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New Paradigms in Central Banking?

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New Paradigms in Central Banking?

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Abstract

This paper reviews whether and how the ongoing financial crisis has influenced central banking policy practice. Taking a historical perspective, it argues that throughout the existence of central banks the main objective has remained the same—stability. What has been evolving over time, and has been influenced by the crisis, is our understanding about how to achieve and maintain stability over time. The paper focuses on the role and relative importance of price stability, economic stability and financial stability arguing that while the crisis has not materially shifted views regarding the monetary policy framework, it has highlighted the need for greater emphasis on financial stability than was appreciated before the crisis. It further argues that central banks must not only have a strong role in macro-prudential supervision but have more direct involvement in micro-supervision of the banking sector. Lastly, the paper argues that the crisis has reaffirmed that strong economic governance is a prerequisite for stability in a monetary union and, in the context of the euro area sovereign crisis, discusses the tremendous costs stemming from lack of sufficient progress regarding economic governance going forward.

Keywords: Monetary policy, financial stability, economic governance, micro-prudential supervision, macro-prudential supervision.

JEL Classification: E52, E58, E63.

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Introduction

The topic of this year's colloquium: "New Paradigms in Money and Finance?" and the invitation to talk about central banking in this context could hardly be more inviting for a career central banker like myself. In this light, I would like to express my appreciation to the organisers for the invitation to deliver this year's Marjolin Lecture. The overall objective of the colloquium is to consider the extent to which the financial crisis we are experiencing has an impact on theoretical and policy paradigms in monetary economics and policy, banking, financial markets, regulation and supervision. The colloquium was organised around three closely related questions: (1) new paradigms in monetary theory and policy? (2) new paradigms in banking and financial markets? and (3) new paradigms in financial regulation and supervision? This led me to organise my remarks around an additional question: new paradigms in central banking?

To assess whether we are moving towards new paradigms, we need to examine things in a historical perspective. Central banking is a relatively young activity and profession. Only a handful of central banks around the world are more than 200 years old and in most countries central banks are younger than 100 years. I would argue that throughout the existence of central banks, the main task has remained the same. In one word: stability. Stability has always been the business of central banking. What has been changing over the history of central banking, and what may be influenced by the experience of the current crisis, is the understanding by central bankers, governments and society in general about what element of stability central banks should focus on, what powers they have in order to do their job and what factors may facilitate or constrain their task.

Our understanding about how to achieve and maintain stability has been evolving over time. One way to see this is to consider different aspects of stability and the relative emphasis given to these over time. Consider price

stability, financial stability and economic stability. Views about the relative importance of each of these as specific objectives for central banks have evolved over time and, I would argue, are again being influenced by the ongoing crisis. Views about the overall policy framework of central banks, including the scope of their responsibilities, as well as views regarding operational aspects of policy towards achieving and maintaining stability, have also evolved over time and are being influenced by the ongoing crisis.

The rest of my talk is organised as follows: I will focus on whether and how the crisis has influenced thinking in a few specific areas. The pre-crisis consensus views have not shifted as a result of the crisis in some areas but have shifted in others. In the next section, I will touch upon the institutional framework and the strategy of monetary policy and I will then turn to the interaction of monetary policy and financial stability as well as recent developments regarding macro-prudential supervision. Finally, I will discuss the interaction of monetary policy and economic governance which I find to be one of the most vexing issues we face in Europe today, and something that requires immediate attention to restore stability.

Institutional framework and strategy of monetary policy

Let me talk first about the institutional framework of monetary policy. This is an area where I believe views about best practices have not shifted materially as a result of the crisis. Two key elements I would like to highlight are the independence of the central bank and the primacy of price stability as a monetary policy objective.

Consider first the role of price stability. Over the past few decades, price stability has been accepted as the main objective of a central bank, a precondition for attaining overall stability in an economy. But there are numerous examples where central banks have failed to achieve this objective. History suggests that if the central bank places insufficient attention on maintaining price stability, overall stability eventually suffers. For example,

in Europe during the 1970s and 1980s considerable economic malaise was experienced when inflation was allowed to be ingrained. In some states inflation was tolerated for a time in the belief that it might facilitate better outcomes regarding economic growth and employment. In the event, the opposite occurred—stagflation.

Next we consider the importance attributed to central bank independence. That is, ensuring that monetary policy remains independent of politics. In the European Union, for example, we live in democracies and recognise the issues that may arise when political motivations have the potential to influence some decisions. One of the limitations of democracies is that some discretionary political decisions may at times be more myopic than would be desirable for social welfare. The electoral calendar may prompt a government facing an unfriendly electorate to not fully account for the negative consequences of a policy decision far into the future if it provides the appearance of short-term gains that might provide an electoral benefit. The temptation to generate inflation has exactly these characteristics. Pursuing inflationary policies for some time may provide the appearance of faster growth and greater employment in the short-run while the detrimental effects may be recognised with considerable lags. Thus, if democratic governments have discretionary power over monetary policy, socially inefficient inflationary policies might be pursued at times. Having recognised the potential social inefficiency of political interference in monetary policy under these circumstances, our democracies have agreed to safeguard central bank independence in order to ensure that central banks can deliver on the primary task of price stability over time. In this manner, political influences determining potentially short-term inflationary dynamics that could be detrimental to welfare as a whole are avoided.

Let me now turn to the strategy of monetary policy. A broad consensus had developed before the crisis on a number of issues in this area. I would like to highlight four elements that summarise how I interpret the consensus that emerged on best policy practice. The first element is the usefulness of a

clear definition of the central bank's price stability objective. Most central banks around the world by now have a clear numerical definition of price stability, and even in those cases where a formal numerical definition has not been adopted, an implicit definition is communicated and respected. The second element is a forward-looking policy orientation. Such an orientation is essential for policy to account properly for anticipated developments in the economy and the lags in the transmission of policy. In addition, a forward looking policy orientation is essential to incorporate information about expectations that businesses and households hold about economic prospects since such expectations influence current behaviour and economic outcomes. The third is the focus on maintaining well-anchored inflation expectations over the medium and longer term. This is an area where the academic work on the formation of expectations, starting with the rational expectations revolution and continuing with the learning literature, has helped us better comprehend how expectations are formed by households and businesses and has played a key role in enhancing our understanding of their role for policy. When private inflation expectations become unmoored from the central bank's objectives, macroeconomic stabilisation suffers as well. Indeed, the crisis has offered additional evidence reaffirming the stabilising role of well-anchored expectations, especially when the economy is under stress. Well-anchored inflation expectations facilitate the monetary policy response to adverse supply shocks, thereby enabling central banks to better stabilise economic fluctuations. The fourth is the recognition that policy must be systematic, based on a contingency plan or well understood policy rule, rather than purely discretionary in nature. Unsystematic policy has serious drawbacks in that its inherent unpredictability can mislead and confuse market participants, businesses and households.

An area where a consensus was not clear cut prior to the crisis and debate is continuing concerns how ambitious monetary policy should be in dampening economic fluctuations, in addition to the pursuit of price stability. The debate can be framed as a comparison of simplicity and robustness

versus perceived optimality. Does a complex optimal policy rule obtained from a policy evaluation experiment on the basis of a macroeconomic model provide a solid basis for formulating policy in practice or are better policy outcomes to be expected over time if policymakers are guided by simple rules that are robust to model misspecification and uncertainty? Another related way of framing the debate is in terms of policy activism versus a stability-oriented policy approach. The activist view suggests that, in addition to price stability, an equally important goal of monetary policy is to guide the economy towards attainment of its ideal "potential" level of activity. That is, an important guide to policy is the "output gap", which measures how far GDP deviates from its potential. In contrast to the activist view, the stability-oriented approach could be characterised as attempting to dampen economic fluctuations by promoting stable economic growth over time, subject to a primary focus on maintaining price stability.

The two alternative ways to frame this question are related in that the answers economists give are informed importantly about their views on the limits of our knowledge about the economy. Those who trust that our understanding of the economy, as reflected by empirical measurement and estimated models, is sufficiently complete, tend to support greater policy activism and trust more model-derived optimal policy recommendations. Those who acknowledge how limited our knowledge is tend to be more modest. They trust more simple and robust policy guides and are content not to guide policy decisions in pursuit of the economy's elusive "potential" at the risk of price stability.

By experience, central bankers appreciate much more how imperfect our knowledge regarding the economy is and, as a result, they tend to be less activist than is often suggested as best practice in the academic literature. At times this can create a disconnect between theory and practice. A theoretical modeller can assume that central bankers and every other agent in a model have much more information about the economic system than they actually do. On the basis of that assumption, an optimal policy can be formulated and

then actual policy decisions can be contrasted against that theoretical optimum. A central banker can be criticised for not acting "optimally" simply because in the model he is assumed to know things which in reality he does not. Similarly, the modeller can be critical of businesses or households for not forming their expectations "efficiently" because their forecasts deviate from what the model would have suggested simply because they cannot form expectations in the manner the model assumes.

Our experience during the crisis has given us more reasons to be cautious with the activist approach. Let me provide an example. Let p and q denote (the logarithms of) the price level and real output, respectively, and define the rate of inflation $\pi \equiv \Delta p$. Using "stars" to mark the ideal target values of respective variables, we can use π^* to denote the numerical definition of price stability and q^* to denote the level of potential GDP.

Both the activist and stability-oriented approaches to monetary policy would aim at achieving price stability that can be interpreted as closing the inflation gap ($\pi - \pi^*$). The difference in the two approaches is that another key objective of the activist approach to monetary policy is to close the output gap ($q - q^*$) and perhaps place as much importance on that objective as on maintaining price stability.

A fundamental practical difficulty, however, is that the output gap cannot be measured in real time, that is when policy decisions are taken, and retrospective estimates can vary dramatically from real time estimates, primarily because the notion of the economy's level of "potential" output, q^* , is fundamentally unknowable. Output gap estimates may not even have the correct sign in real time and as a result can lead to very serious policy mistakes, especially at turning points. Although as a theoretical construct the concept of the output gap may be useful, as an empirical construct it is not, especially at turning points, when it is not unusual to find out years after the event that not even the sign of the output gap estimated in real time was correct.

Let me be more explicit by using the euro area as an example, following Orphanides (2010a). Let us take the first ten years of the euro area and look at real-time estimates of the output gap as presented by the International Monetary Fund (IMF) in the World Economic Outlook (WEO) in the spring of each year (similar results apply also to the estimates of the European Commission). Figure 1 compares these real-time estimates to the most recent retrospective estimates. A significant bias is evident. The bias is mainly due to the fact that the experts are now more pessimistic about what potential output was in the euro area than they were in the past. This is not the experts' fault. We simply cannot know in real time. Notably, this applies not only to the size of the output gap, but also to its sign. In comparing what the experts tell us now and what they were telling us then, in real time, the sign of the output gap is revealed to be incorrect in more than half of the years in the first decade of the euro area.

The problem associated with aiming to close the output gap as a policy guide can be examined in more detail in the context of the crisis by focusing on estimates of the output gap for 2006, the year before the financial turmoil began. Would use of the output gap for 2006 have helped guide monetary policy in the right direction? The answer is no, as can be confirmed by tracing the evolution of output gap estimates for that year. According to the IMF, the euro area operated below its potential that year with the gap being around minus 1 1/2 percent (see Figure 2). As late as 2008, the year 2006 was still being seen as one of wasted resources. But by 2009, with revised estimates, the experts were telling us that three years earlier in 2006, the euro area was overheated and output exceeded its potential by a significant amount. Seen from the present, the activist approach would have led policymakers in the euro area to a serious policy error by suggesting that monetary policy should be loosened when in retrospect the recommendation would have been for policy to be tighter. It is of no use telling the monetary policymaker five years after the fact that the economy was overheated. This is yet another illustration as to why one should not rely on the activist approach.

A central bank need not rely on an unreliable activist approach for formulating policy. An alternative, stability-oriented approach, for example, does not rely on the concept of the output gap but focuses instead on stable growth, in addition to the inflation outlook. Such guidance can be obtained from the outlook of output growth Δq compared to its trend Δq^* . In Orphanides (2010a), I presented a very simple difference policy rule motivated by the writings of Wicksell (1898) and Friedman (1960) that could be used for policy guidance. Specifically,

$$\Delta i = \theta_{\pi}(\pi - \pi^*) + \theta_{\Delta q}(\Delta q - \Delta q^*).$$

The robustness of this simple family of policy rules has been extensively examined in econometric evaluation exercises (see, for example, Orphanides and Williams (2002, 2010)). The underlying idea was to identify a monetary policy guide that can lead to reasonably robust policy without requiring precise information about theoretical concepts such as the various natural rates (e.g. the definition of full employment or potential output, or the equilibrium real interest rate) that cannot be reliably observed or measured when policy is set. Estimates of output gaps are not needed for guiding policy in this approach, but instead only a sense of the economy's trend growth, which is subject to considerably less uncertainty.

A suggestive illustration for the euro area can be implemented, updating the work shown in Orphanides (2010a). For this implementation, the rule coefficients with quarterly frequency are set as follows: $\theta_{\pi} = \theta_{\Delta q} = 1/2$.

Near term forecasts from the ECB's Survey of Professional Forecasters (SPF) are employed as indicators of the outlook for inflation and output growth. Specifically, the illustration uses the average of the survey responses regarding year-on-year forecasts with horizons ending about one year ahead from the data available when the survey is conducted (this is about three quarters ahead from the time the survey is taken). These "year-ahead" forecasts have approximately the same horizon from quarter to quarter.

Figure 3 shows the one-year ahead inflation forecast from the SPF together with two numerical guides for π^* : an upper guide of 2 percent and a lower guide of 1.5 percent. Comparing the inflation forecast with the corresponding guide, therefore, indicates whether the rule prescribes that the policy rate should be raised or lowered on account of the near-term inflation outlook. Figure 4 shows the one-year ahead GDP growth forecasts from the SPF together with two alternative indicators of what trend or potential GDP growth is. One indicator is from the survey itself, the average response to a question asking what GDP growth is expected to be five years ahead. The second indicator is the potential GDP estimate presented in the IMF's Spring WEO (reproduced for all four quarters of the year). The comparison of the GDP forecast, with its underlying estimated trend, indicates whether the economy is expanding faster or slower than its normal limit in the near term, and therefore signals whether the rule prescribes that the policy rate should be raised or lowered on account of the near-term inflation outlook.

The shaded area in Figure 5 presents the envelope of four prescriptions obtained by the combination of two alternative estimates for trend GDP and the upper and lower guide for the definition of price stability. This can be contrasted with the actual policy change of the MRO rate. (This is the change between policy meetings of the second month of each month, a timing that provided the closest match to the timetable of the SPF.) The shaded area in Figure 6 shows the envelope of prescriptions for the level of the policy rate that emerge from applying the prescribed quarterly changes to the level of the policy rate a quarter earlier.

The illustration just presented is meant to show that one does not need very complicated models to arrive at an understanding of the important drivers of policy. The contours of the policy prescriptions from this simple robust rule line up reasonably well with the actual policy decisions taken by the Governing Council of the ECB. In that sense, this rule is also broadly descriptive of ECB policy. But of course this is just an illustration and as such may miss important elements that cannot be summarised in a simple rule.

The most important deviation of actual policy from the rule shown in the figures is observed during the crisis in 2009 and 2010. This is the period when unconventional measures were relied upon to engineer additional monetary policy easing not reflected in the MRO. When short-term nominal interest rates are very close to zero, additional policy tools that rely on changing the size and composition of the central bank's balance sheet can be pivotal for effective crisis response. During the crisis, unconventional measures were employed both to engineer further policy easing, beyond what is reflected in the official policy rates, and to improve liquidity conditions, market functioning and the monetary policy transmission mechanism. Indeed, the crisis reminded us that monetary policy is *not only* about the setting of policy rates. This of course is nothing new, but it is an element that many theoretical models ignored in the years immediately prior to the crisis.

Monetary policy and financial stability

The next area I wish to turn my attention to is the role of central banks in securing financial stability and the interaction of monetary policy and financial stability. Here, the crisis has changed views materially because it proved more virulent than most thought it was likely to be. To be sure, inside central banks, financial stability has been recognised as a crucial central function throughout the history of central banking. But the academic literature tended to underplay this function in the decades prior to the crisis and, in some cases, supervisory responsibilities that can be crucial for safeguarding financial stability were taken away from central banks. The crisis revealed an underappreciation of systemic risks in micro-prudential regulation. This has forced a reconsideration of the attention that should be placed on financial stability in the economy and on the tools central banks should have available to more effectively safeguard financial stability. The crisis has also brought to the forefront the role of central banks in monitoring risks to financial stability and tracking incipient imbalances, as well as

drawing attention to the scope for strengthening macro-prudential supervision.

Three questions can guide an assessment of how views have been influenced as a result of the crisis. First, can macro-prudential supervision succeed in preventing the accumulation of large imbalances if central banks can rely only on monetary policy tools? This is doubtful. I do not think central banks can help maintain financial stability unless they have the appropriate tools and the monetary policy tools are not the most appropriate. This is not to say that monetary policy is thoroughly ineffective in tackling threats to financial stability. However, monetary policy is of rather limited effectiveness in addressing financial imbalances and other risks to financial stability to justify redirecting its setting from what it needs to be to maintain price stability in the medium term. Monetary policy seems neither the most effective nor the most efficient tool to use if the aim is to safeguard financial stability. Rather, using regulatory tools that are targeted towards a specific imbalance would appear to be a more effective approach towards reducing threats to financial stability stemming from an incipient imbalance.

Consider, for example, a situation where credit growth directed to real estate appears excessive for a time, leading to a real estate boom in an environment of price stability. In retrospect, this is one of the imbalances observed in some member states in Europe prior to the crisis. Tighter monetary conditions would likely have dampened the boom only partially and at a cost inappropriately high for the economy as a whole. In contrast, more effective would have been the use of regulatory tools to tighten lending conditions for real estate loans. One example would be imposing lower loan-to-value lending ratios¹.

The second question is the following: can the macro-prudential recommendations presented by a central bank be effectively implemented

¹ The Central Bank of Cyprus implemented such a tightening of lending conditions to control a boom in real estate lending in the Summer of 2007 and contained the associated risks (see Central Bank of Cyprus, 2010). It was possible to employ a restriction of the loan-to-value ratio as a macro-prudential tool because micro supervision and regulation of banks was a function of the central bank.

without the intimate involvement of the central bank in regulation and supervision? This question is pertinent because of the wide variety that is observed around the world in the institutional relationships between central banks and micro-supervisors. It is also of special interest in the context of the EU where, as a result of the crisis and following the recommendations of the de Larosière report (de Larosière, 2009), a new macro-prudential supervisory body has been created, the European Systemic Risk Board (ESRB). This new body includes all of the central banks and all of the micro-supervisors of Europe in order to assess financial stability risks and provide warnings and recommendations towards limiting risks. However, the ESRB has no enforcement power to ensure that its warnings are heeded and recommendations are followed. This may prove a considerable weakness and at the very least raises some legitimate doubts regarding its effectiveness. In particular, the power to issue recommendations by a macro-prudential supervisor may prove inadequate when the pertinent micro-supervisor cannot justify adopting it on the basis of micro-supervisory analysis and finds the macro-supervisory perspective insufficiently compelling to overturn the micro-supervisory perspective.

This brings me to the third and related question: can greater central bank involvement in micro regulation and supervision contribute to better management of overall stability in the economy? I think this is one area where views may have changed quite a bit as a result of the crisis moving the arguments towards an affirmative answer. Prior to the crisis, the tendency in a number of countries had been to separate micro-prudential supervision from central banks. An argument in favour of that separation was that it better protected the independence of the central bank in pursuing its monetary policy function of maintaining price stability. The risk that the independence of the central bank could be compromised could be greater the more powers and responsibilities the central bank has in micro-prudential supervision.

The experience with the crisis, however, has highlighted some advantages in ensuring central bank involvement in micro supervision. From the perspective of macro-prudential supervision, there is no better way to eliminate the mismatch between the institution responsible for coming up with a macro-prudential recommendation and that responsible for implementing the recommendation than ensuring that they are one and the same institution. Thus, crisis prevention could be more effective if the central bank were involved in micro-prudential supervision.

Another reason to seek central bank involvement in micro supervision, at least for banks, is to reap the benefits from the information synergies that can be of critical importance for efficient crisis management. A central bank has a special relationship with a depository institution regarding the provision of liquidity upon the presentation of suitable collateral while the supervisor assesses the bank's capitalisation and potential solvency risks. In crisis situations, when potential shortfalls in capital or liquidity may become blurred, the sharing of information and analysis on liquidity and solvency becomes critical. In theory, the information sharing and joint analysis needed can be achieved even if the micro-supervisor is an institution other than the central bank. In theory, all parties involved can meet and sit around the table in the same room as needed and deal with the problem. Experience, including examples from the current crisis, however, suggests this does not always work in practice. During a crisis it may not be that easy to get all involved in the same room to share and analyse information as much as needed. It is much easier when all involved are in the same organisation, and ideally in the same building! This will make it more likely that a crisis episode will be resolved quickly, perhaps over one weekend, which is often the most efficient way to deal with such situations.

One of the strongest lessons from the crisis is that we should not let bank regulation and supervision be distanced from central banks, as was the case in many countries before the crisis. Where this has not already happened, I believe we need to bring them back closer together. In a sense this is not a

new lesson but rather a lesson re-learned. When it comes to financial stability, the crisis has influenced perceptions of the role of central banking, taking us back to an earlier epoch, when the role of central banks was much closer to the objective of ensuring financial stability, regulating banks and dealing with banking crises much more frequently than had been the case in recent decades.

Monetary policy and economic governance

The next topic I want to cover, and this is a painful topic to cover in Europe today, is the interaction of monetary policy and economic governance in a monetary union like the euro area. The central bank's task of maintaining stability is more complicated in a monetary union when the member states pursue independent fiscal policies unless some minimum coordination and strict budgetary rules are adhered to. This is an area where the necessity of adhering to a proper design of the economic and monetary union (EMU) was advocated by central banks before the crisis. However, the risks posed by weak economic governance of the EMU were arguably underappreciated by euro area governments. Even worse, a delayed and inadequate management of the difficulties identified during the early stages of the crisis has led to a severe worsening of the crisis in the euro area overall. At present, lack of sufficient progress regarding economic governance, including clarity on crisis management, has become a grave source of instability for the system.

It is well understood that sound fiscal policy is a prerequisite for stability in any economy. We all know that when the creditworthiness of a sovereign is endangered it can be disastrous for its economy and render the preservation of stability impossible. But during good times, governments do not always appreciate that in their fiscal plans they should take into account the possibility that after the next recession they may be faced with a difficult situation with a large deficit and a large debt. The crisis revealed that in a number of states in the developed world, government policies prior to the

crisis tolerated structural deficits and debt levels that put the economy at risk when the crisis hit. Following the onset of the crisis we have seen downward revisions in the growth prospect of many economies, for example virtually all the EU economies. For a number of governments this has resulted in limited fiscal space that has reduced their ability to implement countercyclical measures without risking worsening long-term stability prospects. The underlying weakness has been inadequate adherence to sound long-term fiscal planning, made worse in many states by looming demographic problems over the next few decades.

Fiscal problems of this nature, if unchecked, can be magnified in a monetary union. In the euro area the crisis has mutated into a sovereign debt crisis, a crisis of the governance of the euro area. These developments have complicated tremendously the stability-oriented efforts of the European Central Bank (ECB) that has the mandate to set a single monetary policy for the euro area as a whole.

In a monetary union, strong economic governance is a prerequisite for maintaining stability in all states of the union. In the case of the euro area, the Stability and Growth Pact (SGP) provided a framework meant to ensure sound fiscal policy by all member states. Indeed, in theory at least, adherence to the SGP should have ensured sound public finances so well that it was viewed as unnecessary to put in place a crisis management framework for dealing with potential deficit and debt crises. But that was the theory. The crisis revealed significant gaps in monitoring and enforcement and insufficient respect for the rules by euro area governments. Unfortunately, the SGP did not work as intended. Sadly, some of the weaknesses in enforcement were recognised even before the onset of the crisis but at the time there was no consensus among governments about the risks posed by failing to respect the SGP and the need to strengthen governance².

² The ECB had repeatedly expressed concerns about potential problems associated with weakened adherence to the SGP prior to the crisis (see e.g. European Central Bank, 2005a,b).

In some member states, insufficient budgetary discipline allowed the accumulation of large imbalances whose extent was not sufficiently appreciated before the crisis. In the case of Greece, in particular, the imbalances were partly hidden as a result of questionable statistical reporting (see Orphanides, 2010b). Despite concerns being expressed from time to time, euro area governments collectively allowed this to occur through ineffective oversight. These imbalances could no longer be hidden once the crisis hit and the fiscal deficits became larger and more problematic. Doubts about some governments regarding their debt obligations has led to a sovereign debt crisis in the euro area—the crisis we are observing right now—and in the absence of a clear crisis management framework this has become a major source of instability.

Figure 7 illustrates some of the resulting complications for the functioning of the euro area and the transmission of the single monetary policy. The figure compares the yields on ten-year government bonds in several euro area member states. It includes Germany, as a benchmark, and a number of member states whose sovereigns have experienced some pressure during the crisis. The latter includes Greece, Ireland and Portugal, three member states where the situation deteriorated so much that they lost the ability to refinance their debt in the markets and were forced to seek support from their EU partners and the IMF.

As can be seen, prior to the crisis, the costs of financing of member states in the euro area did not differ substantially from each other and co-moved over time. This reflected the perception in markets that euro area sovereign debt presented minimal credit risk, as should be the case if the SGP were fully respected. Since 2009, however, and especially since 2010, government yields have varied substantially among member states, reflecting the opening of significant credit spreads in some states. Recognising that the cost of financing for banks, and consequently for businesses and households, in each member state is materially influenced by the cost of financing for the government of the member state, the divergence in government yields has

meant that financing conditions for the real economy have diverged across the euro area. As a result, the single monetary policy of the euro area does not correspond to similar monetary conditions throughout the euro area. This is the essence of the impairment of the monetary policy transmission experienced at present. Although we use the same currency everywhere in the euro area and despite the single monetary policy, lending rates faced by two households or two businesses with fundamentally similar characteristics can vary tremendously simply because they are located in different member states. As a result of the sovereign crisis, the economic integration sought in the EMU is being seriously challenged.

The dispersion in government financing costs reflected in the figure has another detrimental effect on the euro area. This is the large increase in the overall costs of financing sovereigns in the euro area as a whole due to significant increases in credit spreads for sovereign issues. As a result of the crisis, euro area governments have collectively made most euro area sovereigns much less attractive to investors outside the euro area. With few exceptions, this implies euro area governments need to compensate investors much more to refinance their debt than would have been the case if the sovereign crisis were contained. Not all member states are immediately affected but this cannot obscure the collective inefficiency created by raising the collective costs to all euro area governments. At the end of the day, all citizens in the euro area are collectively paying the cost of this inefficiency. As a result of our failure to tackle the underlying problem, we are becoming poorer.

What is to be done? How can economic governance in the euro area be strengthened to remove the costly inefficiency we observe at the moment? The key weakness that must be corrected is the failure of the existing governance structure to ensure adequate fiscal discipline in all member states. In a changing environment, this requires checks that avoid the building up of fiscal imbalances. Positive shocks that improve fiscal finances are easy to take care of in our societies. Raising spending or reducing taxation is easy to do.

But adverse shocks, such as a slowdown of growth prospects, are more painful to address.

The key is to prevent irresponsible fiscal behaviour by making it difficult to postpone necessary fiscal consolidation when it is determined that such consolidation is needed to ensure long-term stability. In a democracy, it cannot be ruled out that from time to time an elected government may not be predisposed to behave as responsibly as circumstances demand and instead be tempted to behave myopically, for instance by postponing decisions about painful adjustment until after the next election. The perennial problem is that the social cost of postponement can sometimes be hidden from the electorate until after the next election. When unchecked for a time, such behaviour can lead to the accumulated imbalances that can be so problematic, especially in a monetary union. This may be seen as an unavoidable cost of a democratic society, but it can be limited by strengthening governance. The issue then is to improve the governance of our democratic societies, putting checks in place that would protect the citizens of all states in the euro area from the potential of irresponsible behaviour of this kind. I am confident that citizens in every euro area state would support improvements in this area.

The preceding discussion may appear abstract but concrete steps are being contemplated that move the euro area in the right direction. We need to return to the drawing board and reinforce the SGP in a manner that would allow its credible implementation. Some specific elements include improving the reliability of statistical reporting, enhancing the monitoring of budget plans and introducing debt breaks in national legislation. Indeed, these are elements that are included in legislation currently under consideration by the European Parliament³.

The progress under way in this area, however, may prove insufficient to ensure lasting stability. To ensure the framework works in practice, the proper incentive structure must be put in place to discourage future

³ The legislation was enacted by the European Parliament on 28 September 2011 (European Parliament, 2011)

governments from ignoring the common rules. As has been observed in the past, a government may be tempted not to behave prudently in the future. To discourage this, meaningful and prompt sanctions must be enacted. They must be meaningful in order to serve as proper deterrents and they must be prompt in order to be effective. Political discretion to delay the imposition of sanctions should be avoided. It would certainly not help the citizens of a member state that happened to have an irresponsible government if the EU imposed sanctions five years after that government's indiscretions. Nor would such a delayed process provide an incentive to an irresponsible government to behave differently as by then that government might not even be in power. That is why we need automatic, prompt and meaningful sanctions. Unfortunately, the discussions that have taken place so far in the euro area have not taken us far enough in this direction.

In addition to the necessity of improving the governance of the euro area, the ongoing turbulence has also made clear that a crisis management mechanism must be put in place to ensure stability. This is urgently needed. It is not enough to pronounce that such a mechanism will be eventually put in place. The framework that will be operational in the future must be clarified at present to prevent further deterioration of the ongoing crisis. Why the urgency? Why do central banks seem so anxious to have solutions in place as soon as possible? Again, the answer is stability. Because financial markets are forward looking, clarity about how the framework will work tomorrow would have a beneficial effect today. In contrast, the continuing uncertainty created by lack of clarity about euro area governance and crisis resolution and the continuing delay in committing to an operational framework in the future has an adverse impact on the euro area today.

Concluding remarks

Let me conclude by reiterating a few key points. First, what is the paradigm of central banking? Stability, stability, stability. This has been the key

throughout the history of central banking and remains so. As regards monetary policy, I do not think that the crisis has materially shifted views. The basic strategy remains a forward looking policy orientation that maintains well-anchored inflation expectations in line with a numerical definition of price stability. But as a result of the crisis, it appears that greater emphasis on financial stability is warranted than was appreciated before the crisis, in addition to price stability. To that end, the role of central banks in macro-prudential supervision must be strengthened. Furthermore, the balance of arguments has shifted towards central banks having more direct involvement in micro-supervision of the banking sector. Lastly, the crisis has reaffirmed with great force that strong economic governance is a prerequisite for stability in a monetary union. Sadly, despite having experienced tremendous costs stemming from the sovereign crisis in the euro area, lack of sufficient progress in strengthening economic governance going forward, including clarity on crisis management, has become a grave source of instability in the euro area.

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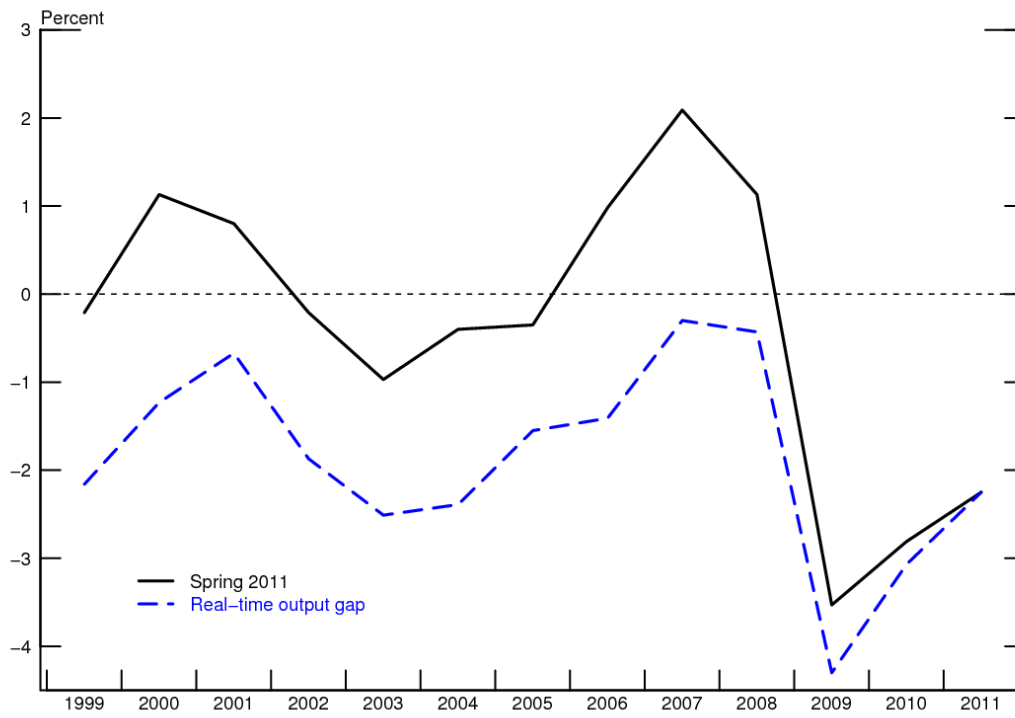
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Figure 1

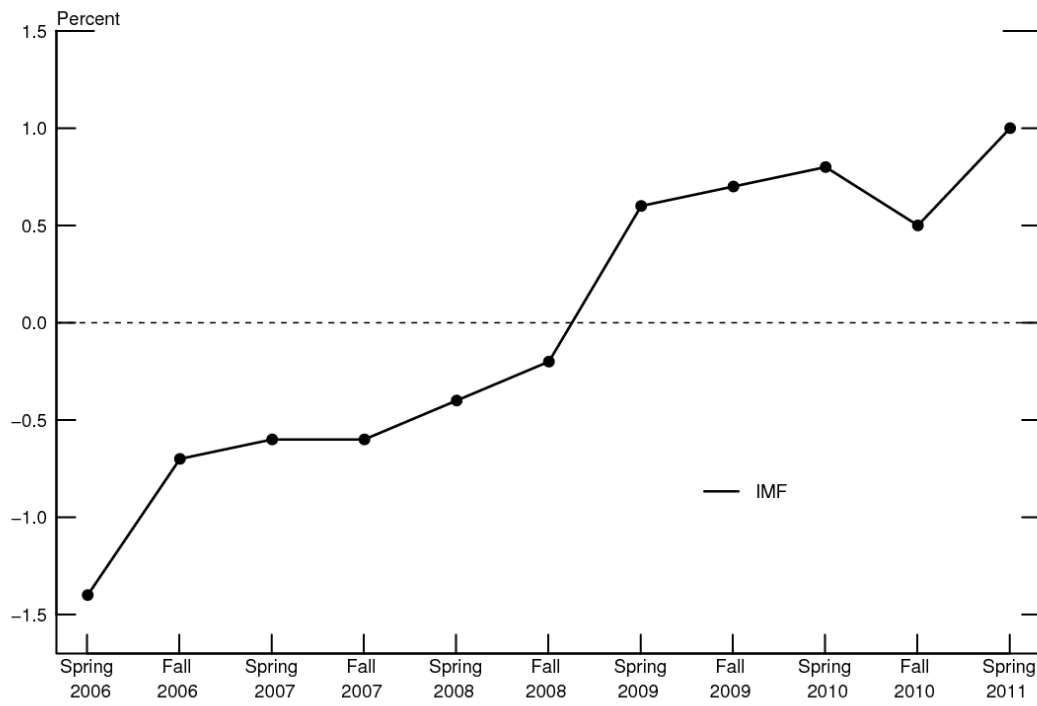
Real-time vs Retrospective Output Gap Estimates



Notes: IMF Spring WEO estimates.

Figure 2

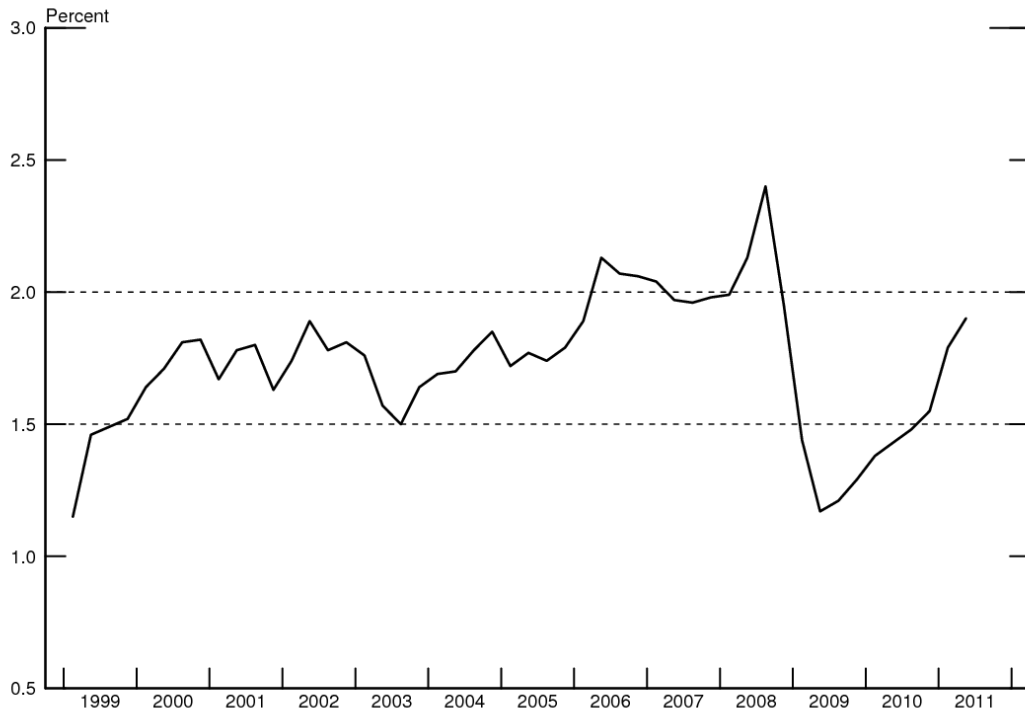
Evolution of Output Gap Estimates for 2006



Notes: IMF estimates as updated in the spring and fall of each year.

Figure 3

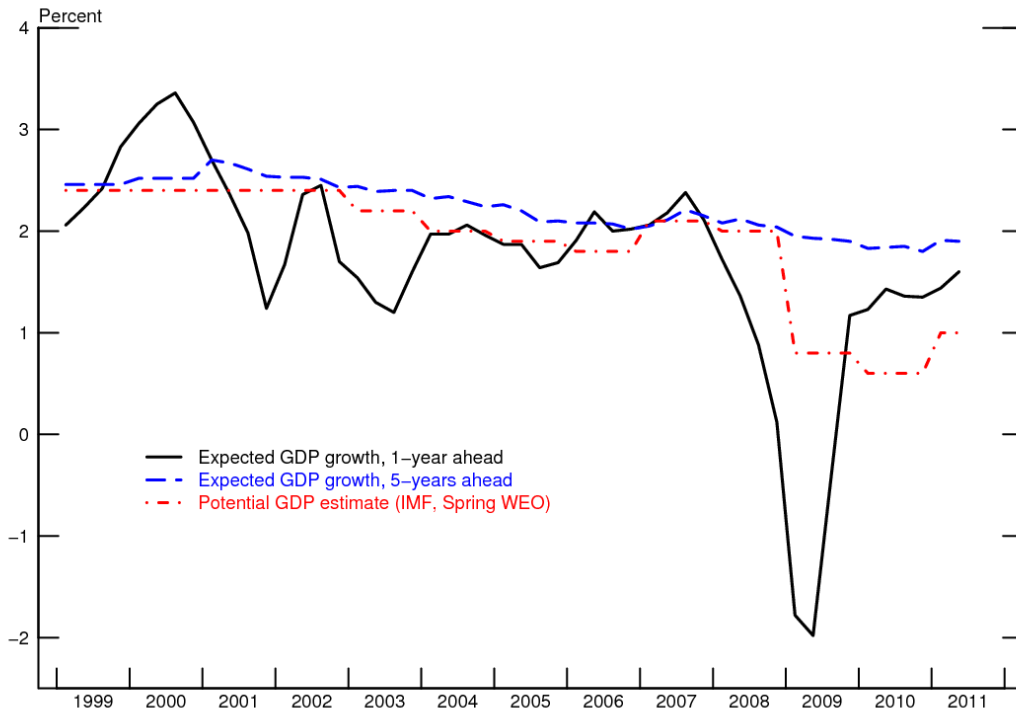
Outlook for Inflation: One-year Ahead



Notes: ECB SPF average of individual responses.

Figure 4

Outlook for GDP Growth: One-year Ahead and Trend



Notes: ECB SPF average of individual responses. IMF real-time Spring WEO.

Figure 5

Policy Rate and Simple Rule Prescription: Quarterly Change

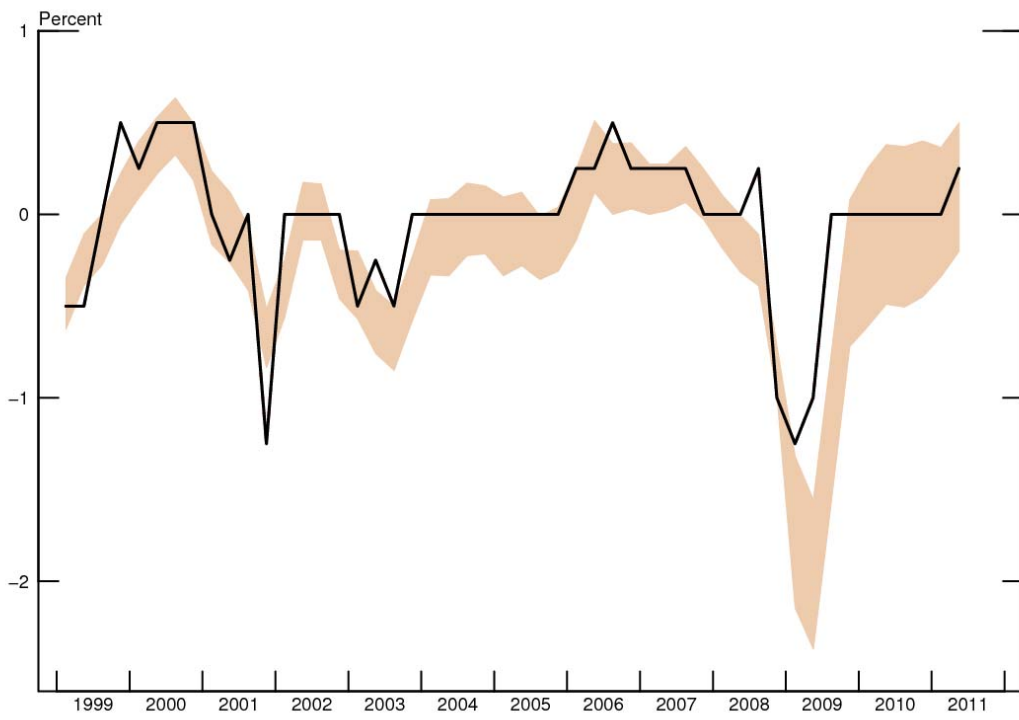


Figure 6

Policy Rate and Simple Rule Prescription

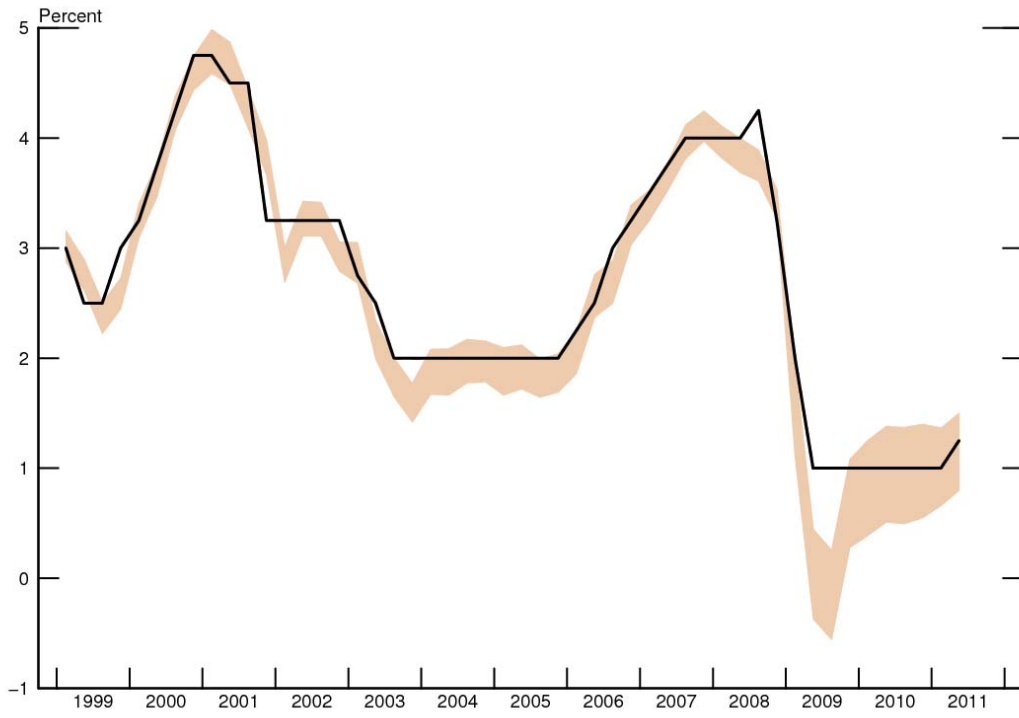


Figure 7

Yields on 10-year Government Bonds

