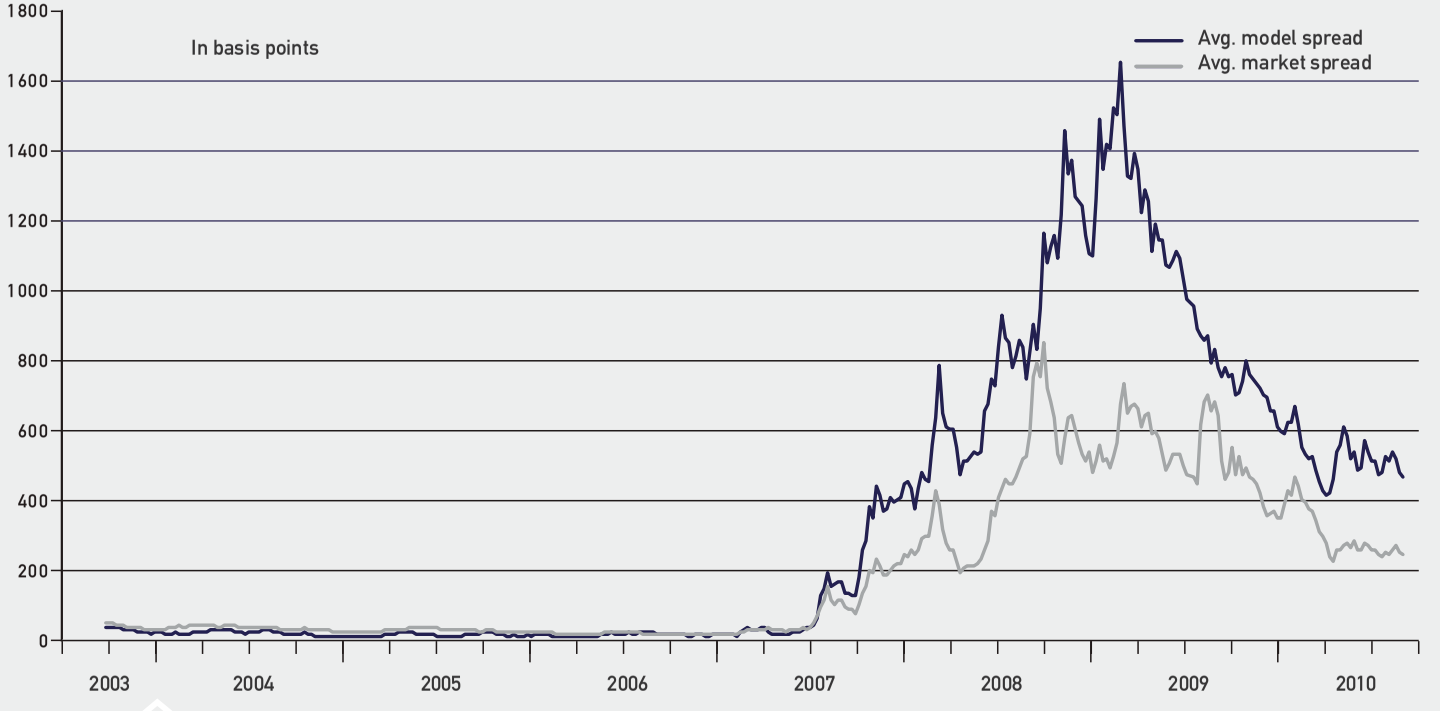
The divergence of the two default risk estimates suggests an explanation: the default risk as seen by equity markets (the upper, bold line in blue) is based on the cash flow risk associated with dividend income. It is judged to be far higher than the cash flow risk associated with interest income (the lower, thin line in grey) embodied in the coupons held by bondholders. Why do bondholders fear a default less than equity holders? One explanation is the implicit government guarantee — which is extended to bondholders, but not to shareholders. Anticipating the higher expected cash flow stream that goes along with being bailed out should the bank ever default yields a higher bond price or, equivalently, a lower expected loss and a lower expected default probability, respectively. Note that bondholders in this text exclude depositors who are assumed to be fully insured.

Schweikhard and Tsesmelidakis show in their paper that the cost advantage of debt (which is implied by the lower default expectation) becomes very visible once markets foresee trouble for banks, namely after summer 2007, and they show that these subsidies apply basically to all major banks in the U.S. and in Europe. Remarkably, the same subsidies cannot be found (or they are much smaller in size) if non-financial firms are considered. Thus, this is primarily a banking characteristic.

Not surprisingly, these unintended public subsidies to banks became a thorn in the flesh of policymakers and the general public, once the implicit guarantee had become explicit following the Lehman default. Of course, the implicit guarantee has "real" consequences, simply because it lowers the cost of debt capital for banks, particularly large international banks, over a long time and in many parts of the world. Here we have the basic objective of what policymakers wanted to achieve with the regulatory responses to the western financial crisis, for instance with the Dodd-Frank act in the U.S. and the banking union project in the European Union. It can be summarised as: getting rid of implicit government subsidies. Easy as this objective may sound, banning the bailout of banks is not easy. A lot of conceptual and preparatory work is needed to make it happen (see Krahnen and Moretti, 2015, for a fuller account of this issue).

Both curves in Chart 3 (the blue and the grey) measure the default probability of the institution, as perceived by the respective market participants. The grey curve is the default probability as it can be observed in credit markets of Lehman products. The blue curve shows the perception of shareholders on the risk of default, as implied by share price dynamics. The vertical difference between the two curves is an indication of distinct risk perceptions in credit and equity markets.

Chart 3 US Banking Sector: Pricing of Debt and Equity During Crisis



Source: Schweikhard and Tsesmelidakis (2012).

One of the most important insights is: to trust that credit markets signal correctly, the type and level of risk that institutions are taking requires a regulatory environment in which a bank bailout is highly unlikely and, in contrast, the liability of bank shareholders and debt holders is undisputed and credible. This brings us back to the initial argument: as long as policymakers are not confronted with systemic risk when an individual bank fails, the bailing-in of the shareholders and debt holders will be possible. This makes fear of systemic risk, or the abolition of it, the order of the day. Systemic risk is thus a major externality endangering the smooth functioning of financial markets. Therefore, systemic risk is the key challenge with which we have to deal, both with macroprudential policy as well as with microprudential regulation and supervision. That is perhaps the topic of the decade: how to bring the role played by systemic risk not only into our economic models, where it had no place in the past, but also to the top of the policy agenda.

Policy Implications of Systemic Risk

On a very general level, only the elimination or a near-elimination of the systemic risk externality will bring realistic debt prices back to banking markets. There are at least two ways to achieve this objective. The first one is to establish a price per unit of systemic risk created in the market, and to impose this price as a form of tax on individual banks. In this case systemic risk build-up, which may be a consequence of bank interconnection and portfolio choice of the banks, will become an explicit component of bank decision-making. It will be costly for individual banks to engage in activities that, as an unintended consequence, contribute to the build-up of systemic risk. As a consequence, there will be less such risk in the system, depending on the price-tag attached to this externality. Note that the pricing of systemic risk in the form of a so-called Pigou-tax is very similar to the example of taxing the emission of carbon, as now practised throughout the European Union.[1] At the current stage of knowledge, the direct pricing of systemic risk is still many years away – mainly because supervisors and academic researchers do not yet know enough about the genesis and the dynamics of systemic risk.

The second method for internalising the systemic risk externality relies on re-introducing debt holder liability into bank funding markets. Remember that the expectation of this form of liability has been severely damaged in the crisis, because

1 For further thoughts on a systemic risk charge, see Bluhm and Krahnen (2012), and Bluhm, Faia and Krahnen (2013).

of serial bailouts in the banking sector of many countries. As developed at length in the Liikanen report of 2012, there are several instruments to achieve the objective of rejuvenated debt holder liability. Banks and their creditors should feel the risk of losing their money. Exercising bail-in, in times of crisis, is essentially this. It would establish what is commonly practised in basically all sectors of the economy, except for the banking sector: in cases of default, not only the shareholders lose, but creditors as well. How can this be achieved?

In the Liikanen report, which discussed a blueprint for regulatory reform, the bail-in theme was singled out as a main element of bank debt market reform.[2] As such, bail-in emphasises a feature of debt contracts that is very common in any market economy, namely its loss-making potential. Bail-in is a consequence of the relevant insolvency regime, typically applying a *par conditio creditorum* rule, among creditors of the same level of seniority.

Bail-in is a stringent concept, but "it does not come easy", as Mathias Dewatripont, the influential economist and central banker, pointed out at a workshop in Frankfurt.[3] It has to be very carefully constructed. Bail-in is like an engineering project: it has to be well-prepared, it has to be monitored at all times, it has to be enabled and it has to be – in that sense – nurtured. My hypothesis is that we have currently no credible policy in place that ensures bail-in will actually happen.

Bail-in is not credible because the industry – by its operation, by market forces – is likely to develop a strategy of interrelationships that will make the bail-in practice by a central bank or a supervisor a highly risky exercise. The interconnections between banks are among the most important problems. Another one is effective or alleged mis-selling of junior bank debt. If these debt instruments end up in the portfolios of retail investors, chances are that an actual bail-in event will cause public outrage, e.g. if the investors turn out to be pensioners whose pension wealth is threatened to be erased. To make bail-in feasible, therefore, it is advisable to create specific, designated debt instruments, which by construction will most likely not trigger a systemic event, when subjected to bail-in. Such unsecured debt instruments, or *bail-in bonds* are thus at the heart of a solution for the too-big-to-fail problem. Effectiveness requires that these instruments cannot be held by other banks, i.e. that there is an effective holding ban. In the same vein, bail-in debt cannot be part of the interbank market, nor can it be sold to retail investors.

2 The other big theme was the separation of banking and trading, not pursued further in this text.

3 Mathias Dewatripont, Director of the National Bank of Belgium, at the workshop on Financial Regulation: A Transatlantic Perspective, organised by the SAFE Policy Center, at the Goethe University Frankfurt, 6-7 June 2014.

Which investors, then, are positively designated to become the holders of bail-in-able bank bonds? The answer is implicitly defined by the aim of systemic risk avoidance. An ideal investor is a life insurance company, or a pension fund. Both are institutional investors with professional management and, most importantly, both are not subject to maturity transformation risk. On the contrary, many life insurance companies have liabilities with durations (weighted average of maturities) exceeding those of their assets.

To be effective, the supervisory agency has to play a pro-active role, ensuring "bail-in ability" on the side of the creditors. Ideally, the banking supervisory authority should know the identity of investors, and it should assess regularly their ability to absorb losses. Moreover, it will need to prevent, through market monitoring, the re-transfer of the relevant default risk into the banking sector, for example via a letter of indemnity or its modern variant, the credit default swap. This is probably the most important take-away from this symposium: it requires a well operating supervisory authority, itself aware of the responsibility for "bail-in ability" across the banking system, for the build-up of market confidence that systemic contagion is under control.

Recently, the Financial Stability Board (FSB) has proposed a new risk capital buffer for globally operating systemically important financial institutions. "Total Loss Absorbing Capacity" (TLAC) is composed of Tier-1 capital and loss absorbing debt; it amounts to 16 to 20 per cent of the risk-weighted assets of a systemically important bank, a significant increase over earlier minimum standards. The design of TLAC deserves key attention. In a crisis situation, "bail-in-able" debt is supposed to be written down or converted into equity.

Relating to our earlier discussion about bail-inability, for TLAC to be credible, a holding restriction for "bail-in-able debt" needs to be implemented. It is essential that markets believe loss-absorbing liabilities to be in fact bail-in-able. Transparency concerning investor identity is crucial, as was explained above. Establishing a significant TLAC requirement is, therefore, a step in the right direction – but: absent a holding restriction for banks, it is merely well-intentioned but not well-designed; it would be ineffective.

Banking Union and Economic Growth

I argue that banking union will prepare the ground – but not more than that – for sustainable investment and growth, by getting incentives right. This has two consequences. First, a solid banking system is more likely to offer financial services reli-

ably and with an eye on the long-term solvency of the investment projects than a weak, undercapitalised and government-dependent banking system. Second, discretionary interference for political reasons will become less attractive from a public interest point of view, more expensive in terms of opportunities foregone and, perhaps, overall less effective from a microeconomic perspective. Let us discuss these effects in turn.

A solid banking system, with all major elements of banking union in place, is likely to render leverage less instrumental for profitability. At the bank level, fairly priced bank funding, without implicit government guarantees, will reduce excessive expansion of bank services and will also encourage banks to focus their activities on business segments in which they can compete successfully in the market. False synergies, deriving from allocated funding costs that do not reflect properly project risk, as was practised widely in universal banks before the great financial crisis of 2007, will discourage banks to expand their leverage just to reap implicit government guarantees.

The resulting profitability potential will, if effectively reaped, solve the ostensible capital shortage now found across wide parts of the banking industry. In fact, as this argument suggests, bank profitability is the single most important key to solving the undercapitalisation of the banking industry. As a consequence, an adequate level of capital is endogenous, in the sense of being directly related to the banks' profitability.

If banking returns to profitability, which will require significant capacity reductions as a precondition, and, most importantly, significant layoffs, then banks may actually shift gears into a pro-growth mode. Assuming a structural reform of the banking sector is achieved, following the full-scale implementation of the banking union rules, a smaller and more profitable banking sector may be well suited for funding the corporate sector. Marginal returns on investment across firms and industry segments will guide credit allocation.

Although this is a rather speculative argument, in such a "good equilibrium", I could imagine higher market prices for bank funding and for bank lending, while at the same time the profitability of the remaining banking operations, in terms of rate of return on invested capital, is also rising. The overall leverage of the corporate sector is likely to shrink, helping to stabilise the economy, as well as the banking system. Leverage in the banking sector will decrease under plausible conditions, too.

A second effect of a fully implemented banking union model relates to specific government interventions which are intended to improve lending to the corporate sector. For example, both the European Commission in its Capital Market Union agenda and the European Central Bank in its asset purchase programmes have

pointed at credit securitisation as a means to improve credit supply to small and medium-sized firms (SMEs).

However, such an effect is unlikely to exist in a fully developed and competitive banking market, as envisaged in the banking union project. To see this, consider the argument that credit securitisation allows to free up the bank's balance sheet, yielding additional lending capacity. Proper measurement of risk-weighted assets and of the required equity capital to support it will not allow the whole of bank plus structured finance vehicles to take on any more default risk than it would be allowed to shoulder without any securitisation activity. For credit securitisation, the revised regulatory rules basically assume a look-through calculation of credit risk – largely doing away with simple risk arbitrage considerations that existed in the pre-crisis years.

The key word is risk retention, the requirement of banks to keep holding sufficient "skin in the game" to render their claim of serious monitoring of borrower credit quality itself credible. With credible retention in place, the bank can effectively leverage its screening and monitoring expertise by adding outside debt capital (mostly through the senior tranche of the securitisation) to the SME lending operations. In exchange, the bank will increase its equity capital. In a benign world (the "good equilibrium" mentioned above), the additional outside funds for SME lending plus the increased equity capital issued by the bank will indeed lead to an increase in SME lending.

At this point we have come full circle, arguing that a comprehensive implementation of banking union, including its private liability rules (bail-in), may well lead to the desired effect of improved access of smaller firms to debt financing, contributing to higher growth.

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13

Banking Union: An Assessment

Angel Ubide

Banking union has changed the landscape of the European financial system, with mixed outcomes. It has failed to deliver the original objective of its creation, the direct recapitalisation of banks; it has put excessive focus on bail-ins as a way to break the link between sovereigns and banks; and it may lead to entrenched fragmentation of the banking system along national lines. At the same time, it has harmonised and improved the supervisory framework and delivered a better capitalised and more robust banking system. It is very possible that the final outcome is European supervision but national banking systems, with little equity-risk sharing. Moreover, it should be clear that the current banking union blueprint is not a substitute for eurobonds in order to complete the economic infrastructure of the euro area.

Banking union has been hailed as one of the key European achievements of the last few years.[1] No doubt, it has been a major change in the economic infrastructure of the euro area. But process should not be confused with outcomes. In order to assess the banking union project and its potential impact, there are three benchmarks. First, assess it versus its original purpose, as stated at its launch. Second, assess it as regards the potential medium-term implications of the current state of the banking union project, regardless of its original purpose. Third, assess it with regard to pending issues in order to make it a more perfect banking union. This paper discusses these three issues in turn.

Achieving the Original Objective

First, we start by clarifying the original purpose of banking union. The European banking union project was launched at the 29 June 2012 Euro Area Summit with the objective to "break the vicious circle between sovereigns and banks", and with a commitment to launch the Single Supervisory Mechanism (SSM) and estab-

1 For earlier assessments of banking union, see Véron (2013) and Ubide (2013a and 2013b).

lish a mechanism within the framework of the European Stability Mechanism (ESM) for the direct recapitalisation of banks. That objective and commitment provide a benchmark to evaluate whether banking union has delivered in the near term. The answer is no, and yes.

No, because the vicious circle between sovereigns and banks was broken by the decision to end the discussion on the Greek exit from the euro area in the spring of 2012 and by the actions of the European Central Bank (ECB), especially the launching of Outright Monetary Transactions (OMT) in August 2012, not by the launching of banking union. In fact, one of the key measures intended to break the vicious circle, namely the direct bank recapitalisation by the ESM, was quickly eliminated from the decision set, and the SSM only became effective in late 2014. Yes, because the decision to launch banking union might have been a necessary condition for the ECB's decision to launch the OMT,[2] and because the SSM has led to a more rigorous asset quality review (AQR) and stress test that will likely end doubts about the solvency of the euro area banking system. Therefore, banking union has likely been a positive development, but not for the reasons that were envisaged initially.

Medium-term Implications

Second, beyond the crisis management impact in the near term, banking union is a permanent change in the economic infrastructure of the euro area, with an important potential impact over the medium term. Before the crisis, banking in the euro area was organised along national lines, in many respects. For example, the proliferation of national champions, which reduced the cross-border risk-sharing via equity holdings; the national supervisory frameworks, which lead to different approaches to supervision and to practices that amplified the fragmentation during the crisis; the national approach to crisis management, with a conscious decision to harmonise but not mutualise the resolution of the banking crisis; and the national approach to crisis resolution, with the creation of the so-called "legacy assets" doctrine.

Banking union has made some changes in this national approach to banking, with the creation of the SSM, the Single Resolution Fund (SRF) and the Bank Recovery and Resolution Directive (BRRD) legislation. Therefore, there have been plenty of institutional changes. But, again, the process should not be confused with outcomes. It is important to take a step back and discuss the political context in which these decisions have taken place. Banking union was launched during the

2 Véron (2014) makes this argument forcefully. Others are more sceptical.

acute phase of the euro area crisis because it was politically easier than what would have been the optimal strategy, starting a programme of eurobonds. The establishment of the SSM did not require a Treaty change, as the Maastricht Treaty already allowed for the ECB to have supervisory functions. The design of banking union contained three key political imperatives: (1) minimising the near-term use of taxpayer money; (2) minimising moral hazard at the national government level by designing a minimalistic European backstop; and (3) minimising moral hazard at the financial market level by introducing mandatory bail-ins via the BRRD legislation. These political premises could be summarised in one sentence: maximising national bail-ins (as most investors in banks are typically domestic) to minimise European bailouts.

Therefore, this banking union was born out of these political restrictions at a time of maximum stress, rather than designed with optimality in mind, and thus it was bound to be suboptimal. In fact, it should be clear that the key objective of banking union should have been to minimise the GDP cost of a systemic crisis, not to minimise the near-term use of taxpayer money. This is an example of what happens when new systems are designed in a backward looking manner, to avoid a repetition of past crises and not to maximise efficiency in resolving future crises. This suboptimal design implies that there are positive and negative outcomes of this banking union project.

The potential positive outcomes from the banking union project include better and more efficient supervisory information sharing. Recall that until the establishment of the SSM there was very little cross-country exchange of supervisory information, at times due to legal restrictions but often reflecting reputational fears. There should also be an end to supervisory fragmentation, both in methods (thus levelling the playing field) and in practices (during the crunch of the crisis, some national supervisors exacerbated the fragmentation by forcing banks to curtail cross-border exposures to other euro area countries), and a reduction in national supervisory capture. In the end, the supervisory and regulatory framework of the European banking system will be more homogeneous and, likely, stronger and more robust.

However, there are also potentially negative aspects of the current banking union framework. As the resolution leg of banking union remains mostly domestic, the national fragmentation in banking ownership is likely to continue. National authorities will probably ensure that banks do not grow too big for national GDP, creating a banking sector that may be efficient for each individual country but inefficient for the euro area as a whole. There is no reason why banking should represent similar shares of GDP in all euro area countries. In addition, it is likely that national governments will press banks not to invest cross borders, as the potential

repercussions of a failure will be borne by national budgets. After all, the resolution framework with mostly centralised decision making but national budgetary repercussions is akin to taxation without representation. We may have already seen this process at work: with the partial exception of Greece, in none of the euro area countries that have suffered a banking crisis in the last few years have there been major foreign acquisitions of banks as a result of the process. The banking sectors of these countries (Spain, Ireland, Portugal, Greece) are smaller and more concentrated, but remain nationally owned. Thus, the clearest risk is that there will be European supervision but the business of banking will remain national. European supervision for national banking would not be a banking union.

Pending Issues

Finally, there are important pending issues in the current banking union project. First, this is a banking union to deal with small problems, not to deal with systemic events, as the SRF has no access to a European budget or a central bank. An ESM line of credit for the SRF would have been an important step in this direction, as recommended in Ubide (2013b). In some sense, this project is born under the assumption of no further systemic crises that require European action and, if and when they happen, something will have to be improvised.

Second, for as long as insolvency frameworks remain national, the SRM will have to rely on national resolution authorities and thus will be European only in name.[3] Third, the BRRD legislation imposing forced bail-ins includes many provisions that have not been tested in practice and could be very risky in a systemic crisis, as it is impossible to foresee *ex ante* what will be systemic.[4]

Fourth, national champions will continue to be prevalent – in fact bigger, as we have seen in the consolidation process in the crisis countries, with very little foreign participation, as discussed above. It is logical: after all, resolution is a politically very sensitive issue that deals with the allocation of losses and property rights, and it may make sense, from a national domestic standpoint, to keep it domestic. But the outcome is no increase in risk sharing via cross-equity holdings. Similarly, the national home bias with government bonds will remain intact. It is logical: unless there are eurobonds, it will be optimal from a business perspective for banks to hold

3 See Véron (2014).

4 This is a similar mistake to the IMF's recent policy proposals to deal with programmes in situations of uncertainty about debt sustainability. See IMF (2013) and Rediker and Ubide (2014).

national bonds. Banks' funding sources are mostly domestic, and buying bonds from other euro area countries with similar yields would add regulatory and break-up risk with little diversification benefit.

Fifth, it will be challenging for the SSM to perform supervision from a truly European perspective. Supervisors at the ECB will come from diverse backgrounds and nationalities, but the supervisory culture should be European. The SSM regulation contains provisions regarding independence and the ECB has created Joint Supervisory Teams consisting of supervisors from different countries, to be able to blend local expertise and a European view. The first crisis that the SSM has to deal with will show the strength of this new culture. Finally, there are legitimate question marks about institutional design. The ECB could be confronted with potential conflicts between monetary policy and supervision – and not just when facing an inflationary threat, as the old literature on the separation of monetary policy and supervision argued, but also in a deflationary situation, as the current low inflation environment shows. One could argue that the supervisory mandate and the desire to implement as tough an AQR as possible have interfered with the ECB's monetary policy mandate. The ECB likely delayed the launching of quantitative easing (QE) to avoid a situation where banks benefited from a QE-induced asset price rally that led to smaller capital increases. This delay has contributed to the decline in inflation and inflation expectations and, therefore, has been one of the reasons why the ECB is failing to meet its price stability mandate. In addition, failure to properly manage a crisis could generate negative credibility spillovers on the ECB's monetary policy mission. Given the magnitude of the enterprise, especially in terms of managing teams of supervisors of different nationalities and, at times, of likely conflicting loyalties, the probability of failure should not be overlooked. This institutional complexity may be compounded by the fact that the perimeter of monetary policy may not coincide with the perimeter of banking union (for example, Bulgaria recently requested to join the SSM). Once the SSM is up and running, it will be necessary to have another look about the appropriateness of institutional design and, possibly, relocate supervision outside of the ECB.

Concluding Remarks

In conclusion, the euro area crisis has left many scars and a fragile financial sector with a high degree of fragmentation. Five years since the start of the financial crisis, the euro area financial sector is barely starting to heal. The credit crunch is very intense. The ECB decision of June 2014, launching yet another long-term refinancing operation, this time of 4-year maturity, and announcing plans to start purchas-

ing Asset Backed Securities (ABS) to foster the creation of a liquid ABS market, is testimony to this fragility. The euro area banking sector remains very bank-centric and needs to be complemented by a strengthening of capital market access for smaller firms, so that it becomes more balanced and resilient to shocks to specific institutions. In addition, it is critical to support demand in order to regenerate growth. The view that recapitalising banks and cleaning up their balance sheets will foster a recovery in growth is at best incomplete, if not wrong. The credit crunch of the euro area is due mostly to lack of demand, and the policy mix must be eased in order to support growth. The stance of monetary policy until September 2014, which tolerated a very long period of very low inflation, was a risky strategy[5] that could have further put at risk the stability of the euro area financial system. The quantitative easing programme of the ECB is a very welcome step in that direction.

The response of the European authorities has started a path of recovery. The banking union project is a good step in the right direction, but it will not restore sustainable growth and it should remain very clear that a lot remains to be done in order to restore euro area financial intermediation to pre-crisis levels of efficiency. Finally, it is critical to understand that the banking union project cannot be an alternative to eurobonds. Without eurobonds – designed to cover a maximum of 30 per cent of GDP in each country, enough to handle a large financial crisis, as discussed in Ubide (2013a) – and without a fiscal policy framework that will ensure that fiscal policy never has to behave again in a procyclical manner during a crisis, the euro area will just be a strengthened fixed exchange rate regime, not a monetary union.

Postscript

Since this piece was originally delivered, the ECB has launched a large-scale monetary policy easing programme, including a programme of purchases of government bonds and the reduction of interest rates to negative levels, that has greatly contributed to supporting aggregate demand and restoring, to some extent, price stability. This policy stance, combined with a more expansionary fiscal policy, is most welcome. However, inflation remains low, even after taking into account the impact of the sharp decline in oil prices, and inflation expectations remain below levels compatible with price stability. Core inflation seems to have settled around 1 per cent, and measures of inflation compensation derived from inflation swaps

5 See the discussion in Ubide (2014).

indicate that annual inflation may not return to 2 per cent for many years. Therefore, it is paramount that the ECB retains the current (or easier) policy stance for as long as needed in order to fulfil its mandate and restore, in a credible and sustainable manner, 2 per cent inflation over the medium term.

As growth has improved, the situation of the European banking sector has also improved, but some of the issues that were flagged above have surfaced. Importantly, the problems in the Italian banking sector have shown that a banking resolution policy built around national resolution funds combined with bail-in clauses is inefficient and politically challenging, especially when the bail-in clause is backward-looking. The unfortunate result has been an undue delay by the Italian authorities in addressing in a forceful manner the stock of non-performing loans (NPLs) and the process of recapitalisation and restructuring of the Italian banking sector, dampening growth along the way.

The SSM has lent credibility to European supervision, as expected, but financial markets remain unconvinced and the shares of most European banks are valued below book value and, in general, below their U.S. counterparts. In addition, cross-border mergers have been largely absent, as feared, depriving the euro area economy of a critical source of risk sharing. A key reason for the still weak credibility of the European banking sector, beyond the challenges presented globally for the business model of banking, is the lack of clarity about the future contours of European banking supervision and regulation. With no conclusion of the debate on the European resolution and deposit insurance frameworks, it stands to reason that banks may prefer to remain national. Better the devil you know.

Finally, the debate on applying risk weights to holdings of government bonds and limiting the geographical exposures of these bonds in banks' balance sheets could make sense in theory if the economy were at potential, inflation were at target, and economic policy had abundant room for manoeuvre, but it is the wrong debate to have at the present time. It would lead to an increase in long-term interest rates in the weaker countries at the time when demand is still very fragile and monetary policy has little room to ease further. It would introduce uncertainty in domestic debt markets, and it would not break the bank-sovereign loop, as government bonds are highly correlated with the rest of domestic assets. This excessive focus on risk reduction is the wrong policy priority. There has already been significant risk reduction, and yet little risk sharing. A stable monetary union cannot be built on an *ultima ratio* principle, where each country is largely on its own. The only sure way to break the bank-sovereign loop is with the creation of eurobonds, as discussed above. This requires political courage, but it is the critical missing part of the process of completing EMU.

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14

Banking Union: Strengths and Weaknesses

Nout Wellink

Introduction

Let me go back briefly to 25 February 2009, the day when Jacques de Larosière presented the report of the Group on Financial Supervision that he had chaired.[1] Otmar Issing, also participating in this symposium, was one of the members of the Group. It was in many respects an excellent report, with a thorough analysis and sensible proposals, but in one respect – certainly with the benefit of hindsight – the report was a bit disappointing. The proposals were built on better coordination, better information sharing, on existing structures, and on a step by step approach. The Group did not present a *quantum leap* in the supervisory domain. I remember that my plea for a European supervisor, based on my experience in the Netherlands with ABN AMRO and Icesave, was rejected on the basis of political infeasibility. Perhaps rightly so – at that time at least.

Three years later, when the crisis peaked and the Monetary Union almost collapsed, the European Council invited the President of the European Council to "*develop, in close cooperation with the President of the Commission, the President of the Eurogroup and the President of the ECB, a specific and time-bound road map for the achievement of a genuine Economic and Monetary Union*".[2]

This request resulted in an Interim Report to the European Council on 12 October 2012, in which it was stated that: "*An integrated financial framework must comprise a single supervisory authority, a common resolution framework, implemented by a common resolution authority, and national deposit guarantee schemes built on common standards*".[3]

1 "Report of the High Level Group on Financial Supervision in the EU", Brussels, 25 February 2009.

2 Conclusions of the European Council, 28/29 June 2012.

3 "Towards a genuine Economic and Monetary Union", Interim Report by Herman Van Rompuy, President of the European Council, José Manuel Barroso, President of the European Commission, Jean-Claude Juncker, President of the Eurogroup, Mario Draghi, President of the European Central Bank, Brussels, 12 October 2012.

Everything becomes liquid under pressure. The crisis has made the impossible possible and Europe now has its own banking union, with a common rule book, a single supervisor, a resolution mechanism and resolution fund, and with a harmonised deposit guarantee scheme. As to the components of banking union, there will be some phasing-in, but that is inevitable, taking into account the far-reaching character of this project. Unfortunately, however, some components of a real banking union are still missing.

Why Is a Banking Union so Important?

Why is a banking union so important and in everybody's interest in Europe? Mainly for three reasons.

A banking union is a *necessary condition* for creating a level playing field. Different regulations, different reaction patterns of governments and supervisory authorities, and different treatment of creditors have resulted in the past in serious distortions in the financial sector of the European economies.

In addition, a banking union can make the financial sector *more resilient* in crisis circumstances. That is not to say that a banking union will completely safeguard the euro area and its citizens against a future financial crisis. After all, the recent crisis started in the U.S. Nevertheless, the U.S. had to mobilise taxpayers' money at a massive, hitherto unknown scale. But a fully fledged banking union will anyhow reduce the probability of such a crisis and minimise its impact.

The third reason is very much linked to the current situation. *Credit conditions* in the euro area have been very constrained across countries and sectors. In a country like Germany the percentage of financially constrained but viable small and medium-sized enterprises (SMEs) is very low (about 1 per cent), but in countries like Spain and Portugal this percentage is at a frightening height (up to as much as 25 to 35 per cent of the total number of firms). As Mario Draghi (2014) made clear, this is quite a challenge for monetary policy. The cleaning-up of the balance sheets of banks, in the context of the start of the Single Supervisory Mechanism (SSM), and the increase in the capital and liquidity ratios as a result of the Basel-III process address the capital constraints on credit supply and will support the speed and the strength of the fragile recovery of the European economy.

So, there are very good reasons to be positive about the start of banking union in Europe. Banking union will make European banking more transparent, more unified, more effective and safer.

Some General Remarks

Before going explicitly into some weaknesses in the design of banking union, I would like to make a few general remarks.

As of November 4, 2014, the ECB has been the euro area's supervisor. We should realise that a European supervisor is not *per se* more effective than a reasonably well-functioning network of national supervisors in which information sharing is guaranteed, national policy approaches are carefully monitored and procedures exist to solve problems in the areas I mentioned (the "de Larosière approach"). Undoubtedly, there is the *potential* for better supervision under the roof of a single European supervisor, but the new supervisor should be aware of the intrinsic risk of becoming a bureaucratic, inflexible Moloch.

Creating an optimally functioning European supervisor is a more difficult job than most people do realise. There is no such thing as a homogeneous supervisory culture in Europe. So, the new supervisory authority has to create its own culture. That might take years. In addition, especially in the beginning, there is the danger of overdoing prudential supervision for reputational reasons. In the specific European setting, this danger is perhaps even bigger than under other, more normal circumstances. The ECB is also Europe's monetary authority. Supervisory mistakes might have a negative impact on its monetary reputation, which could bring the new supervisor to pursuing too harsh a policy. Undoubtedly, the ECB is aware of these dangers, but accidents are not to be excluded.

The run-up to banking union was not completely risk-free either. The ECB made it abundantly clear – and rightly so – that it would only take supervisory tasks on its shoulders when banks were sufficiently capitalised. This approach put effective pressure on the political decision-makers to further improve on the design of banking union as well on the banks to start recapitalising their balance sheets before the completion of the Asset Quality Review. With the benefit of hindsight, my conclusion is that the ECB handled this process extremely well.

One last general remark. I do not know whether Nicolas Véron (2014) was right when he stressed that "the bank-sovereign vicious circle, which has been correctly identified as a key factor of instability, cannot be eliminated without further progress to fiscal and political union". It depends a bit on the definition of such a union, but it is clear that in the present design of banking union not all sovereignty and burden-sharing issues have been addressed sufficiently. In addition, the level of private indebtedness in some sectors of the economy and of public debt in some countries will remain too high, for years to come, to feel completely comfortable that the bank-sovereign vicious circle will be sufficiently mitigated.

Weaknesses in the Design

Let me now highlight some weaknesses in the system that should be addressed at a later stage.

The decision has been taken to create a European supervisor *very close to the ECB*. From an operational point of view, I think this was the only possibility in the short run. The ECB is a well established institution with great credibility. In addition, there is also merit in having a prudential supervisor close to the central bank. Steps have been taken to minimise the potential conflicts of interest between the ECB and the European supervisor. That being said, for a variety of (in itself good) reasons, the ECB has, to my mind, come a bit too close to politics, be it via the Troika, the Outright Monetary Transactions (OMT), Supervision, etc. Actually, as a consequence of the financial crisis, the ECB has become a rather *hybrid animal,* a combination of a monetary authority and a micro- and macro-prudential supervisor, but also a kind of IMF, and, to some extent, part of the Executive Arm of Europe. In addition, with its non-conventional monetary instruments the ECB has sometimes crossed the monetary Rubicon. Do not misunderstand me. By accepting responsibilities outside its direct monetary policy mandate, the ECB has played a pivotal role in fighting the financial crisis. We should be grateful for that, even if one does not always agree with its policies. Anyhow, under normal circumstances the role of a central bank should be more limited and confined to monetary policy and to a co-responsibility for financial stability. Unlike Ignazio Visco (2014), I think this co-responsibility should be legally incorporated in the mandate of the central bank. His argument that this is "*perhaps unnecessarily so if one considers that financial stability is a precondition for price stability*" is to my mind beside the point. This holds for more policy areas (e.g. budgetary policy or incomes policy). Nailing down in legislation the role and responsibility of a central bank with respect to financial stability would be a good thing because of the natural inclination of many governments to claim ultimate responsibility for financial stability. That being said, the borderline between the policy areas that influence price stability is often very thin and sometimes opaque.

A moment will come when, institutionally, supervision should be brought at a greater distance from the ECB, while retaining perfect information lines. My own experience from the crisis is that it is an asset, under normal circumstances, to have monetary policy and supervision under one roof (because of the undisturbed flow of information), but that this asset might turn into a liability in a financial crisis. When something goes wrong in the financial sector, it is always the supervisor who

gets the blame. So, having monetary policy and supervision under one roof is a reputational landmine for a central bank. That is why in the Maastricht Treaty the ECB was given the responsibility to "*contribute to the smooth functioning of the competent authorities*" instead of getting this responsibility itself. Only with unanimity, Heads of State or Government could decide to confer certain *specific tasks* on the ECB. By stretching a bit the Treaty, justified by the crisis we were in, the supervisory role of the ECB has become much larger than foreseen in the Maastricht Treaty. I think that after a number of years the institutional set-up of supervision in Europe should be reexamined and that it would be proof of wisdom if the ECB would take the lead in this process instead of hanging on to an obtained position.

The present institutional set-up of banking union is, for understandable reasons, not perfect (acceptable as long as we agree on its temporary nature), but the lack of courage to build up *a truly European Deposit Guarantee Scheme (DGS)* resulted in a serious flaw in the design of banking union. An adequate deposit guarantee scheme is an integral part of a monetary and financial union. It is more or less a guarantee against a broadly-based bank run. Its origin goes back to the 30s of the last century, in which bank runs at a massive scale took place in the U.S.

The populist view, expressed for example in Germany by Hans-Werner Sinn, is that "*German taxpayers would underwrite thousands of billions of GIIPS' deposits which are backed up by doubtful assets*". But, as Gros and Schoenmaker (2014) have pointed out, the guaranteed deposits in these countries amount to 1,700 billion euro against assets of 9,700 billion euro. I very much regret that we only got a harmonisation of national schemes instead of a truly European DGS. In discussions I had on this issue, I was told time and again that the recent crisis had shown that solidly financed national schemes are enough a guarantee against bank runs.

I think this argument is not valid, because of still existing implicit and also explicit government guarantees during the crisis. But tomorrow will be different. Let me point to two developments. First of all, as a consequence of the creation of a banking union, one might expect more cross-border activities and a further consolidation of the banking sector at the European level.[4] Second, the increased resistance against putting taxpayers' money at stake might stimulate unsecured, but also secured depositors to withdraw their money from a bank at an earlier stage than in the past. Why? For unsecured depositors this is self-evident. But secured depositors might follow suit, because in a cross-border context with banks oper-

4 Such a process takes time because banks first have to put their own house in order. Therefore, a first step is consolidation at the national level, as we have seen for example in Southern European countries.

ating via branches in other parts of the monetary union, the potential claims of secured depositors are clearly too large for national DGSs and for national governments to cope with. Therefore, we should not take for granted that the introduction of bail-in clauses will make the financial system, under crisis circumstances, *per se* more stable. Just the opposite might be the case, the more so because a European DGS is lacking. The mid-2016 experience with Deutsche Bank's CoCo bonds shows how quickly "protective" capital can collapse. However, it is too early to draw firm conclusions from such an event because markets should grow accustomed to these new financial instruments.

From a normative point of view, the bail-in mood is completely understandable. From a more pragmatic point of view, it might not always work as planned, especially not under real crisis circumstances, as also emphasised by Lucas Papademos (2013). Rating institutions have revised downwards their ratings of banks in Europe (Fitch/Moody's) to reflect the new banking framework in Europe. Therefore, their assessment is that, *ceteris paribus*, the system as such might have become less stable.

Let me make a more general remark in this context. My personal feeling is that the slogan "*no taxpayers' money should be involved in rescue operations*" is politically attractive but, in a crisis situation such as the one we have behind us, *way too dogmatic*. If it comes to taxpayers' money, one should not only include the visible, direct financial support, but also the second-round effects, especially on tax revenues as a consequence of reduced or negative growth rates. Eventually, the largest losses stem from the second-round effects. It seems to me almost 100 per cent certain, especially in crisis circumstances or when systemically important financial institutions are involved, that it would be in the interest of the taxpayers not to follow, mechanically, downwards the bail-in ladder, but immediately spend taxpayers' money, so as to prevent too harmful an impact on the economy. If I look back at how the U.S. authorities handled the financial crisis and how we did it in Europe, I find some evidence for my views. My conclusion on this aspect of banking union is that it will work, but only under normal circumstances and for banks that are not too big or for countries that are irrelevant. But even then, contagion might be around the corner.

A last weak element in the system I want to mention is the way financial support can be mobilised in case a bank runs into serious problems. Compared to the original proposals, a lot of progress has been made thanks to the insistence of the European Parliament, but the *potential for national involvement in the decision-making process* in case of bigger banks – and these are politically the most problematic and sensitive cases – is still there. In addition, the Single Resolution

Fund is relatively small, also compared to the amounts spent by governments since the beginning of the financial crisis to rescue their banks, and lacks credibility, but some flexibility has been built in through a kind of an ESM backstop. A positive development is that the contributions to the Single Resolution Fund will be mutualised much faster than previously foreseen. But at the end of the day, in crisis circumstances, it is the full-swing commitment of governments that makes a policy convincing and not a complex, rather meagre, safety net.

In Conclusion

Looking at the problems we have been confronted with in Europe over the last decades, my conclusion is that all these problems boil down to sovereignty and burden-sharing issues. That is why they are so hard to resolve and why it is so difficult to come with a masterplan that addresses these issues. The origin of the present crisis lies in the past and is linked to the two issues I mentioned. At the moment of creation of the monetary union, its members were not prepared to give up sovereignty in the area of budgetary and macroeconomic (structural) policies, including the financial sector.

To some extent, history has repeated itself. The discussion about banking union was to a very large extent again a discussion about the transfer of national sovereignty and burden sharing. The outcome of a long and complicated negotiation process, the present model, is not perfect, but we have made major progress. If I look at the main reasons for creating a banking union in Europe, my conclusions are:

- the level playing field in the financial sector is better guaranteed than in the past;
- banking union will make the financial sector in the longer run more resilient, but the system we have built is not robust enough to function satisfactorily under crisis circumstances;
- therefore, there is still room for, and a necessity of, further improvements in the design of banking union. Crucial are the introduction of a truly European Deposit Guarantee Scheme and a further strengthening of the resolution regime.

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Contributors

Vítor Constâncio has been Vice-President of the ECB since June 2010. He was Governor of the Banco de Portugal from 1985 to 1986 and from February 2000 to May 2010.

Before being appointed Governor of the Banco de Portugal, he was Executive Director of the Banco Português de Investimento (1995-2000) and non-executive Director of the Electricidade de Portugal (EDP), the Portuguese national power utility (1998-2000).

He was Invited Senior Professor of Economics at the Instituto Superior de Economia e Gestão from 1989 to June 2010, the culmination of a long academic career. He graduated in economics from the Universidade Técnica de Lisboa.

Benjamin M. Friedman is the William Joseph Maier Professor of Political Economy, and formerly Chairman of the Department of Economics, at Harvard University, where he has taught since 1972. He has written extensively on economic policy and, in particular, on the role of the financial markets in shaping how monetary and fiscal policies affect overall economic activity. His book *Day of Reckoning: The Consequences of American Economic Policy Under Reagan and After* (Random House, 1988) received the George S. Eccles Prize, awarded annually by Columbia University for excellence in writing about economics. His work has also addressed broader questions concerning economics and economic policy. His book *The Moral Consequences of Economic Growth* (Knopf, 2005) examined the political and social implications of growth versus economic stagnation.

In addition to *Day of Reckoning* and *The Moral Consequences of Economic Growth*, Dr. Friedman is the author and/or editor of nine other books, aimed primarily at economists and economic policymakers, as well as the author of more than one hundred fifty articles on monetary economics, macroeconomics, and monetary and fiscal policy, published in numerous journals. He is also a frequent contributor to publications reaching a broader audience, including especially *The New York Review of Books*.

Dr. Friedman's current professional activities include serving as a director and member of the editorial board of the *Encyclopaedia Britannica*, a director of the Private Export Funding Corporation, a trustee of the Pioneer Funds, and a director of

the National Council on Economic Education. In addition, he has served as director of financial markets and monetary economics research at the National Bureau of Economic Research and as an adviser to the Congressional Budget Office and to the Federal Reserve Bank of New York. He is a member of the Council on Foreign Relations and the American Academy of Arts and Sciences.

Among other awards, Dr. Friedman was the 2005-6 recipient of the John R. Commons Award, presented every two years in recognition of achievements in economics and service to the economics profession. He received the A.B., A.M. and Ph.D. degrees in economics from Harvard University. In addition, he received the M.Sc. degree in economics and politics from King's College, Cambridge (U.K.).

Tassos Giannitsis is Professor of Economics Emeritus at the University of Athens. He has served as Minister of Labour and Social Affairs, Alternate Minister of Foreign Affairs, Minister of Foreign Affairs and Minister of Interior. He has published many books and articles on economic, social and political issues. His recent books include *Inequalities, Poverty and Turmoil in the Years of Crisis* (with Stavros Zografakis, 2016), *The Pension System and the Crisis* (2016) and *Greece in the Crisis* (2013). Among his recent articles are "Fiskalkonsolidierung und Einkomensverteilung" (2016), "Linking Structural and Technological Change to Industrial Recovery in Greece" (with I. Kastelli, 2016), "Industrial Policy in Times of Crisis: The Case of Greece" (with I. Kastelli, 2014). His research has focused on development economics, international economics, European integration, economics and policy of technology, industrial structures and policy. He studied law, economics and political science at the University of Athens and obtained a Ph.D. in economics from the Free University of Berlin.

Otmar Issing is President of the Center for Financial Studies and Chairman of the Board of Trustees of the House of Finance, Goethe University Frankfurt. He is an honorary Professor of the universities of Frankfurt and Würzburg and a member of Goldman Sachs's international advisory board. He has held Chairs of Economics at the universities of Erlangen-Nuremberg and Würzburg. Between 1988 and 1990 he was a member of the German Council of Economic Experts. From 1990 to 1998 he was a member of the Executive Board of the Deutsche Bundesbank, with a seat on the Central Bank Council.

From 1998 to 2006 he was a founding member of the Executive Board of the European Central Bank, responsible for the Directorates General Economics and Research. He has received honorary doctorates from the universities of Bayreuth, Frankfurt and Konstanz, as well as many other awards.

He was formerly Head of the Advisory Group on the New Financial Order appointed by Chancellor Merkel (2008-2012) and a member of the High Level Group of the European Commission chaired by J. de Larosière (2008-2009). In 2017 he was appointed a member of the G20 Eminent Persons Group on Global Financial Governance.

He has published numerous articles in academic journals and is the author of two textbooks: *Die Einführung in die Geldtheorie* (Introduction to Monetary Theory), 15th edition, 2011 (also translated into Chinese and Bulgarian), and *Einführung in die Geldpolitik* (Introduction to Monetary Policy), 6th edition, 1996. His book *Der Euro – Geburt, Erfolg, Zukunft* (The Birth of the Euro) was published in 2008 and has also been translated into English and Chinese.

Donald Kohn holds the Robert V. Roosa Chair in International Economics and is a Senior Fellow in the Economic Studies programme at the Brookings Institution. He also currently serves as an external member of the Financial Policy Committee at the Bank of England. Dr. Kohn is a 40-year veteran of the Federal Reserve System. He has served as member and then Vice Chairman of the Board of Governors of the Federal Reserve System from 2002 to 2010. He is an expert on monetary policy, financial regulation and macroeconomics, and he has written extensively on these issues.

Prior to taking office as a member of the Board of Governors, he served in a number of staff roles at the Board, including secretary of the Federal Open Market Committee (1987-2002) and director of the Division of Monetary Affairs (1987-2001). He has also been Chairman of the Committee on the Global Financial System (CGFS), a central bank panel that monitors and examines broad issues related to financial markets and systems. He advised Federal Reserve Chairman Ben Bernanke throughout the 2008-2009 financial crisis and served as a key adviser to former Federal Reserve Chairman Alan Greenspan.

He received the Distinguished Achievement Award from The Money Marketeers of New York University (2002), lifetime achievement awards from The Clearing House (2012) and Central Banking magazine (2017), the Distinguished Alumni Award from the College of Wooster (1998), and the Honorary Degree, Doctor of Laws, from the College of Wooster (2006). In 2016, he was made honorary Commander of the British Empire. He received a B.A. in economics in 1964 from the College of Wooster and a Ph.D. in economics in 1971 from the University of Michigan.

Hans-Helmut Kotz is a Senior Fellow at the Center for Financial Studies (CFS), and Program Director of the SAFE Policy Center, both of Goethe University Frankfurt. He is also a Resident Fellow, Center for European Studies at Harvard University as well as on the Economics Faculty at Freiburg University, where he received

the University Teaching Award in 2010. In addition, he serves as a Senior Advisor to McKinsey & Co. and UniCredit AG, and he is a member of the Supervisory Board of Eurex Clearing AG.

Prior to that, he was a member of the Executive Board of the Deutsche Bundesbank, in charge of Financial Stability, Markets and Statistics, a member of committees of the European Central Bank, the Bank for International Settlements, the Financial Stability Board as well as the OECD, where he was chair of the Financial Markets Committee. He was also the German Central Bank Deputy for the G7/G8 and the G20 process. Between 2002 and 2005 he served in a personal capacity as a member of the European Parliament's Expert Group on Financial Markets. He has published widely and is involved in a number of academic councils and institutions, e.g., the Board of the Konstanz Seminar on Monetary Theory, the scientific councils of two journals (*Revue d'Économie Financière* in Paris, and *Kredit und Kapital* in Bonn), as well as the Centre Cournot in Paris and the Hamburger Weltwirtschaftliches Institut in Hamburg.

Jan-Pieter Krahnen is Professor of Corporate Finance at Goethe University's House of Finance. He is a Director of the Center for Financial Studies (CFS) and the Research Center SAFE at Goethe University Frankfurt.

His current research interests focus on the implications of the 2007-2010 financial turmoil for banking, systemic risk and financial market regulation. His publications have appeared in, among others, the *Review of Economic Studies*, the *Journal of Financial Intermediation*, the *Journal of Banking and Finance* and the *European Finance Review*. He is a research fellow at the Centre for Economic Policy Research (CEPR) and was President of the European Finance Association in 2011.

Dr. Krahnen has been involved in policy advisory roles on issues of financial market regulation, most recently as a member of the High Level Expert Group on Structural Reforms of the EU Banking Sector (the Liikanen Commission), established by EU Commissioner Michel Barnier. From 2008 to 2012 he was a member of the Issing Commission, advising the German government on the G20 meetings. He was a member of the Group of Economic Advisors (GEA) at the European Securities and Markets Agency (ESMA) in Paris. He is also a member of the Academic Advisory Board of Germany's Federal Ministry of Finance. Dr. Krahnen earned a Ph.D. from Goethe University Frankfurt in 1984. He received his postdoctoral lecture qualification (habilitation) from the Free University of Berlin.

Hiroshi Nakaso has served as a Deputy Governor of the Bank of Japan since March 2013. In his 36 years with the Bank, his main responsibilities have been cri-

sis management of financial systems and markets, especially on a global basis. He has participated in numerous international meetings, and during his terms as Director General of the Financial Markets Department and Assistant Governor, he chaired the BIS Markets Committee and Working Group on Financial Reference Rates, and the G20 Study Group on Commodities. Mr. Nakaso graduated in economics from the University of Tokyo.

Lucas Papademos is currently President of the Academy of Athens and Chair in Economic Sciences. He is also Professor of Economics Emeritus at the University of Athens and a Senior Fellow at the Center for Financial Studies (CFS), Goethe University Frankfurt. He served as Prime Minister of Greece from November 2011 to May 2012, leading a government of national unity during a critical phase of the Greek debt and economic crisis.

Previously, he was the Vice-President of the European Central Bank from 2002 to 2010 and Governor of the Bank of Greece from 1994 to 2002. Before being appointed Governor, he held several senior positions at the Bank of Greece, including those of Chief Economist (1985-1993) and Deputy Governor. Earlier, he served as a senior economist at the Federal Reserve Bank of Boston.

Dr. Papademos has also been on the faculty of Columbia University (1975-1984), the University of Athens (1988-2014), and the Kennedy School of Government, Harvard University (2011-2013). He has served as a member of many boards, councils and committees, including the Executive Board and the Governing Council of the ECB, the G20 Financial Stability Board and its Steering Committee, the EU Economic and Financial Committee and the Central Bank Governance Group at the Bank for International Settlements.

He has published numerous articles in the fields of macroeconomics, financial markets and monetary policy, as well as on subjects concerning economic performance, financial stability and economic policy in the European Union. He holds an S.B. in physics, an S.M. in electrical engineering, and a Ph.D. in economics, all from the Massachusetts Institute of Technology.

Yannis Stournaras has been Governor of the Bank of Greece since June 2014. He is also Professor of Economics at the University of Athens.

He graduated from the Department of Economics of the University of Athens in 1978. He obtained his post-graduate degrees (MPhil 1980, DPhil 1982) from Oxford University, where he also worked from 1982 to 1986 as a Research Fellow and Lecturer at St. Catherine's College and as a Research Fellow at the Oxford Institute for Energy Studies. Following his return to Greece, he worked as a Special

Advisor to the Ministry of Economy and Finance (1986-1989) on Public Enterprises and Incomes Policy issues and to the Bank of Greece (1989-1994) on Monetary Policy issues.

From 1994 to July 2000, he was Chairman of the Council of Economic Advisers at the Ministry of Economy and Finance. In that capacity, he participated in the negotiations for the entry of Greece into the Economic and Monetary Union.

He was Vice Chairman of the Public Gas Corporation (1994-1997) and a member of the Board of Directors of the Public Debt Management Office (1998-2000). From 2000 to 2004, he was Chairman and Chief Executive Officer of Emporiki Bank and Vice Chairman of the Association of Greek Banks. From 2005 to August 2008, he was managing director of Kappa Securities.

He has served as Director General of the Foundation for Economic and Industrial Research (IOBE) (September 2009-June 2012), as Minister of Development, Competitiveness and Shipping of the Interim Government (May-June 2012) and as Minister of Finance of Greece (July 2012-June 2014).

Sir Paul Tucker is Chair of the Systemic Risk Council, and a Fellow at the Kennedy School of Government, Harvard University. From 2009 to late 2013 he was Deputy Governor at the Bank of England, having joined the Bank in 1980. He was a member of all of the Bank of England's statutory policy committees: the Monetary Policy Committee, Financial Policy Committee (Vice Chair), Prudential Regulatory Authority Board (Vice Chair), as well as of the Court of Directors. Internationally, he was a member of the steering committee of the G20 Financial Stability Board, and chaired its Committee on the Resolution of Cross-Border Banks in order to solve the "too big to fail" problem. He was a member of the board of directors of the Bank for International Settlements, and was Chair of the Basel Committee for Payment and Settlement Systems from 2012 to 2013. He is a member of the Board of the Financial Services Volunteer Corps, a director at Swiss Re, a Visiting Fellow of Nuffield College Oxford, a member of the Advisory Council of the AQR Asset Management Institute at the London Business School, and a Governor of the Ditchley Foundation.

Angel Ubide has been a Senior Fellow at the Peterson Institute for International Economics since 2009. He has been deeply involved in the global economic policy debate as a member of the Steering Committee of the Euro50 Group, as a board member of the Reinventing Bretton Woods Committee, as a founding member (2002–2012) of the European Central Bank's Shadow Governing Council and as an associate fellow at the Center for European Policy Studies.

Dr. Ubide has written extensively on international macroeconomics, monetary policy, European policy issues, banking, and exchange rates. He has also been a frequent contributor to the Spanish media and has also been published in leading global newspapers, including the *Economist*, the *Financial Times* and the *Wall Street Journal*. His recent work focuses on the dynamics of the global financial crisis, with special emphasis on the euro area outlook and on monetary policy.

He has also worked for a decade and a half in the financial industry, first at Tudor Investment Corporation, a multistrategy hedge fund management firm, and later at D. E. Shaw Group, a global investment and technology development firm, where he was a Senior Vice President and Co-Director of Global Economics. He started his career as an economist at the International Monetary Fund and as an associate at McKinsey & Company. He received a degree in economics and business administration from the University of Zaragoza and an M.A. and a Ph.D. in economics from the European University Institute in Florence, Italy.

Ignazio Visco was appointed Governor of the Bank of Italy in November 2011, after a long career with the Bank that began in 1972. He is a member of the Governing Council and General Council of the European Central Bank (ECB), the General Board of the European Systemic Risk Board (ESRB), the Group of Seven (G7), the Group of Twenty (G20), and the Board of Directors of the Bank for International Settlements (BIS).

Dr. Visco is Governor for Italy on the Boards of Governors of the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA), the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA), the Asian Development Bank (ADB), and Alternate Governor for Italy at the International Monetary Fund (IMF) and the Inter-American Development Bank (IADB).

From 1997 to 2002 he was Chief Economist and Head of the Economics Department of the Organisation for Economic Co-operation and Development.

He has written numerous articles and books on economics and finance, and he also taught Econometrics and Economic Policy at "La Sapienza" University of Rome. He graduated from the University of Rome and obtained a Ph.D. in economics from the University of Pennsylvania.

A.H.E.M (Nout) Wellink has served as a member of the Executive Board of De Nederlandsche Bank (DNB), the Dutch central bank, for almost 30 years, the last 14 years as its President. He retired from DNB on 1 July 2011. Since the establishment of the European Monetary Union Dr. Wellink has served as a member of the Gov-

erning Council of the European Central Bank (ECB). Starting from 1997, he served as a member of the Board of Directors of the Bank for International Settlements (BIS), which he chaired from 2002 to 2006. From 2006 to 2011 he also chaired the Basel Committee on Banking Supervision. From 1997 to 2011 he was a member of the Group of Ten Governors and a Governor of the International Monetary Fund (IMF). Prior to his appointment in 1982 as an Executive Director of DNB, Dr. Wellink held several posts in the Dutch Ministry of Finance, including as the Treasurer General from 1977 to 1982.

After studying Dutch law at Leiden University from 1961 to 1968, where he obtained a Master's degree, Dr. Wellink received a doctor's degree in economics from the Rotterdam Erasmus University in 1975. In 2008 he received an honorary doctorate from Tilburg University. From 1988 to 1998, he was an Extraordinary Professor at the Free University in Amsterdam.

Dr. Wellink has had many secondary functions. He is currently an independent non-executive Director of the Bank of China, Chairman of PricewaterhouseCoopers' (PwC) Public Interest Committee, and Chairman of the Supervisory Board of Leiden University. He was awarded a Knighthood in the Order of the Netherlands Lion in 1980 and has been Commander of the Order of Orange-Nassau since 2011.

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