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MANAGING EXCHANGE RATE MISALIGNMENT AND CURRENT ACCOUNT IMBALANCES

By Luca Dedola

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and technology framework than commonly assumed, both models can be shown to generate technology-hours correlations of either sign. The impact of technology on hours can hardly be taken as evidence in support of any particular business cycle model.

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By Luca Dedola



The international monetary system proved to be fairly resilient during the recent global financial crisis. However, as highlighted by the G20 at its meeting in Paris, vulnerabilities remain. These vulnerabilities could hinder an orderly international adjustment, especially through exchange rate misalignment, excessive current account imbalances and disruptive fluctuations in capital flows. This article looks at recent research on the emergence of misalignments and imbalances due to financial market imperfections and examines the related policy implications.

At their meeting in Paris on 18-19 February 2011, Group of Twenty (G20) Finance Ministers and Central Bank Governors stressed "the need to reduce excessive imbalances" by "strengthening multilateral cooperation." Taking "due consideration of exchange rate, fiscal, monetary and other policies", the G20 also agreed to develop "indicative guidelines" to assess external imbalances. Concerns about real exchange rate misalignment, current account imbalances and excessive fluctuations in capital flows are a recurrent theme in international policy discussions and have prompted calls to redirect macroeconomic policy towards correcting exchange rate volatility or unsustainable current account positions. At the same time, these calls have raised analytical and quantitative issues regarding the trade-off between pursuing domestic stabilisation and addressing external imbalances.

At first sight, it may seem obvious that action needs to be taken against excessive fluctuations in capital flows and exchange rates. However, it could be argued that, to the extent that it is present, the "invisible hand" of the market knows better how to allocate capital and determine exchange rates. Preventing market participants from taking their optimal course of action would seemingly only make them worse off. Nonetheless, corrective action is required when the roots of imbalances and misalignments can be traced to misguided macroeconomic policies or failures in financial regulation. As argued by Blanchard and Milesi-Ferretti (2011), removing these distortions is in the interest of each individual country and does not necessarily imply any relevant trade-off between internal and external balance. In addition, in order to determine the appropriate policy response to imbalances and misalignments and for an insight into the design of "indicative guidelines", sound analytical foundations are indispensable. What is needed is a coherent framework linking current account imbalances and exchange rate misalignment; one which identifies their causes, their impact on global welfare and whether they require multilateral policy responses.

Many determinants of exchange rate movements in today's sophisticated financial markets (especially in the short run) and their macroeconomic implications, including the emergence and unwinding of external imbalances, are still imperfectly understood. Nonetheless, some progress has recently been made on two fronts: (i) as regards the empirical analysis of the link between exchange rates and fundamentals, stressing the role of news and expected fundamentals; and (ii) as concerns the monetary policy implications of accounting for the dual role played by the exchange rate as a relative price in goods markets under nominal rigidities and as an asset price determined in imperfect financial markets in dynamic stochastic general equilibrium (DSGE) models. This article describes some of the author's main findings in respect of the latter.1

Nominal rigidities and misalignment in the NOEM literature

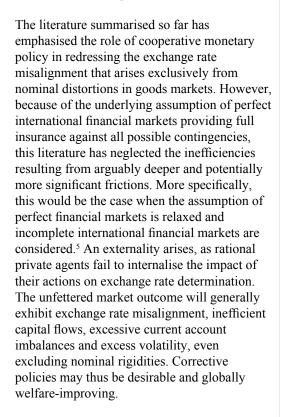
A standard tool for policy analysis in open economies is the (New Keynesian) new open economy macroeconomics (NOEM) model. This model typically features two symmetric countries, each specialised in the production of one type of tradable good. The tradable good produced in each country is a composite of different varieties produced by monopolistic producers subject to staggered nominal price rigidities.² A popular specification of this model sees movements in the exchange rate as an endogenous response to macroeconomic shocks that give rise to a self-correcting mechanism for potential misalignment in the relative price

See Corsetti, Dedola and Leduc (2010 and 2011).
 See, for example, Obstfeld and Rogoff (2002), Clarida, Galí and Gertler (2002), Benigno and Benigno (2003), Corsetti and Pesenti (2005) and Engel (2009).

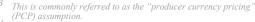
between domestic and foreign goods. This would be in line with the classical view of the international transmission mechanism formalised by, for example, Friedman (1953). Two key assumptions underlie this classical view. First, that perfect international financial markets ensure an efficient allocation of capital flows and undistorted exchange rate determination. Second, that export prices are sticky in the producer's currency, so the foreign currency price of products moves one-for-one with the exchange rate.³ Therefore, once monetary policy has stabilised inflation and closed output gaps, restoring a frictionless setting with efficient outcomes, international prices will also move correspondingly to their efficient level, along with current account deficits and surpluses. Under this framework, the possibility of exchange rate misalignment and current account imbalances arises only because a particular country's macroeconomic policy, notably its monetary policy, is not conducted in a cooperative manner, taking into account the global repercussions. For instance, the unilateral adoption of an exchange rate peg could result in negative spillover effects on the rest of the world.

As a first departure from the classical view of the near irrelevance of misalignment and imbalances, recent outstanding research contributions have assumed that import prices are sticky in the local currency.4 Consistent with widespread evidence, exchange rate movements thus have a limited impact on the import prices faced by consumers and pass-through is incomplete. Exchange rates cannot realign international and domestic relative prices to their efficient level. Rather, their movements cause a specific kind of misalignment, namely inefficient deviations from the law of one price: identical goods trade at different prices (expressed in the same currency) across national markets. In addition to output gaps and inflation rates, the global welfare loss function now includes deviations from the law of one price, driving misalignment in relative prices and causing imbalances in the level and composition of global demand. This means that monetary policy-makers, while trading-off internal and external objectives, will have to take a multilateral approach to minimise the domestic and global spillovers stemming from such misalignment. Again, once the distortions arising from nominal rigidities are dealt with optimally in a cooperative fashion by monetary policy, both misalignment and imbalances will be minimised. In general, this would also be inconsistent with a policy of pegging the nominal exchange rate.

Financial market imperfections, imbalances and global welfare



This can best be illustrated by focusing on the example of the arrival of "news" that leads rational agents to expect higher future productivity in a particular country. A configuration of current account deficits and surpluses would emerge for seemingly "good" reasons, as Blanchard and Milesi-Ferretti (2011) would say: in reaction to this type of news, rational agents have an incentive to smooth consumption by borrowing and lending in international markets. However, this is not what global efficiency would require.



⁽PCP) assumption.
This is commonly referred to as the "local currency pricing" (LCP) assumption.



Under the assumption of perfect financial markets, a complete set of securities indexed to all possible contingencies are traded across countries. Conversely, when financial markets are incomplete, cross-border trade is restricted to a limited number of securities, for instance, uncontingent bonds



This is illustrated by the simulation presented in Chart 1, whereby the news about the increase in productivity in the domestic country is assumed to arrive four periods in advance. The frictionless benchmark – under complete markets and flexible prices – is depicted by the green dashed line. Conversely, the red dotted

line represents the responses for the case in which only cross-border borrowing and lending is allowed, with risksharing across countries thus being far from complete.⁶

Even if the exchange rate acts as a "shock absorber" it may display excessive volatility

When production risk is well diversified under perfect

financial markets, positive news regarding future productivity in the domestic country makes both domestic and foreign households feel richer. Yet, in the short run, there is no change in current productivity: it would be inefficient to change production and spending plans, so neither global demand nor activity reacts to the news.7 The real interest rate (short-term, depicted in Chart 1, and long-term) rises in both countries to induce households to postpone their spending plans until some point in the future (when higher productivity materialises) and to prevent a decrease in the labour supply. Thus, upon the arrival of the news, no other variable moves until domestic productivity gains actually materialise in the fifth period.

In particular, this applies to the real exchange rate and the current account, which, in the efficient allocation, do not respond to shocks to *expected* fundamentals.

The allocation differs sharply under incomplete financial markets, as illustrated by the red dotted line. In anticipation of future domestic productivity gains, only domestic households

Under incomplete financial markets current account imbalances and misalignment will emerge

now feel richer and they increase their spending by borrowing internationally. Capital inflows thus result in an inefficient current account deficit for the domestic country, reflecting the cross-country

imbalance in demand, production and savings. The foreign economy runs a sub-optimal surplus, producing and exporting too much.

In addition, the exchange rate's excessive volatility and misalignment are apparent, relative to the efficient benchmark. Instead of remaining unchanged, the real exchange rate (and nominal, given price stability) not only surges upon the arrival of the news, but also continues to appreciate in a sustained way.

Even if the exchange rate acts as a "shock absorber" – responding to (rationally expected) fundamentals – it will display excessive volatility and, in contrast to the tenets of the classical view, it will bring about inefficient cross-country adjustment

and imbalances in both deficit and surplus countries, thereby supporting the desirability of corrective policy actions at the global level. It should be noted that if expectations about future productivity gains were in fact mistaken, a drastic reversal in capital flows and a sharp exchange rate correction would occur. Optimal risk diversification, ruled out by incomplete markets, would provide a safeguard against this type of boom-bust cycle.

Misalignment, imbalances and monetary policy under cooperation

The obvious question is thus what kind of policies should be used to address misalignment and imbalances and, more particularly, whether monetary policy can and should counteract these external imbalances rather than focus exclusively on traditional domestic stabilisation objectives. Providing precise quantitative policy guidance is beyond the scope of the stylised models summarised in this article. These models, however, are useful insofar as they highlight effects that are also likely to play a role in more elaborate frameworks. First, as in the standard New Keynesian setting, it remains possible to consider inflationary pressures as arising from deviations of the real interest rate from a conveniently defined summary indicator, the "natural rate of interest".

6 This case also defines the natural rate benchmark for this analysis and thus corresponds to what would occur under inflexible CPI inflation targeting regimes in each country.

inflation targeting regimes in each country.

For simplicity, the model abstracts from (costly) capital accumulation and other sources of sluggish adjustment, such as consumption habits. Introducing these features would mainly change results quantitatively.

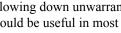
More precisely, in a theoretical world economy with nominal price rigidities and imperfect international financial markets, price stability can still be maintained at all times through commitment to a "natural rate rule". This ensures that the policy interest rate moves one-for-one with an appropriately defined natural rate of interest. Indeed, this is the case illustrated in Chart 1 by the red dotted line. However, because of the aforementioned trade-off between domestic stabilisation (i.e. output and inflation) and external stabilisation, maintaining price stability at all times, rather than over the medium term, may generate excessive volatility in output, exchange rates and capital flows. When setting the policy stance, a central bank should avoid focusing exclusively on inflation over the very short run. Allowing adverse shocks to produce short-lived inflationary effects may actually help reduce the consequences of the shocks for aggregate demand and, in addition, for exchange rates and current accounts. Similarly, even those policies narrowly focused on limiting exchange rate flexibility may result in excessive inflation volatility and current account imbalances.

Meanwhile, this concern to avoid excessive volatility in output, exchange rates and capital flows should have a quantitatively minor impact on a central bank's overall objectives. According to the model, maintaining price stability over the medium term should remain the central bank's overriding goal. Even when a monetary policy action is called for, this would occur at the cost of short-lived deviations from price stability. This can be seen from Chart 1,

An appropriate global monetary policy stance could reduce excessive volatility and imbalances where the response of the variables under the globally optimal policy is depicted by the solid blue line. An appropriate global monetary policy stance, whereby

the home real interest rate is below the natural rate, and the real interest rate in the rest of the world is above the natural rate, goes a long way in reducing excessive volatility and redressing the exchange rate misalignment and current account imbalances. The inflationary effects of this are transitory and limited (to around 1% on

impact).8 Hence, one would be mistaken to conclude that, under most circumstances, the emergence of misalignment and imbalances should be ignored not only by central banks but also by policy-makers in general. On the contrary, even if their emergence does not pose monetary policy trade-offs, it could still be welfare-improving to redress these inefficiencies and curb the excessive volatility using other policy tools. For instance, it is conceivable that actions geared towards slowing down unwarranted capital inflows could be useful in most of these cases.

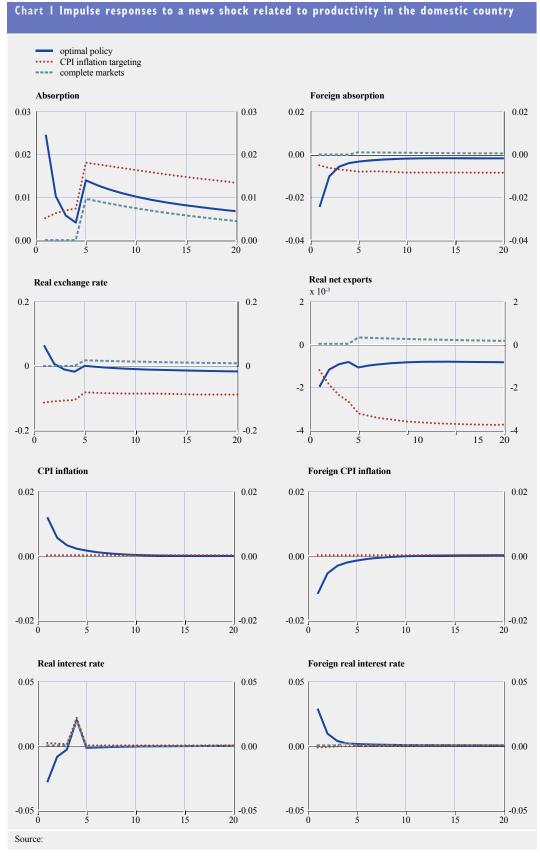


Conclusion

This article summarises the findings of recent research that attempts to provide normative guidance on the appropriate policy response to exchange rate misalignment and current account imbalances in the context of DSGE models suitable for policy analysis. These models are consistent with many features that we observe in the data, such as the fact that international financial markets are far from perfect. Nonetheless, the models can be further improved by, for example, incorporating features that may have played a role in the episodes of global financial market turmoil witnessed in recent years (for instance, the possibility of sudden stops in capital inflows). Improving the models along these lines is currently an active area of research.

However, such a strong reaction by monetary policy is confirmed for only a subset of parameterisations in the model (albeit those associated with realistically high exchange rate volatility). Moreover, this result does not necessarily imply that monetary policy should counteract most exchange rate movements,





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TECHNOLOGY, HOURS AND FACTOR SUBSTITUTION

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The reaction of hours worked to technology shocks represents a key distinction between real business cycle (RBC) and New Keynesian (NK) explanations of the business cycle. This article summarises recent research that demonstrates that, with a more general production and technology framework than commonly assumed, both models can generate technology-hours correlations of either sign. The impact of technology on hours can thus hardly be taken as evidence in support of any particular business cycle model.

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According to the standard RBC model, hours worked should rise after a positive productivity shock. However, in an influential paper, Galí (1999), using a structural VAR, found the impact to be negative. This evidence has since been interpreted as favouring the NK sticky-price model.

Nonetheless, the effect of technological change on employment is a long-standing debate. The kind of mechanism envisaged, however, does not rest on the introduction of nominal rigidities

that characterise much of modern macroeconomics. It relies instead on certain aspects of the production process, such as the degree to which different factors substitute or complement one another, and the extent to which technological change is non-neutral. Recent research¹

shows that this more general approach gives us a better understanding of how technology shocks and production complementarities work and how best to incorporate them into business cycle models.

Modern business cycle models, though, have generally abstracted from these aspects. They tend to impose an aggregate Cobb-Douglas production function which is characterised by a unitary elasticity of factor substitution. This is unfortunate, since this form of production is routinely rejected by the (aggregate and non-aggregate) data and is uninformative regarding possible biases in technological change. The choice may be considered especially surprising given the avowed interest of the literature in analysing the cyclical importance of "technology" shocks. By contrast, the constant elasticity of substitution (CES) production function is more general - it nests Cobb-Douglas and Leontief (zero elasticity) forms – and also admits technological improvements to both capital and labour over time, as opposed to just labour or completely neutral technological change (Harrod and Hicks forms, respectively).

When investigating the ramifications of non-unitary substitution elasticity and factor-augmenting technology shocks one necessarily faces the issue of *normalization* (de La Grandville (1989), Klump and de La Grandville (2000), León-Ledesma et al (2010)). This is an aspect that is not yet widely known in business cycle modelling. Normalisation implies representing production and technology

in consistent indexed number form. Without it, production-function parameters can be shown to have no economic interpretation since, rather than being deep, they are dependent on the normalisation point and the elasticity of substitution. This significantly undermines

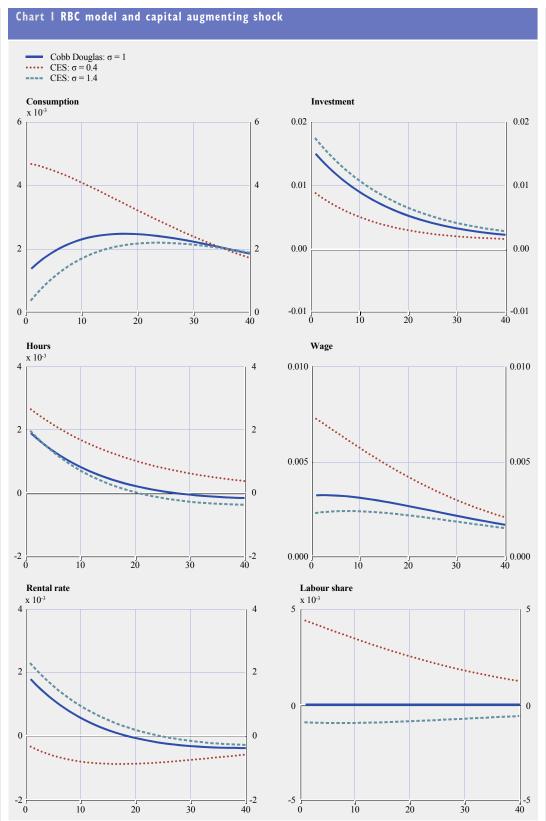
estimation and, as is especially important here, comparative static exercises.

Charts 1 and 2 depict the dynamic responses of selected variables (consumption, investment, hours worked, wages, rental rate of capital, labour-to-output share 2) to a persistent one percentage point increase in the amount of capital and labour-augmenting technological progress in the RBC model for a standard calibration with the elasticity of substitution, σ , varied over 0.4, 1, and 1.4. If the substitution elasticity is less than one, factors of production are said to be gross complements (otherwise, they are said to be gross substitutes).

Positive technology shocks naturally stimulate output, consumption and investment. It can further be shown that movements in factor income shares (excluding Cobb-Douglas, in which the shares are constant) are symmetrical and "favour" one factor or the other, depending

¹ See Cantore et al. (2010).

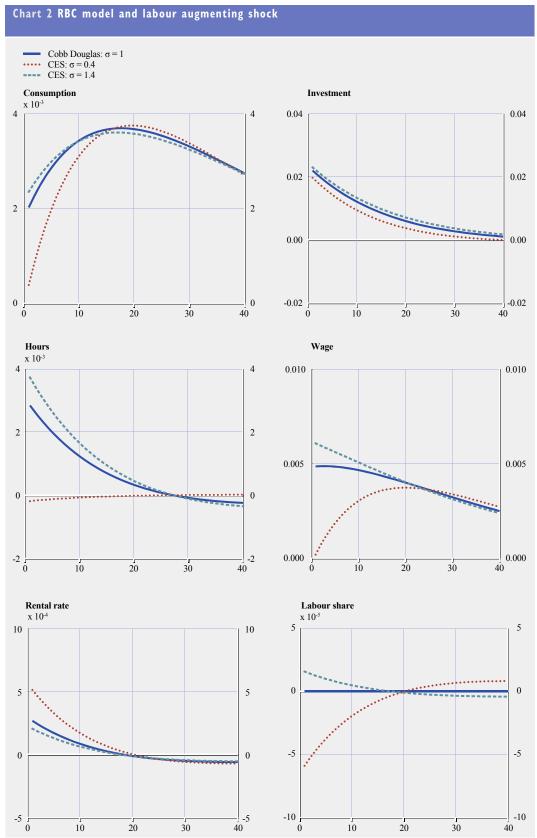
² The capital income share is, by definition, the mirror image of the labour share





Note: This chart shows the impulse responses in the RBC model of selected variables to a capital-augmenting shock of one standard deviation. All responses are reported as percentage deviations from the non-stochastic steady state.





Note: This chart shows the impulse responses in the RBC model of selected variables to a labour-augmenting shock of one standard deviation. All responses are reported as percentage deviations from the non-stochastic steady state.

Technology-hours sign by model response		
Initial effect on hours worked from	Model RBC NK	
capital-augmenting technology shock labour-augmenting	>0	can be either sign
technology shock	can be either sign	<0

on the source of the technological improvement and on whether the factors are gross complements or gross substitutes. However, focusing on hours worked, we see (as expected) that hours rise following both types of technological improvement. However, for a substitution elasticity value of 0.4, a labouraugmenting shock produces a negative hours response. The effect is small, but this simply reflects the particular core calibration.

The table above, moreover, shows outcomes when the exercise is applied across both models. We have just seen how the RBC model can produce ambiguous technology-hours signs (depending on the substitution elasticity value) if the technology shock is labour-augmenting. For the NK model,

however, the labouraugmenting shocks turn out to have the familiar negative impact, whilst the capital-augmenting shock can produce technology-hours correlations of either sign.

These charts and the table merely give a taste of the results. However, the analysis in Cantore et al. (2010) suggests that a more general analysis is possible. They develop analytical expressions which establish the threshold between positive and negative contemporaneous correlations for both models. These depend on the factor source of the shock, the elasticity of substitution, the capital income share, and the marginal propensity to consume. Cantore et al. (2010) are also able to demonstrate that these conditions can be re-expressed in terms of labour demand and supply schedules.



Conclusions

The research highlighted here re-examined the impact of technology shocks on hours worked in business cycle models. The usual interpretation is that, in an RBC model, hours increase after a positive technology shock, but that, in an NK model, they initially fall. This difference has been taken as a means of empirically discriminating between different theories of business cycle fluctuations and remains a major controversy in macroeconomics.

The research introduced CES supply with factor-augmenting technology improvements and differing substitution possibilities into

otherwise standard models. It was shown that both RBC and NK models can yield hours responses of either sign. The impact of technology shocks on hours worked can thus hardly be taken as evidence in support of any particular business

cycle model. This is not to say that empirical evidence *cannot* discriminate between models; only that concentrating on the hours response may lead to ambiguous or inconclusive results.

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Box I

THE ADVISORY SCIENTIFIC COMMITTEE OF THE EUROPEAN SYSTEMIC RISK BOARD

The European Systemic Risk Board (ESRB) – the new macro-prudential oversight body of the European Union which started operating in January this year – has now been enriched by the establishment of an Advisory Scientific Committee (ASC). As one of the ESRB's two main sub-structures, the ASC is expected to ensure that the Board benefits from independent advice on the latest research on systemic risk and macro-prudential policy.

The ASC has two main areas of work, one analytical and the other consultative. Its analytical tasks include (i) improving analytical methodologies to detect risks and to assess their potential impact and (ii) designing and calibrating effective macro-prudential policy tools, including improving existing tools or models and proposing new and/or complementary analytical tools and models. Its consultative tasks include performing an open, independent and analytical review of macro-prudential strategies and operational frameworks in order to contribute to an ESRB policy framework that remains "state-of-the-art" on a continuous basis. In addition, the ASC may suggest and contribute to special analytical studies designed to support the macro-prudential objectives and tasks of the ESRB.

Following an open call for expressions of interest, the ESRB has appointed 15 members of the ASC. Its first Chairperson is Professor Martin Hellwig, Director of the Max Planck Institute for Research on Collective Goods in Bonn (Germany), and its first two Vice-Chairpersons are Professor Jean-Charles Rochet (University of Zurich) and Professor André Sapir (Free University of Brussels). Further information about the ASC and its members can be found on the ESRB website (http://www.esrb.europa.eu). The ASC's first meeting is scheduled for 21 June 2011.

Box 2

MONETARY AND FISCAL POLICY CHALLENGES IN TIMES OF FINANCIAL STRESS

On 2 and 3 December 2010, the ECB's Directorates General Economics and Research hosted a conference entitled "Monetary and fiscal policy challenges in times of financial stress".

At the conference, academics and economists from policy institutions discussed the challenges to monetary policy and fiscal policy during and in the aftermath of the recent financial crisis.



José Manuel González-Páramo

Christopher A. Sims (Princeton University) argued that European Monetary Union (EMU) was at a fork in the road. Sims outlined two possible scenarios for the future of EMU: one with sovereign default and one without sovereign default. He observed that designing EMU as a currency area in which sovereign default never occurs has important advantages.

Karel Mertens (Cornell University) analysed the effects of expansionary fiscal policy when interest rates are at or near zero. Challenging mainstream wisdom, he argued that, at the zero lower bound, expansionary fiscal policy may be less and not more effective than usual.

Huw Pill (ECB) presented a joint paper with Alain Durré (ECB). Pill discussed non-standard central bank measures, distinguishing between pure liquidity measures and credit measures (with quasi-fiscal implications). He argued that, while credit measures may be necessary in the face of exceptional circumstances, credit measures may entail longer-term risks to price stability, unless limited in scope, magnitude and duration.

Eric Leeper (Indiana University) presented a model with a rich specification of fiscal policy, including the possibility of sovereign default. He showed that otherwise routine monetary and fiscal actions can have unusual effects when the economy is near its "fiscal limit", defined as the level of public debt at which sovereign default occurs.

Marco del Negro (Federal Reserve Bank of New York) presented a paper that adds a financial friction into the standard New Keynesian business cycle model. The model is used to quantify the effects of the recent non-standard central bank measures in the United States. Del Negro's analysis suggests that those measures had large positive effects on output.





Giovanni Lombardo (ECB) presented a joint paper with Luca Dedola (ECB). Lombardo showed that international trade in assets in an environment with a financial friction can markedly strengthen the cross-border transmission of economic shocks.

Harald Uhlig (University of Chicago) analysed a rich model aimed at quantifying the fiscal multipliers associated with the American Recovery and Reinvestment Act of 2009. While reporting modestly positive short-run multipliers, Uhlig emphasised sizeable negative long-run multipliers.

Klaus Adam (University of Mannheim) discussed the normative implications of the recent buildup of public debt in many countries. In the context of a model of optimal monetary and fiscal policy, Adam argued that it is optimal to reduce public debt in the wake of an adverse disturbance.

The conference concluded with two special sessions focused on policy. In the first session, Jan in't Veld (European Commission) and Mathias Trabandt (ECB) presented fiscal aspects of the policy models used by the Commission and the ECB, respectively. In the second session, Frank Smets (ECB) chaired a panel consisting of Leeper, Sims, Perotti (Bocconi University), and Uhlig. The panellists and speakers from the floor discussed the implications of the financial crisis for macroeconomic research and for the design of policy institutions in the euro area.

The papers, presentations, and discussions can be downloaded from the ECB's website at http://www.ecb.europa.eu/events/conferences/html/ecb_mopo_fipo.en.html

Box 3

EXTERNAL EVALUATION OF THE ACTIVITIES OF THE ECB'S DIRECTORATE GENERAL RESEARCH

On 10 March 2011 the ECB published a report evaluating the performance of its Directorate General Research (DG/R). The evaluation was commissioned by the Executive Board of the ECB and conducted by four independent external experts: Charles Freedman, Philip Lane, Rafael Repullo and Klaus Schmidt-Hebbel. The overall findings of the evaluation are positive.

The evaluation focused on DG/R's performance in respect of its two main strategic objectives: establishing intellectual leadership within the global central banking research community; and strengthening DG/R's role as a valued source of research-based policy advice within the ECB, the Eurosystem and the European System of Central Banks (ESCB).

In its conclusion, the report states that its overall assessment is "very positive" and that "DG Research has made substantial progress since 2004 in meeting its aim of achieving 'intellectual leadership within the world-wide central bank-related research community', both directly in terms of its own publication output and indirectly via its support for such research in the academic community. There is a critical mass of productive researchers building significant track records of publications on central banking topics and attracting significant numbers of citations in the wider research literature. Moreover, DG Research has contributed significantly as a 'valued source of research-based policy advice within the ECB, Eurosystem, and European System of Central Banks (ESCB)', especially in terms of the development of analytical tools for forecasting and policy simulation and the leadership and coordination of monetary and financial research within the Eurosystem and ESCB."

The report also contains a number of recommendations, which are currently under consideration. These relate in particular to the question of how to foster an increase in the level of research output and strengthen cooperation within the ECB in the area of research.

The report is available on the ECB's website at http://www.ecb.europa.eu/press/pr/date/2011/html/pr110310.en.html.



Box 4

RESEARCH VISITOR PROGRAMME IN THE ECB'S DIRECTORATE GENERAL RESEARCH

Maintaining a high level of interaction with the academic community is an important function of the Directorate General Research (DG/R) and helps to strengthen its research on topics of relevance to the work of the ECB. In practice, this interaction is achieved in two ways. On the one hand, DG/R economists actively participate in external conferences organised by universities and research institutes and frequently work with academic economists on joint projects. On the other hand, the bank provides opportunities for academic economists to visit the ECB to interact with the bank's researchers and policy-makers. In the past, these visits have taken various forms. For example, external researchers are invited to present their research findings at regular seminars and conferences organised by the ECB or they are invited to visit the bank for short periods to assist ECB staff with their research projects. In addition, since the early days of the ECB, the Wim Duisenberg Research Fellowship Programme has provided opportunities for longer stays at the ECB (for periods of up to one year).

The Research Visitor Programme is the latest initiative taken by DG/R to promote interaction with the academic community. Under this programme, economists from universities or research institutes can visit the ECB on a regular basis, typically once a month for periods of one to two days. The regular visitors attend internal seminars at the bank, provide comments and guidance to ECB economists on their research projects and provide advice to the management of DG/R regarding the bank's research programme.

Opportunities to participate in the programme are advertised from time to time on the ECB's website and visitors are selected from the applicants by a selection committee comprising representatives of DG/R and other ECB business areas.

Six economists currently participate in the programme and visit the ECB regularly. They are Giancarlo Corsetti (University of Cambridge), Jordi Galí (CREI, Barcelona), Philippe Weil (OFCE, Paris), Bruno Biais (University of Toulouse), Roman Inderst and Thomas Laubach (both from the Goethe University Frankfurt).

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