

Interactions between monetary and macroprudential policies

J. Boeckx
P. Ilbas
M. Kasongo Kashama
M. de Sola Perea
Ch. Van Nieuwenhuyze

Introduction

Prior to the onset of the financial crisis in 2007, most policy-makers traditionally assumed that price stability should be the prime objective of monetary policy. In the previous two decades inflation targeting had become the norm for monetary policy frameworks, either explicitly – at the Reserve Bank of New Zealand, Norges Bank, Sveriges Riksbank, Bank of Chile, etc. – or implicitly, in the case of the US Federal Reserve and the Eurosystem. Typically, it combined a medium-term inflation target with capacity utilisation objectives such as the highest attainable employment or output consistent with price stability.

It was generally believed that, if a central bank managed to keep inflation stable and slightly positive – typically at around 2% –, next to real economic, financial stability would also be assured. In fact, it was generally assumed that there was no close link between the financial markets and the real economy: the assumption was that even major disruptions in the financial markets would have no significant real economy effects and that the monetary authorities had adequate tools at their disposal to ‘mop up’ the consequences of any such crises (“the Greenspan put”) – ideas that appeared to be confirmed during the great moderation. Any great emphasis on financial stability was thought unnecessary, as the financial markets in

the advanced countries appeared to operate more or less efficiently⁽¹⁾. Financial stability was considered to be an altogether different policy domain – and guaranteeing it not monetary policy’s main purpose.

The great recession has taught policy-makers that price stability in itself is no guarantee of financial stability and cannot prevent financial crises. As it turns out, shocks to the financial system can have major repercussions for the real economy – and also in terms of risks to price stability. Today, in a marked change to the past, financial institutions are generally assumed to require better and more frequent supervision. In addition to strengthened microprudential policies targeting individual institutions, solid macroprudential controls are also needed, devoting explicit attention to the systemic risks to the financial system at large and the ways in which the real economy and the financial spheres interact.

This article investigates the implications of an active macroprudential policy for monetary policy, paying particular attention to the ways in which the two policy domains interact. The first section outlines the framework in which macroprudential and monetary policies operate: what are the objectives of each policy domain, what instruments are available to help achieve these objectives and what are their main transmission channels? The section then goes on to describe the institutional framework for monetary and macroprudential decisions in Belgium. Section two reviews situations in which trade-offs emerge between price and financial stability. This is crucial, as

(1) The Eurosystem monitors monetary and credit aggregates in its two-pillar strategy on the initial assumption that money and credit aggregates signal risks to price stability in the medium to longer term.

these trade-offs between the two key objectives determine the nature of the interactions between monetary and macroprudential policies. Drawing on a theoretical model supported by real-world evidence, the article demonstrates that such trade-offs depend on the shocks that might affect the economy. Against this backdrop, Section three suggests in which cases it might be desirable for monetary policy to "lean against the wind", implying that monetary policy might be used to support macroprudential policy to help achieve financial stability when financial imbalances are widespread, or if sufficiently effective prudential instruments are lacking. The final and fourth section touches upon the challenges currently facing the euro area, outlining the potential trade-offs between the Eurosystem's (non-conventional) monetary policy and financial stability. The article ends with our conclusions.

1. Definition and institutional framework

1.1 Objectives, instruments and transmission channels

Monetary and macroprudential policies are primarily defined by their objectives. The key target of monetary policy is price stability, which, in the euro area, is specifically described as keeping inflation below, but close to, 2% over the medium term. For its part, macroprudential policy is aimed at financial stability, which the ECB, as part of its prudential oversight function in the euro area, defines as "a condition in which the financial system – intermediaries, markets and market infrastructures – can withstand shocks without major disruption in financial intermediation or in the effective allocation of savings to productive investment" ⁽¹⁾.

Based on their respective objectives and in keeping with the Tinbergen rule ⁽²⁾, monetary and macroprudential policies draw on a wide range of instruments. Before 2008, the Eurosystem typically used a single monetary policy instrument: key interest rates. But by changing the composition and/or the size of their balance sheets since the beginning

of the crisis, central banks in the advanced economies have acquired a second instrument. Macroprudential instruments break down into three separate categories. The first, capital rules, comprises counter-cyclical capital buffers, sectoral capital requirements, systemic risk buffers and leverage ratios. The second category, liquidity rules, includes liquidity ratios such as the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR). The third and last category, lending limits, encompasses ratios such as loan-to-value caps, loan-to-income caps and debt service-to-income caps, as well as large exposure restrictions ⁽³⁾.

Categories based on objectives and instruments aside, monetary and macroprudential policies closely interact insofar as their instruments affect general monetary conditions and/or specific conditions in the financial sector, and their effects spread simultaneously across the financial system. For a conceptual analysis of this interface, three types of monetary transmission channels may be distinguished – monetary, credit and risk-taking channels – and tied up with the sphere of influence and range of macroprudential instruments.

Monetary channels assume that monetary impulses influence the behaviour of non-financial agents through adjustments between money on the one hand and financial and real assets on the other. These adjustments are reflected in (1) the cost of capital, directly affecting the profitability of real investment; (2) interest rates (including rates charged and paid by banks), which are responsible for substitution and income effects that change the trade-off between current consumption and savings; (3) asset prices in a broad sense (including exchange rates) through portfolio effects. Furthermore, the prospective nature of decisions taken by economic agents means that their expectations regarding real interest rates – and consequently future inflation – influence the transmission of monetary shocks to spending and investment.

Secondly, monetary policy also operates through the credit channels, i.e. the bank lending channel and the balance sheet channel ⁽⁴⁾. These channels assume that corporations and households acquire investment capital or goods through equity *and* by borrowing. Imperfections in the credit markets, and particularly information asymmetry, are then a key explanation for the leverage of monetary policy. It is precisely these frictions that put banks in prime position in the credit markets and that ensure the existence of a counter-cyclical external finance premium ⁽⁵⁾. Thus, the central bank's capacity to influence bank lending conditions (bank lending channel), as well as the net worth of borrowers and thereby their external funding premium (balance sheet channel), ensures the transmission of monetary policy through the adjustment

(1) ECB (2015).

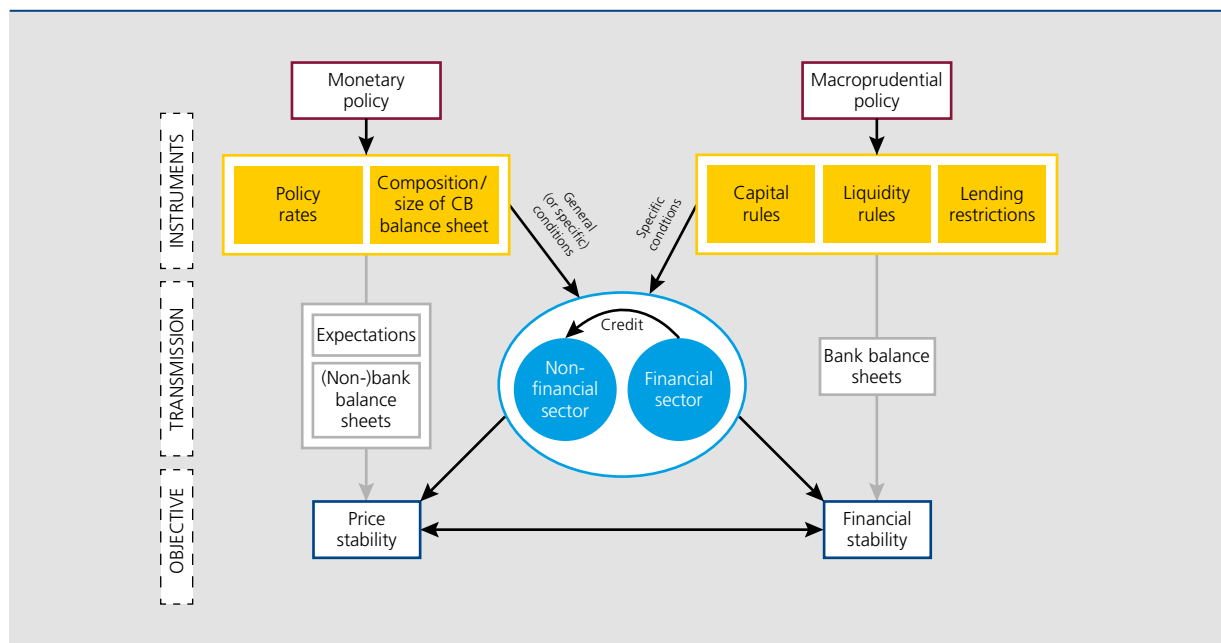
(2) The Tinbergen rule states that for each and every policy target there must be at least one policy tool. It is also recommended that available tools are used for the objective on which they have a comparative advantage (Smets, 2014).

(3) See Cordemans and Ide (2012), among others, for a detailed review of the types of monetary policy instruments used in the advanced economies since the crisis. A comprehensive review of macroprudential instruments is provided by the Bank's most recent financial stability report (NBB, 2015).

(4) See, in particular, Bernanke and Gertler (1995), Bernanke, Gertler and Gilchrist (1999) and Mishkin (2001).

(5) Banks play an important role to the extent that they solve information asymmetry issues. Frictions in credit markets also imply that loans should be collateralised by the net worth of borrowers. In this context, an external finance premium – which is inversely related to the net worth of the borrowers – emerges.

CHART 1 OBJECTIVES, INSTRUMENTS AND TRANSMISSION CHANNELS OF MONETARY AND MACROPRUDENTIAL POLICIES



Sources: Smets (2014), NBB.

of banks' debit conditions (rates and other conditions governing new loans and/or the volume of the credit supply). In the more general financial accelerator theory, this monetary policy leverage on credit conditions, as well as on the price of the assets used as collateral by borrowers, sparks second-round effects that extend and enhance the initial monetary impulse⁽¹⁾.

Lastly, the risk-taking channel presupposes that a long period of very expansive monetary policy will encourage economic agents, and particularly banks/financial institutions, to assume more risk, thus influencing the level of activity⁽²⁾. More specifically, too much confidence on the back of excessively loose monetary policy and a balmy economic environment encourages financial and non-financial investors to take on more risks and build up excessive debt. In addition, a prolonged period of low interest rates might trigger a search for higher-yielding assets on the part of financial institutions and cause them to engage in heavier risk-taking than is desirable for the agent bearing the ultimate risk.

Much like the monetary transmission mechanisms we have just described, macroprudential instruments directly affect financial institutions' balance sheets, particularly

those of banks, their aim being to make institutions less vulnerable to negative shocks as well as to reduce financial systemic risk. The transmission of macroprudential measures takes the shape of adjustments financial institutions make in their behaviour in response to the balance sheet restrictions imposed on them.

Monetary and macroprudential policies can be complementary in as much as financially healthier credit institutions – e.g. better capitalised ones – can ensure a smoother transmission of monetary impulses by way of interest-rate and credit channels. Besides, by reducing the probability of systemic stress, the macroprudential framework supports monetary policy as it lowers the chances of the latter having to address the zero lower bound while financial institutions are highly vulnerable and poorly operating markets pose risks to price stability. Conversely, financial stability may benefit from a decision to implement monetary policy instruments in response to some financial developments seen as material risks to price stability in the medium term.

Interactions between monetary and macroprudential policies may thus turn out well for both sets of objectives, but negative spillovers cannot be ruled out. For example, the risk-taking channel might jeopardise financial stability if, due to financial frictions, more risk-taking due to very expansive monetary policy makes the financial system more vulnerable to shocks.

(1) Hence, the credit approach is not different from traditional monetary analysis, but rather complementary. (See Bernanke (2007) in particular.)
 (2) See, in particular, Borio and Lowe (2002), ECB (2007) and Gambacorta (2009).

1.2 Institutional framework

The interactions, synergies and trade-offs observed between monetary and macroprudential policies have led to the creation of institutional frameworks in which the same institutions, namely the central banks, have been tasked with both remits, at the national level, at the level of the euro area and that of the European Union. As Regulation (EU) No. 1092/2010 states: "national central banks should have a leading role in macro-prudential oversight because of their expertise and their existing responsibilities in the area of financial stability"⁽¹⁾. Getting national central banks (NCBs) involved has become the generally accepted approach: most European countries have opted for an institutional model entrusting macroprudential responsibilities to their NCBs⁽²⁾, not just because of their expertise but also because of their independence and credibility, and the potential synergies arising from the interaction between both sets of policies— as it is these that implement

monetary policy and are typically also tasked with micro-prudential supervision, in most cases⁽³⁾. Both at euro area and at European Union level, NCBs and the European Central Bank (ECB) have been assigned decisive powers in designing macroprudential policies – presenting challenges for policy-making and decision-making in both domains, challenges that become even more complex in a monetary union marked by different levels of decision-making.

The introduction of the euro was accompanied by a single monetary policy for all countries that joined it, necessitating a centralised decision-making process. Heading up the Eurosystem, the ECB's Governing Council – of which all Member States' central bank governors are part – is the key authority responsible for monetary policy in the euro area⁽⁴⁾, and its decisions apply to all countries in the euro area.

By contrast, the institutional framework for macroprudential policy has a decentralised set-up, with competent authorities at national, euro area and European Union levels. This reflects the heterogeneity of financial cycles across the different countries⁽⁵⁾ as well as the need for individual countries to remain able to take specific measures to ensure financial stability, as the responsibilities linked to managing financial crises (of a fiscal nature, among others) have largely remained matters of national provenance⁽⁶⁾,

(1) Regulation (EU) No. 1092/2010 on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board.

(2) Knot (2014).

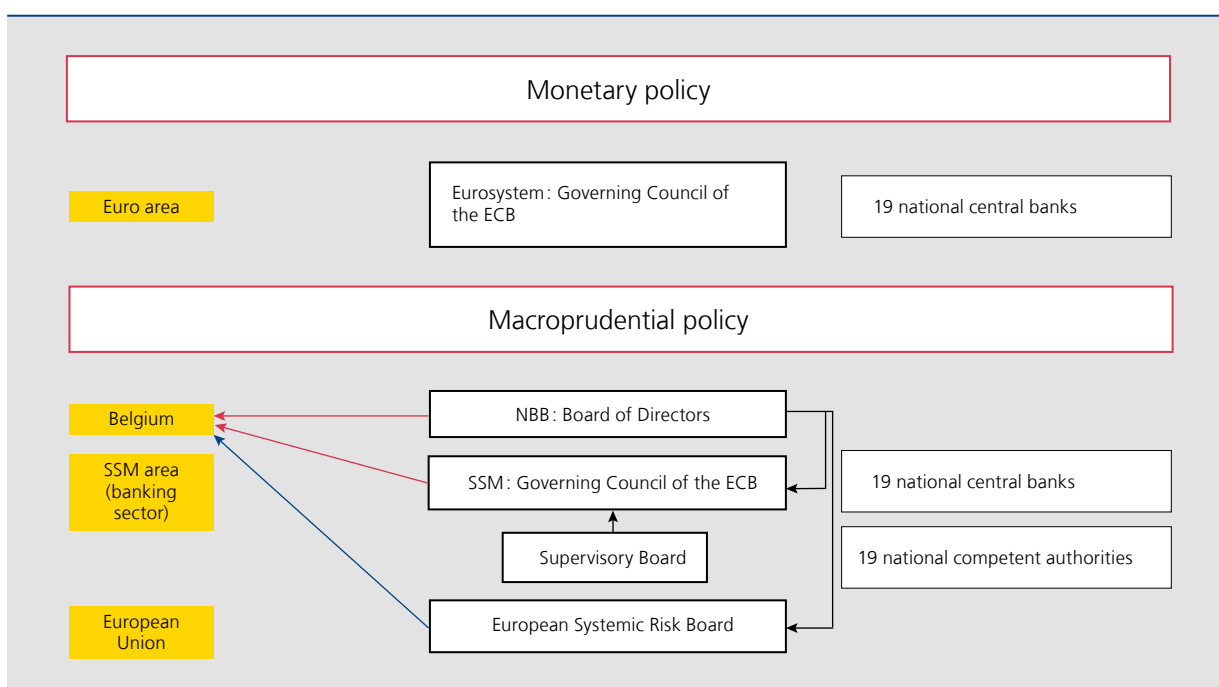
(3) While, in the euro area, the NCBs have transferred to the ECB some or all of their powers – or at least part of their supervision powers –, they remain involved in both implementation and decision-making.

(4) Protocol on the Statutes of the European System of Central Banks and of the European Central Bank.

(5) Constâncio (2014).

(6) NBB (2015).

CHART 2 INSTITUTIONAL FRAMEWORK OF MONETARY AND MACROPRUDENTIAL POLICIES IN BELGIUM



Source: NBB.

Note: The red arrows indicates direct decision-making power; blue stands for recommendations.

and as it is national governments that in the final instance have the authority to take key macroprudential measures given their highly redistributive effect. The supranational institutions, for their part, are expected to facilitate the coordination of national policies between the various countries and to limit any negative spillovers.

In Belgium, the National Bank of Belgium (NBB) is the national macroprudential authority⁽¹⁾. Its Board of Directors is in charge of measures that affect the wider Belgian financial sector⁽²⁾, by using sector-specific instruments. To facilitate coordination with other euro area and EU countries, the Board must inform the supranational institutions – i.e. the ECB and the European Systemic Risk Board (ESRB) – about its intention to take macroprudential measures and take account of any objections before implementing such measures. The Board also has the authority to tighten any macroprudential measures imposed by the ECB that apply to Belgium, and may suggest to the ECB that it impose stricter measures on Belgian banks under the ECB's direct supervision.

The fact that it has been granted banking supervision authority by way of the single supervisory mechanism (SSM), of which all euro area countries are members, implies that the ECB has macroprudential powers that encompass the whole of the SSM area, but also of specific application to some countries. The ECB's powers remain limited to the banking industry and to the instruments specified in the European legislation (CRR/CRD IV⁽³⁾ and the SSM Regulation⁽⁴⁾). If necessary, the ECB may 'top up' measures taken at national level by the competent macroprudential authority. This asymmetric mandate – it does not allow for the possibility to ease measures – has been put in place to prevent national governments from being too lenient in the macroprudential arena. This relates primarily to microprudential measures used for macroprudential purposes, which is why both the new banking supervision structures and

the specific central bank structures are involved in the decision-making process⁽⁵⁾. That said, (macro)prudential tasks must be carried out separately, and without prejudice to the duties under the monetary policy framework⁽⁶⁾ (principle of separation).

The ultimate decision-making authority for macroprudential policies is the ECB's Governing Council. It is supported by the Supervisory Board, which is composed of representatives of the ECB and of the competent authorities of the Member States, and whose responsibilities include analysis and preparation of draft prudential decisions. Such drafts are submitted to the Governing Council for its approval or objection during meetings that are held apart from the monetary policy meetings, in order to ensure separate consultations⁽⁷⁾. If the Governing Council opposes a decision put forward by the Supervisory Board, it has to disclose its reasons, particularly if they relate to monetary policy. In addition, the Governing Council can request the Supervisory Board to submit a proposal related to macroprudential policy or make macroprudential decisions without any input from the Supervisory Board if such a proposal is not forthcoming⁽⁸⁾.

The NCBs that have been appointed national macroprudential authorities – e.g. the NBB for Belgium – are represented both on the ECB's Supervisory Board and on its Governing Council, and are thus involved in the analysis, proposal of measures and decision-making on both macroprudential and monetary matters.

The ECB is also strongly involved in the macroprudential institutional framework of the European Union, as it ensures the secretariat to the ESRB, the principal authority⁽⁹⁾. In the event of systemic risk, the ESRB can issue warnings and recommend measures pertaining to the whole financial sector at both the national and supranational level, in keeping with a 'comply or explain' mechanism. Its recommendations are not exclusively targeted at the relevant macroprudential authorities, but also at other government bodies – including the legislature and the executive. The Board is not competent to implement macroprudential policy instruments directly, but it does exert influence despite its lack of hard power.

The institutional framework for macroprudential policies in the euro area thus implies that decisions relating to macroprudential policies are taken and implemented at various levels (national, SSM/euro area and European Union), unlike monetary policy, which is common for the euro area. Another fundamental feature is that central banks – including the ECB and NBB – are fully involved in the fleshing-out and decision-making on monetary and macroprudential policies at all levels, implying challenges

(1) Belgian Official Gazette (2014).

(2) NBB's macroprudential authority is supplemented with powers entrusted to the Belgian government whenever selected instruments have redistributive implications. For more information about Belgium's macroprudential institutional framework, see NBB (2015).

(3) Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC, and Regulation (EU) No. 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No. 648/2012.

(4) Council Regulation (EU) No. 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions.

(5) Grande (2014).

(6) Council Regulation (EU) No. 1024/2013.

(7) Decision ECB/2014/39 of the European Central Bank of 17 September 2014 on the implementation of the separation between the monetary policy and supervision function of the European Central Bank.

(8) ECB (2014a)

(9) Regulation (EU) No. 1092/2010.

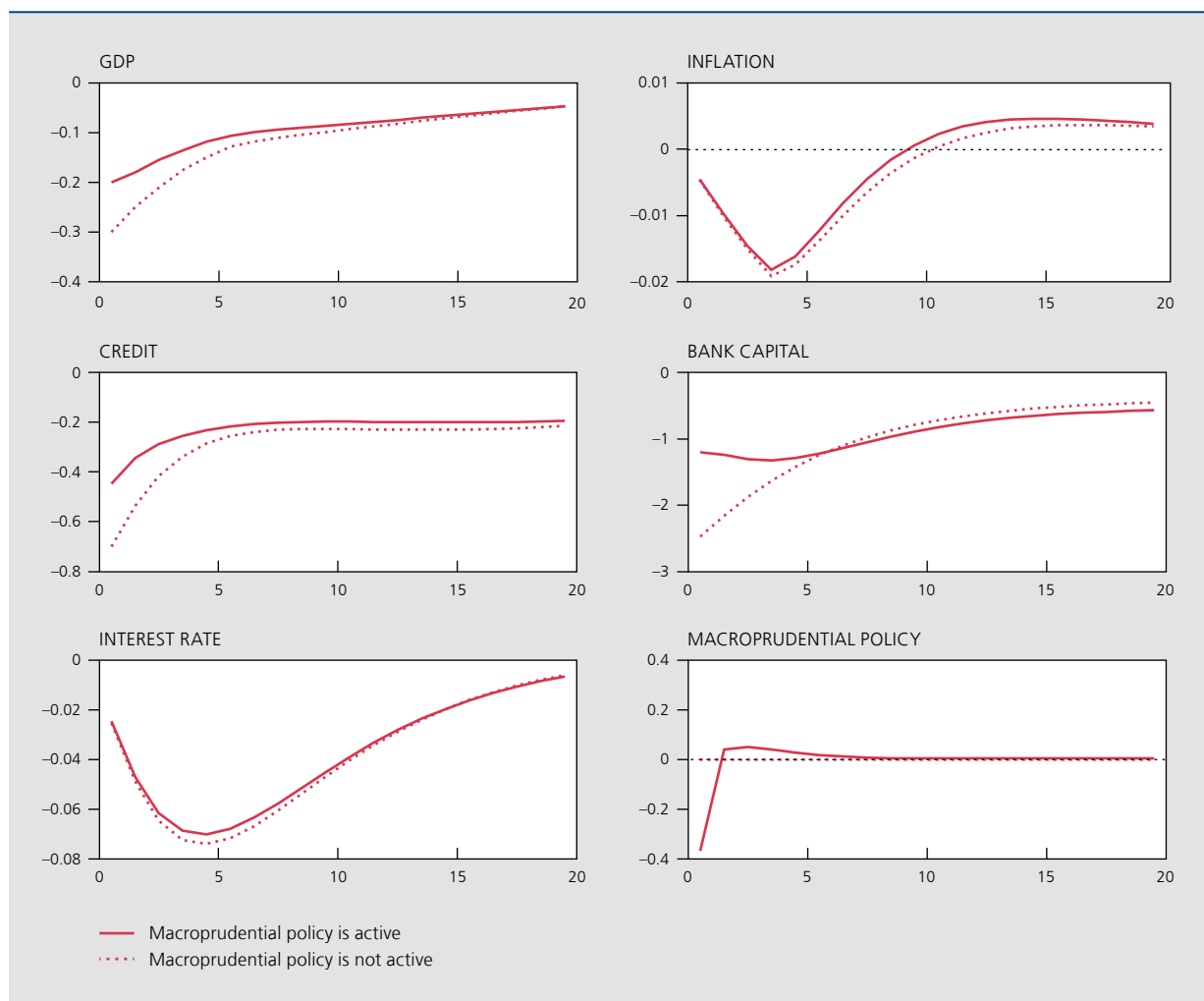
in terms of coordination as well as separation of both domains, even if the law provides for a strict separation of the ECB's monetary and (macro)prudential policy tasks.

2. Trade-offs between price and financial stability

The nature of the interaction between monetary and macroprudential policies is determined by trade-offs between price and financial stability. Drawing on a theoretical model supported by anecdotal real-world evidence, this section will show that the intensity of such trade-offs largely depends on the nature of the shocks that might occur at any particular time.

Taken over the longer term, however, there is little or no trade-off between the two objectives, as price stability is necessary – though not sufficient – for financial stability and vice versa, and as monetary and prudential policies make complementary contributions to a stable macroeconomic environment. That said, real and financial cycles might not always run precisely in tandem, or shocks may occur that cause a temporary trade-off between macroeconomic and financial objectives. In such cases, complementarity may be lacking and the two policy domains may be pulling in opposite directions, as illustrated by simulations of a structural macrofinancial model (Gelain and Ilbas, 2014). It is initially assumed that the economy is in equilibrium, but is then disrupted by a negative demand shock and a positive supply shock, respectively.

CHART 3 ILLUSTRATION OF A NEGATIVE DEMAND SHOCK ⁽¹⁾
(percentage deviations from long-term equilibrium values)



Source: Gelain and Ilbas, 2014.

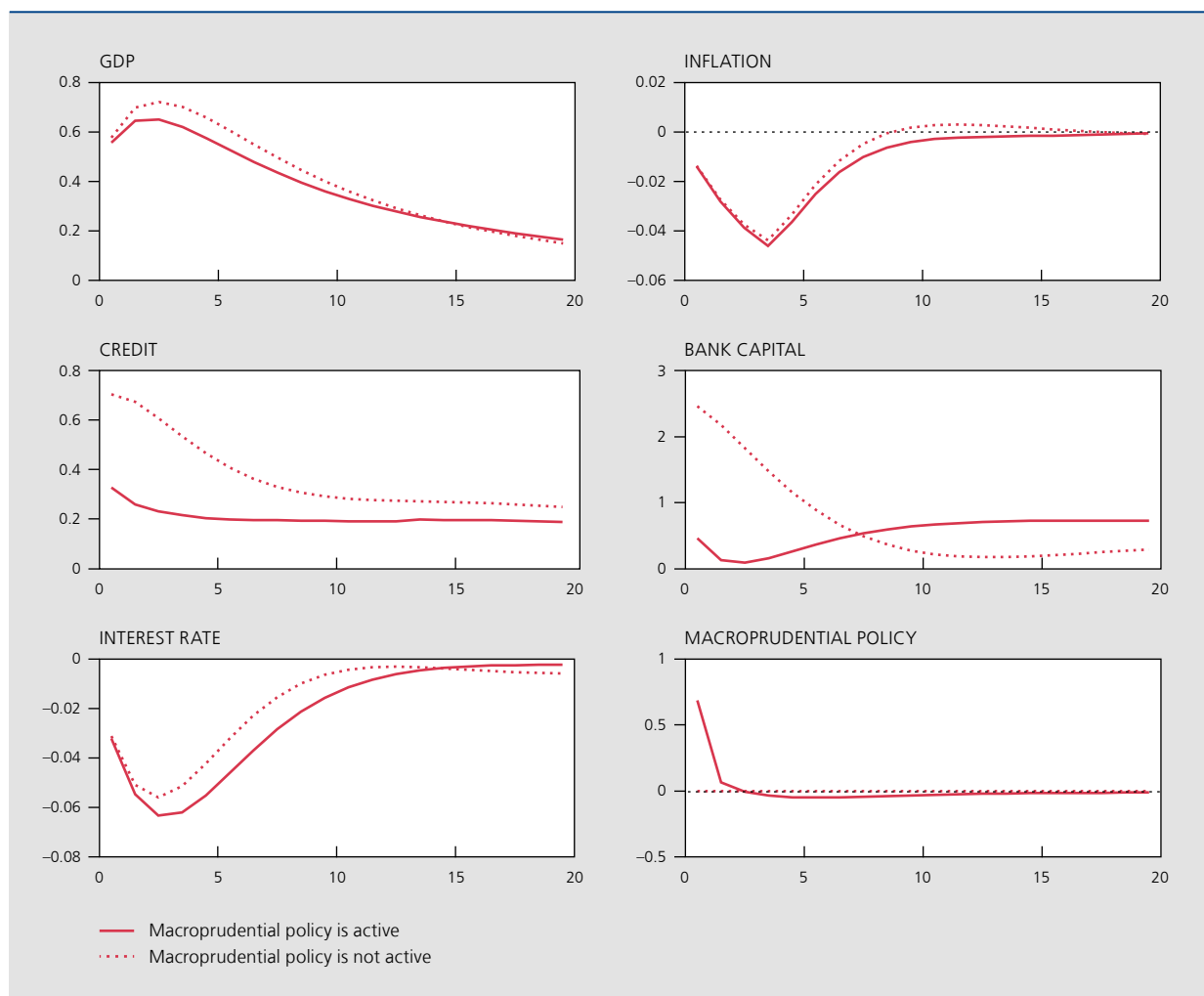
(1) Y-axis: deviation from long-term equilibrium values (as a %); X-axis: time unit (in quarters).

Chart 3 shows a negative demand shock, which may have been triggered by, say, weaker consumer confidence in the wake of bad news and/or turmoil in the financial markets. The shock causes demand for goods and services to fall and capital spending to contract, with GDP shrinking and inflation declining in their wake. Weaker demand also sees lending in the economy and banking capital come down, as the economic slowdown drives up default numbers and puts pressure on banks' profitability and therefore their capital positions.

The chart shows the response of a number of macroeconomic aggregates in percentage deviations from their long-term equilibrium values (Y-axis) over time (in quarters, X-axis) in two alternative scenarios. The first scenario assumes that macroprudential policy is not active (broken line): in response

to the crisis and low inflation, monetary policy would cut the short-term interest rate, while the second scenario reflects what would happen if macroprudential policy were to be activated (unbroken line) in the form of a counter-cyclical tax/subsidy on bank capital. This type of macroprudential policy can also be considered to approximate the operation of a counter-cyclical capital buffer (CCB). Active macroprudential policies would in this case wind down the CCB to spark lending and get demand back on track, with bank capital falling less than in the previous scenario. As the active CCB policy contains the negative effects of the demand shock, the repercussions for the real economy are also smaller and inflation does not fall as sharply. As a consequence, the central bank does not have to cut the short-term interest rate by as much as it would do if no active macroprudential policy were in place.

CHART 4 ILLUSTRATION OF A POSITIVE SUPPLY SHOCK⁽¹⁾
(percentage deviations from long-term equilibrium values)



Source: Gelain and Ilbas, 2014.

(1) Y-axis: deviation from long-term equilibrium values (as a %); X-axis: time unit (in quarters).

This example shows that both policy authorities move in the same direction to get the economy back on track. Both policies are accommodative in reaction to a negative demand shock. Therefore, the measures may be considered complementary, and there is no conflict between price and financial stability.

Such a situation emerged in the euro area between 2008 and 2010, when the demise of Lehman Brothers in the United States in September 2008 sparked a worldwide negative demand shock. Consumer and business confidence nosedived and, coupled with the evaporation of bank credit – a consequence of the financial crisis – caused a deep recession: between the first quarter of 2008 and the second quarter of 2009, euro area GDP dropped 5.8% before picking up again. Euro area core inflation, which does not take account of the direct impact of the volatility of commodity prices (very high in the period under review) came down from an average close to 2% at the end of 2008 and beginning of 2009 to 0.8% in February 2010, in tandem with shrinking GDP. The downward trend in macroeconomic variables was also reflected in credit indicators: bank lending to corporations collapsed, with negative net lending flows in the wake of weak demand, while credit supply suffered dislocations from banks hit hard by the financial crisis.

The authorities responded by applying expansive monetary policies. The ECB dramatically reduced interest rates and provided liquidity to banks, which helped bring down their funding costs. Before the crisis, the importance of macroprudential policy was little known or widespread, and it did not get implemented in the euro area at that moment; impulse responses derived from the model reveal that it would have resulted in an easing of conditions to facilitate lending. As it turned out, the prudential policy actually adopted in the framework of the reforms regulating the financial sector in general and the banking sector in particular may well have had a restrictive impact on lending.

Chart 4 shows a positive supply shock caused, for example, by technological progress. GDP climbs and lending is encouraged – with higher expectations of future earnings prompting additional spending today – while inflation falls. Monetary policy responds to low inflation by cutting the interest rate. When the counter-cyclical macroprudential policy is activated (unbroken line), it will, in response to greater lending, be more restrictive and raise the CCB, for instance. This in turn pushes down

lending and demand, increasing the downward pressure on consumer prices and sparking a further easing of monetary policy.

Contrary to the negative demand shock scenario, the two different authorities are likely to implement conflicting measures and the effects of one set of measures will be partially offset by the other. Monetary policy will ease due to low inflation while macroprudential policy will tighten to clamp down on lending. Obviously, measures are not complementary in this instance and there is a conflict between price stability and financial stability.

In the real world, it is often hard to identify a single significant economic supply shock: unlike demand shocks, which typically happen unexpectedly and rather forcefully, supply shocks usually emerge as a series of smaller shocks. The economic expansion in the euro area between 2003 and 2007 to some degree reflects the features of the positive technological shock described in the framework of our model.

Against the backdrop of the rapid and increasing integration of new economies such as China, India and other emerging countries in the global economy, the euro area had started to import more from cheap production countries in the early 2000s. This downward pressure on the costs of goods used as inputs by euro area corporations can be considered a positive supply shock in so far as it boosted production from firms and so increased supply as compared to demand. In addition, the possibility of outsourcing production to low-cost countries – representing a significant increase in available labour reserves – also added to the economy's supply capacity, albeit less directly.

Inflation was limited in this environment: the year-on-year increase in the GDP deflator, which serves as a price index for the added value produced in an economy, slowed down to 2% on average between 2003 and 2007, compared with 2.5% in the two preceding years⁽¹⁾. At the same time, financial risks emerged, as the increased economic openness sparked a wave of optimism about future incomes. Between 2003 and 2007, this led to an increase in the real average growth of lending to the private sector in the euro area of around 30%, with even higher figures in some peripheral countries (where nominal rates had come down very rapidly in the early 2000s). In an environment in which virtually no macroprudential instruments were put into place, the ECB's monetary policy response was to hike its key interest rates from the end of 2005, from 2% in 2005 to 4.25% by 2008. Indeed, despite relatively low domestic inflation rates, the steep increase in money and in lending called for tighter monetary conditions in as much these developments were considered

(1) It should be noted that commodity prices rose significantly in that period and that overall inflation was therefore on the rise. In the absence of any second-round effects, however, domestic inflation remained relatively low.

to pose a severe risk to price stability over the medium to long term⁽¹⁾. Section 3.2 discusses in some greater depth what the financial cycle looked like in the same period.

3. Should monetary policy lean against the wind?

3.1 Leaning against the wind: what and why?

The previous section has shown that when the economy is hit by a demand shock, monetary and macroprudential policies typically complement each other, with the stability of prices and GDP going hand in hand with financial stability.

In the event of a supply shock, by contrast, policies are not always complementary. For one thing, a positive shock will see GDP – and lending – go up while inflation comes down, as GDP does not rise as far as its full potential because of imperfections in the goods and labour markets. In this scenario, monetary policy will respond to low inflation by lowering the interest rate, while macroprudential policy will focus on increased lending and its concomitant risks and therefore tighten – a clear trade-off between several objectives. The risk of conflicts and coordination failures increases and there is a stronger argument for a joint strategy for monetary and macroprudential policies. The question whether monetary policy should lean against the wind hence becomes more relevant.

Monetary policy is said to "lean against the wind" when it decides to be more restrictive than strictly necessary to ensure price stability in the short to medium term, the aim being to keep the risks to financial stability at a minimum.

Post-crisis, there is little disagreement about the active role that macroprudential policy needs to play to keep financial stability on an even keel, but academics and policy-makers do not yet agree on whether or not monetary policy should lean against the wind and, if so, what the consequences would be for the traditional strategies pursued by central banks aimed at keeping inflation low and stable. Past discussions on whether or not monetary policy should factor in developments in asset prices can be seen as a precursor to today's debate on the degree of coordination between macroprudential and monetary policies. The debate at the time was conducted on a much smaller scale and arguments in favour of an active role for monetary policy on asset prices (see Cecchetti et

al., 2000) were more muted. Counter-arguments included that there were few benefits to responding to asset prices because of the challenges involved in identifying over- and undervaluations, except where this influenced inflation expectations (e.g. Bernanke and Gertler, 2001).

The financial crisis rekindled the debate and raised the question whether monetary policy was actually contributing to the financial imbalances, the argument being that monetary policy should have been more restrictive in the mid-2000s to slow down any build-up of financial imbalances, even though no upward risks threatened price stability at the time (remember, there was no active macroprudential policy in place either). Changes to the key interest rates typically impact debt positions, the quality of assets and risk appetite of banks – all factors that have an impact on the availability and cost of bank loans for borrowers. Borio and Zhu (2008) argue that the risk-taking channel of monetary policy – which clearly links monetary policy and banks' risk appetite and hence bank lending – may be important enough to call for an active role for monetary policy to discourage excessive risk-taking at times of economic expansion (see Adrian and Shin, 2010). Although it has been demonstrated (by Reinhart and Rogoff, 2009, for instance) that all serious financial crises have been preceded by times of very rapid credit growth, the discussion about the degree to which financial stability should be one of the core elements of monetary policy has not been resolved decisively. The new framework for macroprudential policy is likely to have a range of different effects on monetary policy, depending on the views of policy-makers. Two of these opposing views are discussed in some greater depth below.

Those in favour of a more active role for monetary policy in the new framework for macroprudential policies argue that central banks should be given a wider remit than their previous single-minded focus on price stability; that they should factor in the effects of their policies on risk-taking behaviour and where necessary should try to prevent a credit boom, by addressing the build-up of financial imbalances that macroprudential policy may fail to tackle (see De Grauwe, 2008, Borio, 2011). As financial imbalances typically take a relatively long time to build, Bean (2003) suggests that monetary policy should focus on the longer term than is the case today – inflation targets are typically set for the medium term. Woodford (2011) suggests a "natural extension of flexible inflation targeting", in which central banks adopt financial stability objectives in addition to their usual objectives for price stability and output. To assess systemic risk and respond appropriately through the interest rate policy instrument, they will have to take on board both maturity transformation by and the debt positions of financial institutions.

(1) That said, monetary policy remained relatively accommodating in the period despite the increase in key interest rates.

In line with this view, the Sveriges Riksbank chose to raise its key policy rate in the summer of 2010 – i.e. in the aftermath of the crisis – and hence to lean against the wind, in order to contain the growing household debt burden and rising residential property prices.

Those against additional objectives for monetary policy to help achieve financial stability reckon that specific macroprudential instruments – e.g. capital and liquidity buffers, loan-to-value ratios, etc. – are much more efficient means of assuring financial stability than is monetary policy. Svensson (2012) proposes a separation of the two policy domains, and advocates that monetary and macroprudential policies should be separated and that financial stability is only relevant to monetary policy insofar as it influences medium-term prospects for inflation and employment. His line of thought implies no change to the pre-crisis framework concerning the pursuit of inflation objectives. Svensson (2012) also points out that the Sveriges Riskbank's "leaning against the wind" policy has not exactly been a resounding success, and suggests that it came at the cost of lower inflation and higher unemployment figures, which in their turn jeopardised financial stability by increasing the real debt burden of households.

Bernanke (2011) admits that the importance of financial stability was underestimated before the crisis and that it deserves much greater attention, making financial stability as important as price stability and turning these into complementary remits for central banks. He argues that this should not require any massive changes in the current – price stability targeted – monetary policy framework, as it is as yet unclear whether monetary policy provides the appropriate instruments or whether better macroprudential instruments are available.

This view is reflected in the Swiss policy reaction to a worrying increase in the country's debt ratio and rapidly rising prices in its property markets in 2012. The Swiss National Bank has opted not to "lean against the wind" and to stick to its accommodating policies in view of the country's low inflation outlook. Instead of raising key rates, it activated sectoral CCBs at the end of 2012 in order to put the brakes on rising debt ratios and house prices. A year later, the CCB on risk-weighted assets secured by direct or indirect Swiss property holdings was raised from 1 % to 2 %.

In practice, a number of factors would seem to come into play when deciding whether and, if so, to what degree monetary policy should lean against the wind. Section 3.2 touches on two of them: (1) the nature of financial imbalances and whether these are sector-specific or widespread, and (2) whether prudential policy has suitable instruments with which systemic risk can be addressed effectively.

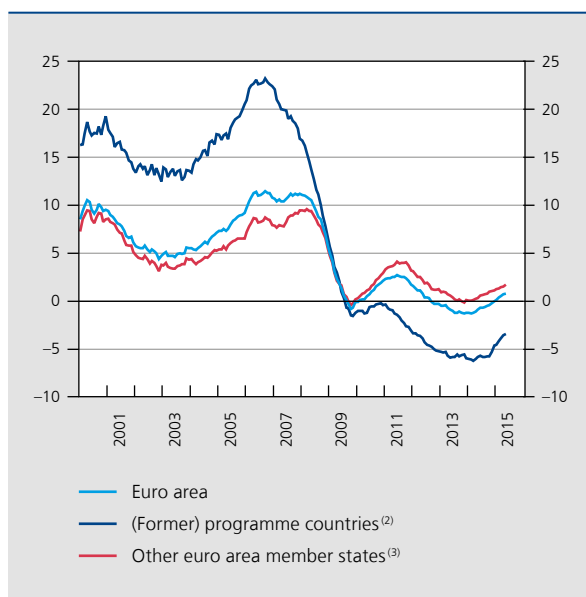
3.2 Specific versus widespread imbalances

An example of sector-specific imbalances would be a bubble in a specific asset market, such as an excessive increase in house prices. If the emergence of a local bubble is suspected, targeted macroprudential measures – such as a reduction in loan-to-value (LTV) ratios – might be better suited than monetary policy to clamp down on the threat to financial stability. After all, using key rates might require quite a significant rise in interest rates, potentially weakening the real economy and eroding price stability.

At euro area level, the arguments in favour of leaning against the wind typically find less favour when imbalances are country-(and/or sector-) specific. Macroprudential instruments are much more likely to provide relief in such cases as these can be adjusted to the specific characteristics of the affected country (and/or sector). Pro-leaning arguments gain traction where the risk of contagion to the rest of the economy increases or when imbalances are emerging at a more aggregate level.

How heterogeneous are financial imbalances in the euro area? Are they widespread or are they limited to a few

CHART 5 GROWTH IN BANK LOANS TO THE PRIVATE SECTOR IN THE EURO AREA⁽¹⁾
(year-on-year percentage changes)



Sources: ECB, NBB.

- (1) Total lending by resident banks to resident households and non-financial corporations, including securitised loans (figures before January 2010 concern lending to non-bank private sector and are not adjusted for securitised loans).
- (2) Greece, Ireland, Portugal and Spain, weighted average based on nominal GDP (excluding Cyprus as no data are available for the full period).
- (3) Excluding Estonia, Latvia, Lithuania, Malta, Slovenia and Slovakia (no data available for the full period); weighted average based on nominal GDP.

countries or sectors? What was the situation before the financial crisis? Apart from differences between sectors, the euro area also shows a significant heterogeneity between countries, and most certainly in terms of the financial cycle. Developments in bank credit growth to households and non-financial corporations illustrate the differences between financial cycles in the various euro area countries.

While turning points are highly correlated, financial cycles in (former) "programme" countries (Greece, Ireland, Portugal and Spain) are typically much more pronounced than in the other euro area countries. On average, (former) programme countries recorded pre-crisis credit growth at twice the pace of that in other Member States, causing a build-up of significant – and country-specific – financial imbalances, which also showed up in rising current account deficits for these countries.

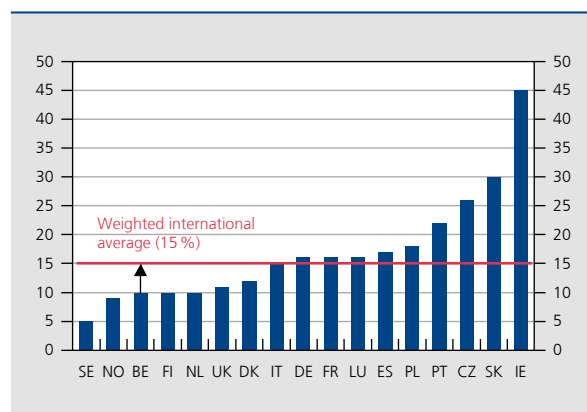
Euro area monetary policy, which focuses on price stability in the Economic and Monetary Union as a whole, is not really equipped to correct such country-specific imbalances, irrespective of whether these arise from asymmetric shocks or from structural differences. Furthermore, if monetary policy were to target countries with overheated credit markets, such adjustments would not resolve the heterogeneity between countries, as such policies might well be too restrictive for other Member States.

In such an environment, (country-specific) macroprudential policies are not just better suited to ensure financial stability; they may also prevent single monetary policy from exacerbating certain imbalances. Also, macroprudential policies have the advantage of being able to target measures more specifically, for instance by imposing a more stringent LTV on mortgage loans, if credit growth is only robust in this particular area.

The question is whether such (national) macroprudential measures would have fully covered financial stability risks in the (former) programme countries in the first decade of EMU's third phase and would have brought their financial cycles more in line with the average in the euro area. In view of their high credit growth, we can suppose, *ex post*, that the CCBs – one of the key pillars of the euro area's new macroprudential policies – would have been imposed in these countries, which would probably have nipped over-robust credit growth in the bud and/or could

(1) Jiménez *et al.* (2012) have found that Spain's introduction of a CCB in 2000 – which was revised in 2005 and 2008 – helped smooth the credit cycle.
 (2) The Bank estimated the additional capital the measure required at € 600 million (see NBB, 2015), though in practice it did not result in an effective increase, as the banks already had sufficient capital in place. In fact, the measure implied a limited reduction of the capital ratio, indicating that the banks took the adjustment largely on the liabilities side and not through any rundown of risk-weighted assets.

CHART 6 MORTGAGE LOAN RISK WEIGHTS: AN INTERNATIONAL COMPARISON⁽¹⁾
 (in %)



Sources: EBA, NBB.
 (1) Risk weights of banks using an IRB model to calculate their regulatory capital requirements. Data as released in the *Fourth report on the consistency of risk weighted assets* (EBA, June 2014).

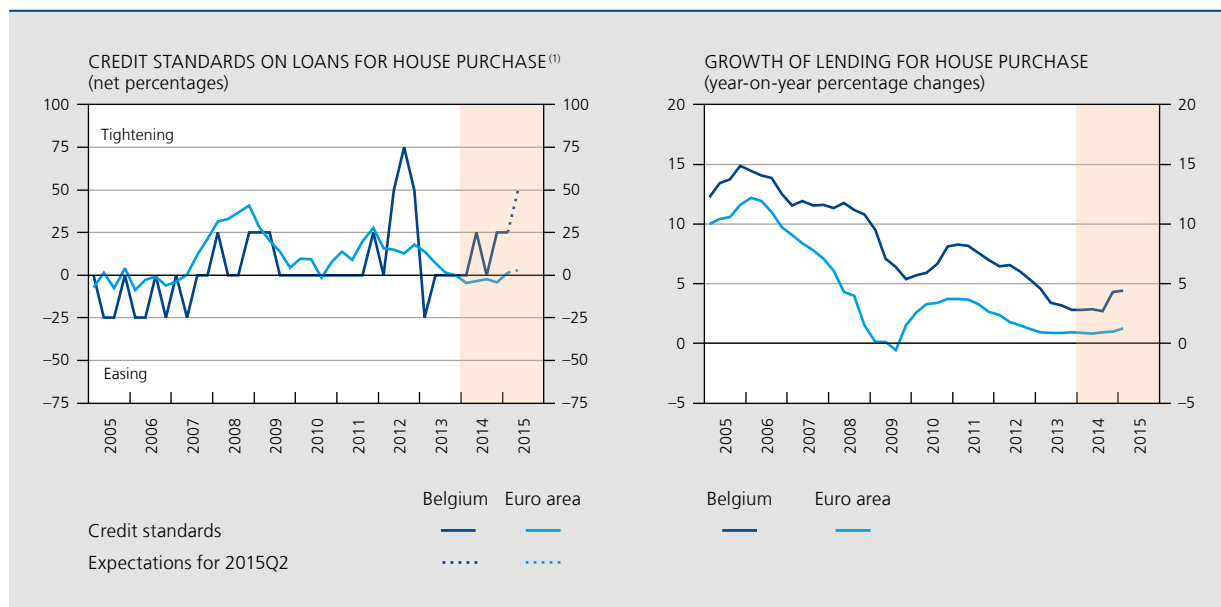
have limited the repercussions of a subsequent "bust" on financial stability⁽¹⁾.

Sector-specific imbalances may also justify the activation of targeted macroprudential instruments. In 2013, the National Bank of Belgium decided that the Belgian housing and mortgage markets were showing signs of potential risks, in particular given the significant increase in house prices and mortgage lending in the preceding decade, and the trend towards easing lending criteria (longer mortgage maturities, larger loans).

At the end of 2013, the Bank deemed it appropriate to draw on its new macroprudential set of tools for the first time, to help make banks more resilient to possible adverse shocks in the mortgage market. More specifically, the Royal Decree dated 8 December 2013 raised by 5 percentage points the risk weights used by banks for mortgage loans, a measure that applied to banks using an internal ratings-based model (IRB). The measure has brought risk weights for Belgian mortgage loans more in line with the average in a number of European countries (from 10 % to 15 %).

Based on the outstanding mortgage loan portfolio at the end of 2013 (€ 165 billion), this implied an increase in risk-weighted assets by € 8.2 billion. Assuming that banks hold the 8 % minimum required capital for these assets, this adds an extra capital requirement of around € 700 million, or 0.2 % of GDP. Alternatively, banks might choose to reduce their risk-weighted assets – though not necessarily their mortgage holdings – to meet this stricter requirement⁽²⁾.

CHART 7 EVALUATING THE MACROPRUDENTIAL MEASURE IN THE BELGIAN MORTGAGE LOAN MARKET



Sources: ECB, NBB.

(1) Net percentage of banks reporting a tightening of credit standards vis-à-vis the previous quarter (Bank Lending Survey).

Evaluating the macroeconomic impact of the measure is not straightforward, but it can be noted that it was relatively limited in scope when compared with some macroprudential measures adopted in other countries⁽¹⁾. That said, some evidence can be found on the basis of banks' credit standards when granting mortgage loans (impact on financial stability) as well as from credit growth developments (macroeconomic impact).

As the Bank Lending Survey reveals, Belgian banks have tightened their credit standards on mortgage loans since the introduction of the measure at the end of 2013, deviating from the trend in the rest of the euro area, where banks have tended to ease their credit standards slightly. These tighter credit standards on housing loans are also in contrast to the easing of credit standards on loans to firms as implemented by Belgian banks in the same period.

Nevertheless, the annual growth rate of mortgage loans in fact increased again by the end of 2014. The accommodating monetary policy – resulting in a further drop in mortgage lending rates – and, at the end of 2014, the expectations of a less favourable tax treatment for

mortgage loans that was introduced in Flanders in 2015, have played a role in this trend.

3.3 Macroprudential instruments and their effectiveness

When addressing the question of whether monetary policy should lean against the wind, we need to investigate, in addition to whether imbalances are widespread or sector-/country-specific, whether macroprudential authorities have access to appropriate instruments to combat systemic risk effectively. After all, there may be doubts about the effectiveness of the instruments one is intending to use, especially if such instruments have never been used before or only in a limited way. The Belgian experience of changing the risk-weighting for mortgage loans appears to be positive, but it is generally too early to assess the impact of macroprudential measures, most of which have been taken only since the financial crisis.

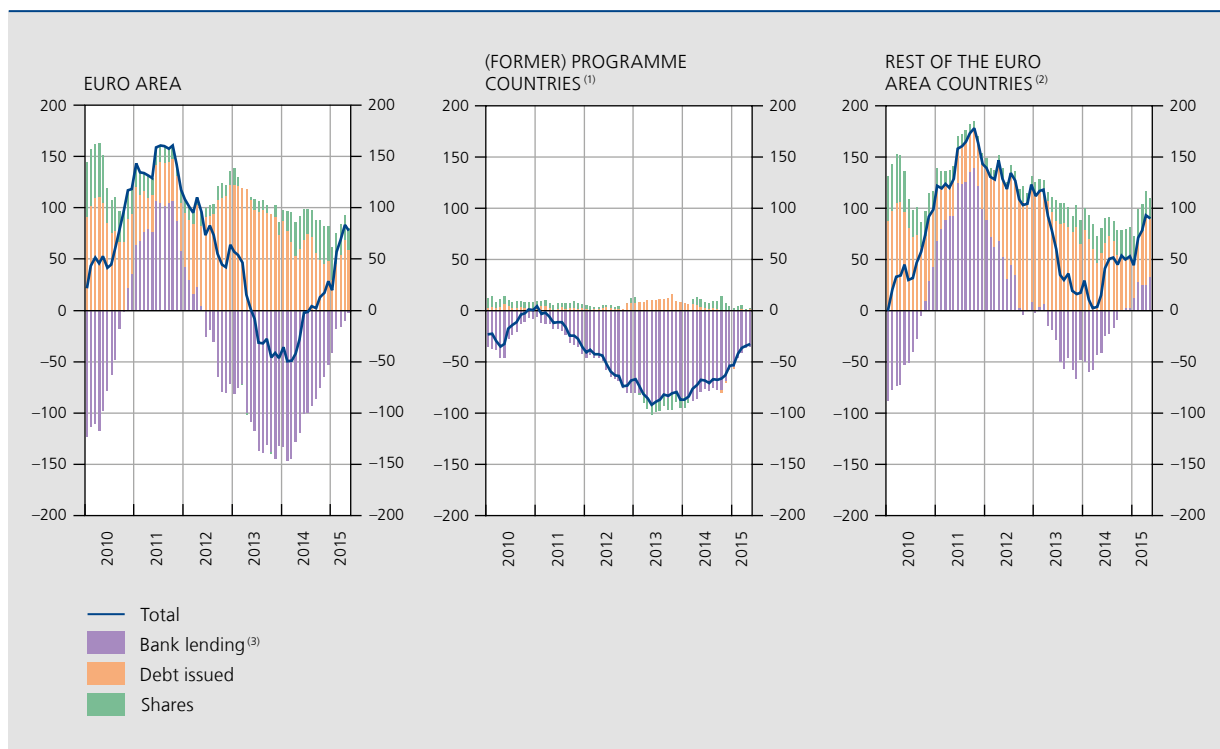
Also, the impact of the instruments might change over time as financial markets will always look for ways to sidestep rules and legislation, and regulatory flexibility and alertness will remain imperative if systemic risk is to be addressed successfully.

In the case of half-hearted and inefficient prudential policies, it may indeed be desirable for monetary policy to lean against the wind, as it can help temper the financial cycle

(1) In the Netherlands, for instance, De Nederlandsche Bank (DNB) imposed an additional systemic buffer of 3% of total risk-weighted assets (and a buffer of 1% for the fourth largest bank). According to the DNB, the three major banks account for over 80% of the Dutch market (DNB, 2012). Note that this measure attempts to contain systemic risk and does not directly compare with the targeted mortgage loan measure in Belgium.

CHART 8 SOURCES OF EXTERNAL FUNDING FOR NON-FINANCIAL CORPORATIONS IN THE EURO AREA

(in € billion, flows cumulated over 12 months)



Source: ECB.

(1) Cyprus, Spain, Greece, Ireland and Portugal.

(2) With the exception of Lithuania.

(3) Adjusted for securitisation, except for Belgium and Italy.

when prudential measures prove not very effective. Raising the risk-free rate – a typical monetary policy instrument and the starting point for pricing assets and credit – is felt throughout the financial system, even in sectors where prudential rules are less applicable, such as in shadow banking (“It gets in all the cracks”, as former member of the Federal Reserve Board Jeremy Stein stated in a 2013 speech).

The effectiveness of macroprudential policy is primarily threatened by the potential shift from regulated sectors to sectors governed by less strict rules. A potential case in point – and one that might make macroprudential rules much less effective – is that, increasingly in the euro area, market funding is stepping into the gap left by banking finance to corporations⁽¹⁾.

Post-crisis, corporations have increasingly been tapping the markets for their funding, largely offsetting the contraction in

bank loans in some countries of the euro area – a trend that has gone hand in hand with the expansion of the non-banking financial sector (including so-called “shadow banking”).

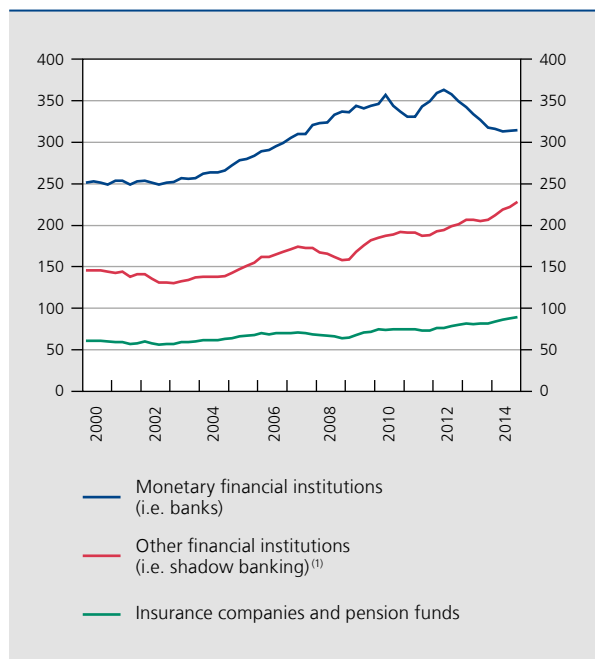
On the one hand, the growth of non-banking financial sectors has diversified sources of external funding in a highly bank-dominated financial intermediation industry, and such expansion of the capital markets might actually make the financial system in the euro area more stable.

On the other hand, however, from a macroprudential perspective this might give rise to some concern over the growth of non-banking sectors for financial intermediation⁽²⁾, as the banking industry is rigorously regulated and controlled when compared with other financial sectors – and all the more so since the financial crisis. There is a real risk, then, that financial vulnerabilities are shifted to less strictly regulated institutions. In such a climate, as we observed above, monetary policy may, in the absence of regulatory instruments to address such concerns, help to contain a potential bubble by raising interest rates, which should percolate through to all sectors of the economy

(1) Some authors (Herman, Igan and Solé, 2015) note that such shifts may also occur in response to a monetary-policy-sparked interest rate change, which affects the various subsectors (banking and non-banking) of the financial industry differently.

(2) The rapid rise of shadow banking is identified as one of the main threats to financial stability in the ECB’s Financial Stability Review published in May 2015.

CHART 9 FINANCIAL SECTOR ASSETS IN THE EURO AREA
(in % of GDP)



Sources: ECB, NBB.

(1) Defined as non-monetary investment funds, other financial intermediaries, financial auxiliaries and captive financial institutions and money lenders.

and all segments of the financial markets. This is why it is important to extend (macro)prudential powers to non-bank financial sectors, and particularly to shadow banking.

4. Does current monetary policy in the euro area pose a threat to financial stability?

This final section will discuss in greater detail the current assessment of the trade-off between assuring price stability and financial stability in the euro area. In order to safeguard price stability, the Eurosystem is currently pursuing a markedly accommodative monetary policy. After policy rates had reached their lower bound in September 2014, the ECB started buying ABS and covered bonds in the autumn of that year. In January 2015, the Governing Council moved to combine these programmes into an expanded asset purchase programme (APP) for mainly government bonds, with monthly purchases amounting to €60 billion. The Council intends to run the programme until the end of September 2016 and, in any case, until it sees a sustained adjustment in the path of inflation that is consistent with its aim of achieving inflation rates below, but close to, 2% over the medium term. Both the APP announcement and its actual implementation have depressed short-term

as well as long-term rates, both nominal and real – i.e. adjusted for inflation expectations. The monetary boost has now also reached households and corporations, as interest rates on new loans have been coming down significantly since mid-2014, whereas they had been virtually unchanged in the previous months.

Meanwhile, some signs are now also pointing at risks to financial stability, and these may not be unconnected with recent monetary policy measures, which imply a significant amount of liquidity being pumped into the financial system and noticeable effects on market rates. For one thing, share prices have gone up sharply, while risk premiums in the bond markets are very low indeed and some institutions such as the IMF (2015) – as well as the NBB (2015) – have warned that low nominal rates threaten to weigh on the profitability of banks and insurers.

The APP's impact on the financial markets typically runs via three channels. First off, the announcement of such a major, never-used monetary policy instrument sends a strong signal that the central bank is taking its mandate – i.e. ensuring price stability – very seriously indeed. This boosts central bank credibility and helps anchor inflation expectations around its stated target. In addition to this all-encompassing first channel, there is the immediate impetus to prices from assets so purchased, reducing long-term nominal rates. Lastly, market participants are likely to rebalance their portfolios, as individual sellers of assets will typically use the central bank reserves or bank deposits they have been paid to make new investments.

Accommodative monetary policy benefits macroeconomic stability through these three channels: real interest rates fall as direct effects squeeze nominal rates and as the signalling effect stabilises inflation expectations. Portfolio rebalancing pushes up the value of risky assets, allowing less highly rated economic agents to also secure funding. Meanwhile, the three channels – and particularly the immediate downward pressure on nominal rates and the portfolio rebalancing – also pose risks to financial stability, if they trigger an excessive search for yield or cause economic agents with fixed nominal return objectives to get into trouble, e.g. life insurers that have committed themselves to specific minimum returns.

4.1 Current trade-offs – three considerations

To adequately gauge the trade-offs between price stability and financial stability, three main factors come into play.

The first is straightforward: the primary objective of monetary policy in the euro area is to ensure price stability. There is little doubt that risks to price stability were

on the downside in mid-January 2015: in the preceding months, inflation had plumbed greater depths than had been anticipated and inflation expectations had fallen, even those for the longer term. With policy rates at their lower bound, non-conventional monetary policy, or the active use of the central bank balance sheet as a monetary policy instrument, was the next logical step.

The second aspect is rather more subtle. On the surface, the asset purchase programme does indeed seem to spell trouble for financial stability, but its risks should be compared to those that would have emerged if monetary policy had not provided further stimulus, but had let disinflation run its course and slide into deflation. This would have had devastating effects on financial stability, as it would have put downward pressure on nominal incomes – from labour as well as capital or wealth – implying that nominal debt would have weighed more heavily: a debt deflation scenario that might trigger larger default numbers. In addition, permanently low inflation would also imply permanently low nominal rates. This would not only have negative consequences for financial stability (as we describe below) but would also mean that it would no longer be possible to make full use of monetary policy to help stabilise the economy (because of the lower bound on nominal interest rates) – a real problem for financial stability also, which benefits from a less volatile macro-economic environment.

However, positive spillover effects on financial stability via macroeconomic stabilisation are not visible immediately, and tend to support financial stability only indirectly, in contrast to the clearly identifiable effects of monetary policy accommodation on the valuations of selected asset classes. And although monetary policy does act as a positive influence on financial stability via macroeconomic stabilisation, its effect on the financial markets, and on the banking and non-banking financial sector (including shadow banking), should be tracked closely.

A third and final factor in this context is that, although valuations in selected markets have increased considerably, lending in the euro area has stayed fairly anaemic and the process of balance sheet strengthening has continued unabated, both in the banking industry and in the non-financial private sector. What is more, residual risks can be addressed via targeted (macro)prudential instruments, as – in contrast to the pre-crisis period – there is now a framework in place to use such instruments more swiftly

and smoothly. Section 4.2 illustrates all three aspects for a sector often identified as hard hit by accommodating monetary policy: (life) insurance.

4.2 Risks of too-low inflation: monetary policy and the (life) insurance industry

The APP had pushed down long-term nominal rates to record lows by mid-April 2015 and there has only been a subdued revival since. Insurers are often mentioned as the one group that will see profitability come under pressure if this situation persists.

To assess how exposed insurers are, there are two elements that we need to consider. The corporations most vulnerable to lengthy periods of low interest rates are those that face a bigger mismatch between the duration of assets and liabilities – i.e. their assets have shorter durations than their liabilities – and a bigger legacy of contracts (liabilities) with high nominal returns (see ECB (2015), p. 12).

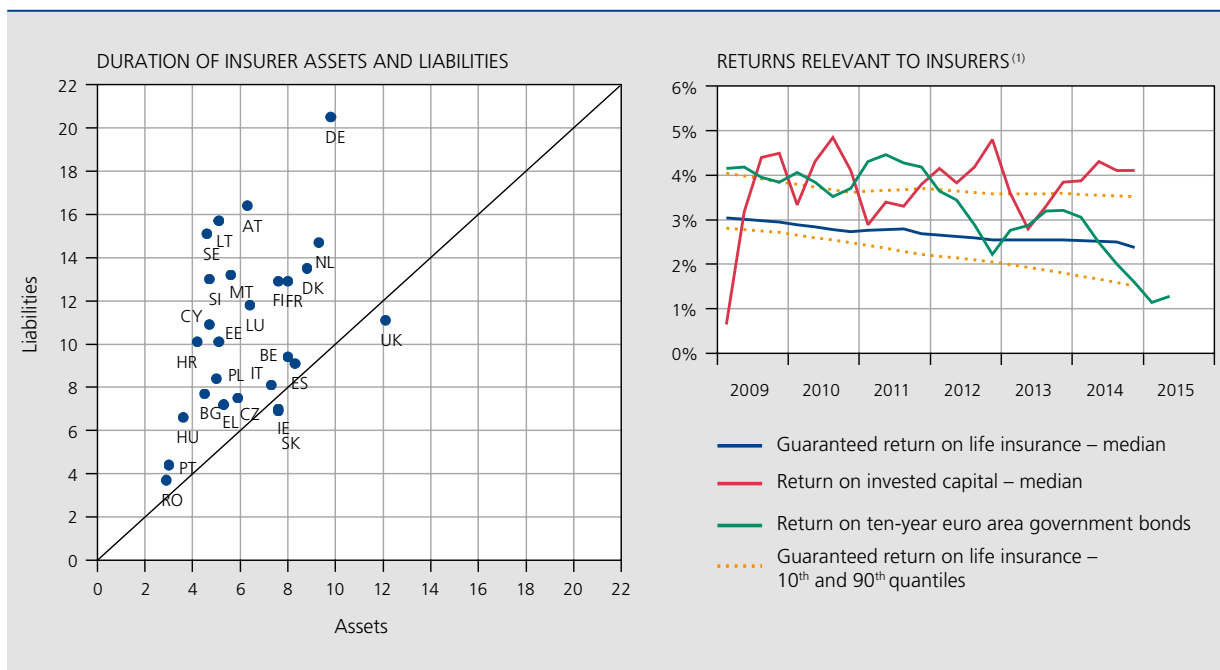
If there is no duration mismatch between assets and liabilities, insurers do not see their profitability slashed by falling interest rates triggering revaluations of their balance sheet positions: in fact, discounted values rise just as fast on both sides of the balance sheet and no capital shortfalls emerge. Lower interest rates do not just imply higher discounted values of future liabilities, they similarly affect long-term assets⁽¹⁾.

That said, insurers' assets generally have shorter durations than their liabilities and EIOPA data (2014) show that the mismatch is typically bigger in the northern euro area countries (Germany, Austria, the Netherlands, Finland). Hence, the potential repercussions of today's monetary policy are not only sector-specific, they are even more pronounced in some countries for one single sector.

Their assets having shorter durations than their liabilities in some countries poses a challenge to these corporations: when they mature, these assets will have to be reinvested at lower rates. The problem gets even worse if the liabilities on their balance sheet come with high guaranteed returns, which was common practice at a time when nominal interest rates were much higher than they are today. The right panel of chart 10 illustrates that these guaranteed returns currently exceed returns on government paper in the euro area – a challenge for insurers. The chart also shows that returns on investment have gone up in the past few years on the back of higher equity and bond prices – as accommodating monetary policies support returns by producing capital gains.

(1) See page 22 of IMF (2015): "In the past three years, European life insurers' equities have paid one of the most attractive dividends, outperforming on the back of waning euro area fragmentation risk, high capital gains on bond holdings, and the release of excess capital due to lower claims inflation."

CHART 10 INSURERS AND LOW INTEREST RATES



Sources: EIOPA, ECB.

(1) The data reveal the annually guaranteed returns for insurers that have actually issued such guarantees.

Paradoxically, the current very low interest rate environment also creates the best conditions to ensure the future financial health of the insurers, precisely because these low-interest policies are supposed to breathe new life into the economy and get inflation back up – a sure route towards higher interest rates. In that context, it is instructive to investigate what are the driving forces behind these low nominal rates.

Chart 11 breaks down ten-year rates on AAA-rated government paper in the euro area: long-term nominal rates contain a compensation for expected inflation (measured here in terms of ten-year inflation swaps) and an implicit real interest rate (measured as the difference between nominal rates and the inflation swap). The chart does not explicitly allow for the role played by risk premiums (intended to compensate for risks related to, for example, long durations or liquidity of the instruments).

In the pre-crisis 2005-2007 period, long-term interest rates stood at around 3.8 %, breaking down into inflation compensation of nearly 2.2 % and real interest rates of 1.6 %. This latter percentage more or less equalled the economy's

potential growth⁽¹⁾, which makes sense as long-term real interest rates typically tie in closely with this.

Just before the ECB announced its APP in December 2014, nominal ten-year rates had come down to 75 basis points, while implicit real interest rates had turned slightly negative in the wake of previous monetary policy easing plus the expectation of a future expanded asset purchase programme. In fact, real interest rates had dipped below potential growth – a monetary stimulus. However, inflation expectations had also fallen sharply: in December 2014, the financial markets were pricing in average inflation for the next decade of a mere 1.2 %, well below the Eurosystem's objective and significantly lower than the 2.2 % inflation compensation seen in 2005-2007⁽²⁾. In other words, the subdued inflation outlook was also contributing to low long-term nominal rates.

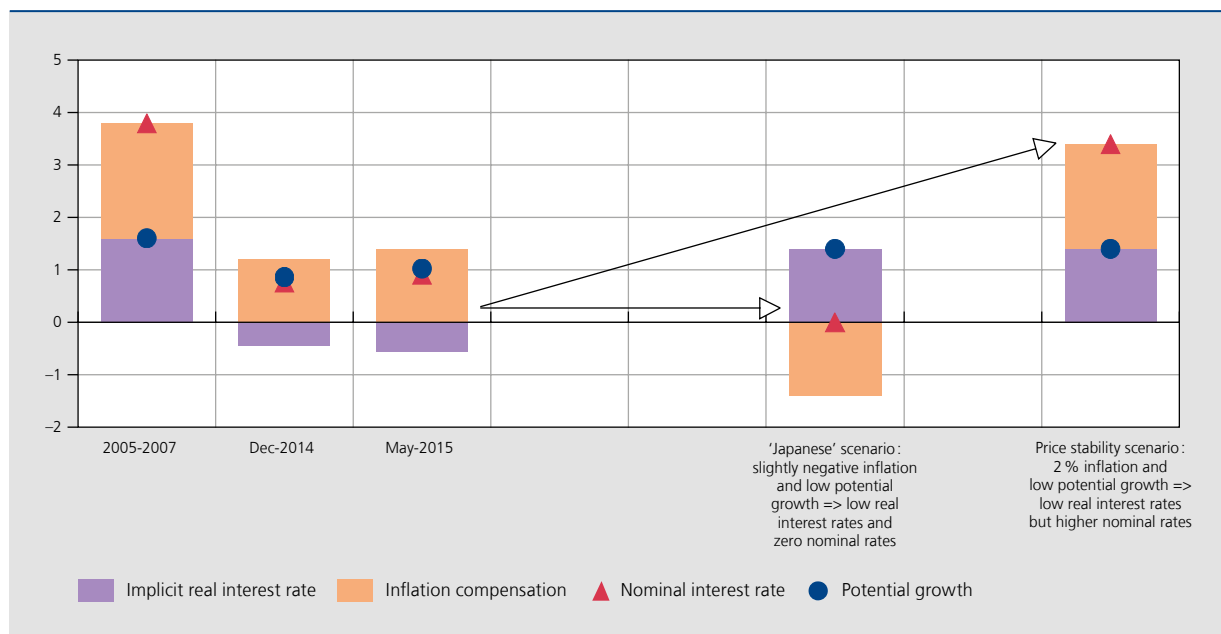
In June 2015, after a few months of APP, long-term nominal rates had moved somewhat higher than in December 2014, to 88 basis points. When broken down, however, these nominal rates were clearly more growth-friendly than in December: higher inflation expectations imply lower ex ante real interest rates and more monetary stimulus.

The ECB's APP has significantly reduced the chances of interest rates getting stuck in a 'Japanese' scenario

(1) OECD forecasts.

(2) This 2.2 % inflation compensation in the pre-crisis period is not necessarily inconsistent with inflation expectations "below, but close to, 2 %" as different types of risk premiums (e.g. liquidity premiums) influence the price of these inflation swaps. This analysis does not explicitly identify these premiums.

CHART 11 TWO LONG-TERM SCENARIOS FOR TEN-YEAR NOMINAL RATES
(as a %)



Sources: Bloomberg, EC, ECB.

of deflation and decades of interest rates close to zero, even in the longer maturities. A 'Japanese' scenario here suggests a "passive" monetary policy not actively combating falling inflation. It implies an acceptance of disinflation and economies sliding into permanently low or even negative inflation, and so also into low nominal rates. This particular scenario may bring about a new equilibrium in which nominal rates equal zero, while prices fall at a pace implying real interest rates on a par with the potential growth of the economy⁽¹⁾ (and with real interest rates neither stimulative nor restrictive to growth). This scenario is outlined by Bullard (2010) and also covered by Boeckx, Butzen, Cordemans and Ide (2015).

The APP attempts to prevent just such a scenario by putting downward pressure on real interest rates and thus kick-starting the economy as well as inflation. Under this scenario, nominal rates should eventually also turn higher, as inflation expectations amount to around 2% and real interest rates approximate potential growth.

Our analysis shows that the APP helps to ward off the threat of low nominal rates – for insurers, say – by stabilising its inflation component. However, real interest rates

(1) To arrive at equilibrium real rates, the analysis used long-term potential growth in the euro area as projected by the OECD.

over a longer horizon are outside the control of monetary policy, as these tend to reflect potential growth. And potential growth depends on factors unrelated to monetary policy, such as technological advances, demographics and labour market policies.

Should potential growth – for various reasons – languish below past levels (and international institutions expect it will), prudential policy may have a part to play in incorporating this new "real reality", for instance when setting return guarantees on life insurance. In addition, the regulator should also actively monitor whether corporations (continue to) pursue appropriate asset liability management and do not get tempted into an excessive search for yield (as noted above) or by selling off high-coupon bonds too hastily as they record high prices due to low interest rates.

The NBB (2015) discusses in greater detail the prudential measures the Bank has taken in its capacity as the insurance industry's regulator. Within the framework of Belgian insurance laws, the Bank puts a proposal to the competent minister to adjust the mechanism of maximum rates on individual long-term insurance contracts. The Bank also recommends that insurers move cautiously on locking in capital gains in light of the environment of low interest rates. Its 2013 decision – calling for the creation of a so-called "flashing-light provision" as additional provision to cushion interest rate risks – also still applies.

Conclusions

The Tinbergen principle states that, for economic policy to be successful, there should be at least one instrument for each objective. It is within this framework that the ECB has been given macroprudential responsibilities to ensure financial stability, while keeping its (macro)prudential objectives separate from its duty to ensure price stability.

However, this does not imply that, in addition to synergies, trade-offs between macroeconomic and financial objectives might arise. Interaction between the two policy domains is therefore inevitable.

Although monetary policy does not have macroprudential objectives, a "leaning against the wind" policy might be appropriate when financial imbalances are widespread or if sufficiently effective prudential instruments are not available.

In the current context, expansive monetary policies appear justified as the economy shows no signs of widespread, excessive risk behaviour, as monetary policy in fact has positive spillovers on financial stability via macroeconomic stabilisation, and as targeted macroprudential instruments are available to help address risks that might emerge.

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