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Pierre Jaillet, Director General, Directorate General Economics and International Relations

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Investigating heterogeneity in local borrowing  
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DSGE Report  
by Michel Juillard
Although they have no direct decision-making role in the matter, central banks show a strong interest in structural reforms. Their research effort in this area is sustained and the Governing Council of the Eurosystem establishes a monthly update on these reforms.

Indeed, it is essential to have a thorough knowledge of the functioning of the goods and labour markets to understand how inflationary pressures spread throughout the economy. It is also crucial to understand the functioning of financial markets in order to control the transmission of monetary policy. Structural reforms aim at improving the price and wage formation mechanisms and the impact of decisions concerning key interest rates or the provision of liquidity on the yield curve and the financing of the economy.

At the core of this relationship between inflation and structural reforms lies the concept of potential growth: what growth can we achieve without causing imbalances, in particular inflationary pressures? Structural reforms, by improving the functioning of the economy, by stimulating innovation and productivity, contribute to raising potential growth and competitiveness in the world economy.

The recent crisis has brought to the fore the questions concerning potential growth: has it been durably affected by the crisis? To what extent can structural reforms help to strengthen it? These questions are essential for determining the monetary policy stance and gauging the pressure on production factors. Lower potential growth would mean that monetary policy should be tightened more rapidly in the recovery phase to prevent the economy from overheating and foreign trade from declining. Structural reforms are therefore a major component of the assistance programmes in Greece, Portugal and Ireland. Estimating the impact on growth of reforms carried out in these countries is also essential for forecasting the path of public debt. Finally, reforms in the financial sector (Basel III, systemic financial institutions, etc.) are underway to correct the market imperfections revealed by the crisis and generate a need for expertise, in particular for assessing their impact on the real economy.

At the Banque de France, the Microeconomic and Structural Studies Directorate brings together twenty economists to work on these topics. It promotes in the area of research and analysis the Banque de France’s databases, studies price and wage dynamics, the competitiveness of the French economy and the impact of structural reforms, and produces estimates of potential growth. It also contributes to research in these areas by publishing in leading journals3 and makes essential contributions to forecasting and to the preparation of monetary policy decisions.

3 See in this issue the summaries of the articles by Jean-Charles Briconne, Lionel Fontagné, Guillaume Gauillet, Daria Taglioni and Vincent Viscard (p. 5), by Claire Loupias and Patrick Sevestre (p. 6) or by Vincent Viscard (p. 7)
Anton Korinek (University of Maryland), “Macroprudential regulation versus mopping up after the crash”, 3 June


Glenn Rudebusch (Federal Reserve Bank of San Francisco), “Unbiased estimation of dynamic term structure models”, 12 May

Luciana Juvenal (Federal Reserve Bank of Saint Louis), “Trade and synchronisation in a multi-country economy”, 21 April

Craig Burnside (Duke University), “Understanding booms and busts in housing markets”, 7 April

Daria Taglioni (ECB), “Gravity chains: estimating bilateral trade flows when parts and components trade is important”, 21 March

Isabelle Méjean (École polytechnique) and Julien Martin (PSE-Crest), “Reallocation across firms and aggregate quality upgrading”, 21 March

Michel Beine (Université de Luxembourg), “Determinants of international migration and brain drain”, 17 March

Michael Clements (University of Warwick), “Estimating output gaps and inflation trend-cycle decompositions in real time”, 10 March

Ravi Bansal (Duke University), “Liquidity and financial intermediation”, 31 January

Books

“A reform of French labour law could reconcile employment protection with economic efficiency”, Book published by the French Council of Economic Analysis (Collection poche) by Jacques Barthelemy and Gilbert Cette

Building on their previous report published by the French Council of Economic Analysis, the authors show that a radical reform of French labour law is needed to adapt to changes in the way work is organised, particularly those induced by information technologies. The authors suggest that this radical reform should be based on a fundamental principle: contracts allow for a more harmonious conciliation of the economic sphere with the social context, which implies that a prominent role should be given to negotiated labour agreements. To achieve this, an extension of the domains in which labour law is temporarily waived, the provision of genuine legitimacy to negotiators and the introduction of substantive rules for the conduct of negotiations would foster better labour relations and liberalise collective bargaining. Collective or individual company agreements could then, under …/…

Four questions to…

Philippe Aghion

Economist, professor. Harvard and École d’économie de Paris

It is a tenet of standard macroeconomics that stabilisation policies have no impact on long-term growth, except maybe through hysteresis in the job market. Your research has challenged that view. Which channels should be considered important?

I think it is a supply side channel, as it is centered around firms’ investment decisions, even though one should keep in mind that firms innovate when they have the prospect of increasing their market shares, so demand also matters. It is important that firms maintain training, qualification or innovative equipments over the business cycle, otherwise growth would be stifled if these long-run investments are interrupted down the road. When bank-dependent firms are credit-constrained, the risk is that R&D is sacrificed as banks become more conservative under worsening business conditions. This is why countercyclical policies and automatic stabilisers play an important role. By dampening fluctuations, they help spur investment in R&D and innovations.

Given that countries away from the technological frontier can always catch up later, are the benefits of stabilisation policies most likely to be felt by the countries that stand at the frontier?

I wouldn’t say so. Countercyclical policy is needed when industrial sectors are credit-constrained or liquidity-constrained. To the extent that emerging countries suffer more from lack of financial development, one might think that these countries should benefit most from countercyclical policies. On the other hand, innovative investments (which often involve firms with low degrees of asset tangibility and therefore also subject to the possibility of a credit crunch during a recession) are more likely to be undertaken in developed countries. Thus the above argument about countercyclical policy encompasses emerging as well developed countries, it is a general notion.

The crisis underway is different from previous ones in that it is global, affecting equally those that define the current frontier. Does that have specific consequences?

The current crisis is not a subprime crisis following excessive banking deregulation, but a crisis rooted in the gridlock of political institutions. Governments in the United States (US) or within the euro area do not play their role, in particular that of enforcing adequate budgetary policies, as sovereign debts pile up. Partisan lines and policy rent-seeking prevent progress and override economic patriotism. When push comes to shove, it is at the end the central banks which need to compensate for the lack of constructive budgetary intervention by expanding the scope of their monetary intervention, sometimes at the risk of exceeding their mandates.

What is your assessment of the stabilisation policies carried out in response to the current crisis, particularly regarding their implementation by central banks?

Cooperation has not proven particularly effective in Europe, even though the euro area as a whole is less indebted than the US or Japan. Europe needs to move towards more federalism, in particular that of enforcing adequate budgetary policies, as sovereign debts pile up. Partisan lines and policy rent-seeking prevent progress and override economic patriotism. When push comes to shove, it is at the end the central banks which need to compensate for the lack of constructive budgetary intervention by expanding the scope of their monetary intervention, sometimes at the risk of exceeding their mandates.

Initiatives also have to be taken concerning banks. An interesting idea is the efficient recapitalisation scheme advocated by Thomas Philippon, where the government uses preferred stocks with a put option in exchange for cash injections. The option allows the government to partake in the high-payoff state without opportunistic participation from banks that can invest on their own. One should also mull over the Independent Commission on Banking’s Vickers report on the separation between traditional and wholesale/investment banking. …/…
conditions defined by the social partners, waive the provisions of the Labour Code, within the limits of the legal hierarchy of applicable national and supranational labour legislation. For example, rights that have more of a contractual than a regulatory basis imply a different approach to the settlement of disputes and the concept of non-compliance with labour law. This approach would give full power to the Larcher Law of 31 January 2007 which gives social partners a pre-legislative status, as well as to the Law of 20 August 2008 on the conditions of legitimacy and representativeness of trade unions. The range of civil, criminal and administrative sanctions would thus be rebalanced in favour of administrative sanctions and procedures for mediation and arbitration. At the same time, the authors address the question of the relationship between employment protection and employee protection and they show, via a comparison of the reactions of different labour markets to the crisis, the advantages of incorporating elements of collective agreements into employment contracts.

Publications in the 1st half of 2011


“Asset price changes and macroeconomic measurement of profitability”, G. Cette, D. Durant, J. P. Villelette, Review of Income and Wealth, v. 57, iss. 2, June


“Effets de richesse : le cas français”, V. Chauvin and O. Darné, Économie et Statistique, 438–440, June


“Households’ savings and portfolio choices: micro and macroeconomic approaches”, L. Arrondel, V. Borgy and F. Savignac, Banque de France Quarterly Selection of Articles, Summer 2011

“The relationship between capital flows and financial development: a review of the literature”, J. Ramos-Tallada, Banque de France Quarterly Selection of Articles, Summer 2011

Regarding short-run stabilisation policies, in recent work with Enisse Kharroubi we find a strong positive correlation between fiscal discipline and countercyclical fiscal policy. This means that it’s easier for countries with low average deficits to implement countercyclical policies that are supportive of long-run growth. In France in particular the implementation of a fiscal reform which eliminates all the deductions that are not directly motivated by a measured growth impact, would provide considerable breathing space.

Conference

Banque de France – Bundesbank conference "Fiscal and monetary policy challenges in the short and long run"

Organised by Heinz Erhmann (Deutsche Bundesbank), Laurent Clerc and Hubert Kempf (Banque de France), the third Bundesbank-Banque de France conference was held on 19-20 May 2011 in Hamburg. The conference was devoted to the challenges that macroeconomic policy – in the form of monetary, fiscal and tax policy – must address in the short and long run. These constitute the thorniest issues in the current economic context: i.e. the management of public debt, fiscal and tax policy, and macroprudential policy, in the face of financial crises.

The first part of the conference, which focused on public debt, began with a presentation by Alan Auerbach, who conducted a wide-ranging discussion of the institutions that are desirable in a currency union – particularly in terms of tax and fiscal discipline – based on a comparison between the euro area and the United States. Three other contributions addressed two types of response to the drift in public finances: raising inflation and sovereign default.

Fiscal and tax policies were addressed in the second part of the conference. The aim was first of all to quantify the optimum profile of fiscal consolidation, by seeking a trade-off between short-term macroeconomic costs and longer-term gains. The research presented also addressed the issue of international cooperation between countries involved in international trade when monetary policies are likely to reach the zero bound to nominal interest rates. The remainder of the session was devoted to assessing the robustness of the fiscal multipliers estimated using macroeconomic models of the DSGE type and taking account of wealth inequalities between agents in the study of the effects of tax policy.

The last session was devoted to macroprudential policy in response to financial crises. The two presentations in this section dealt with possible overborrowing by economic agents and bank runs respectively. The Bundesbank President, Jens Weidmann, summarised the contributions and stressed the importance of sound scientific research for central banks, both from the point of view of decision-making and communication to the public. He also underscored the need for central banks and fiscal authorities to learn the lessons from the current crisis. While they have been able to manage the crisis, they must now organise a return to normal policies, failing which they will subject their economies to the increased risk of further crises.

The conclusions to be drawn from this research were summed up by the Banque de France’s Governor, Christian Noyer. After stating that the foundations of modern monetary policy, namely the absence of a long-run trade-off between inflation and unemployment and the merits of an objective of low and stable inflation have not been invalidated by the crisis, the Governor pointed out that the crisis has shown up some limits to the consensus on monetary policy, making necessary a reappraisal of the latter both in theoretical terms and in terms of the practical conduct of monetary policy. Governor Noyer nevertheless concluded that central banks are reasonably well equipped to cope with the future monetary and financial problems that the crisis has thrown up.
The impact of unconventional monetary policy on the market for collateral: The case of the French bond market

Banks obtain liquidity funding from the Central Bank in exchange for collateral. Under specific conditions, a significant increase in the volumes of these so-called open-market operations generates a liquidity risk on these markets. The higher liquidity risk, paradoxically, raises the refinancing cost of the financial system owing to a lack of eligible collateral.

Using a Markov-switching model with time-varying transition probabilities, Sanvi Avouyi-Dovi and Julien Idier show the existence of an “unconventional” regime where monetary policy is non-neutral and generates a premium for volatility and liquidity. In the “normal” regime, monetary policy is neutral.

The non-neutrality induces a strong asymmetry between the two regimes. The probability of moving from the normal to the unconventional regime is high when the central bank conducts large operations. In contrast, under the unconventional regime with a volatile and illiquid market for collateral, an increase in the refinancing helps stabilise the market by easing refinancing pressures and aggressive trading. The timing of the exit strategy is crucial. Were a similar policy maintained when the underlying regime is back to normal, the central bank could prompt a devastating spiral in some market segments instead of bringing them back to efficiency.


Sanvi Avouyi-Dovi is Adviser in the Microeconomic and Structural Analysis Directorate and Associate Professor at Paris Dauphine. He has published articles in journals such as the Journal of Money, Credit and Banking, the Journal of Macroeconomics, the Journal of Banking and Finance and the European Economic Review.

Firms and the global crisis: French exports in the turmoil

Global trade contracted quickly and severely during the global crisis. In a paper joint with Lionel Fontagné, Guillaume Gaulier, Vincent Vicard and Daria Taglioni, Jean-Charles Bricongne uses a dataset of French firms to match export data with firm-level credit constraints and shows that most of the 2008-2009 trade collapse was due to the unprecedented demand shock and to product characteristics.

While all firms have been affected by the crisis, the effect on large firms has been mainly on existing flows and has resulted in a smaller portfolio of products being offered to export destinations. The effect on smaller exporters has been to reduce the range of destinations served or to stop exporting altogether. Credit constraints have been an additional impediment for firms active in high financial dependence sectors. However, the share of credit-constrained firms is small and their number has not increased significantly during the crisis, with the result that the overall impact of credit constraints on trade has been limited.


“Multiple filtering devices for the estimation of cyclical DSGE models”, F. Canova and F. Ferroni, Quantitative Economics, v. 2, iss. 1, March


« Le partage de la valeur ajoutée », P. Askenazy, G. Cette and A. Sylvain, La Découverte, Collection Repères

« Refonder le droit social », J. Barthéléméy and G. Cetta, La Documentation française


“Bilinear term structure model”, C. Gourieroux and A. Monfort, Mathematical Finance, v. 21, iss. 1, January

“Incomplete markets and the output-inflation tradeoff”, Y. Algan, E. Challe and X. Ragot, Economic Theory, v. 46, iss. 1, January

“The OECD’s new global model”, K. Herve, N. Pain, P. Richardson, F. Sedillot and P. O. Belfy, Economic Modelling, v. 28, iss. 1-2, January-March


« Crise de la dette et financement de la croissance », P. Jaïlet, Année des professions financières, 2011

The research on this issue is part of a program developed at the Banque de France, addressing the relationship between financial constraints, trade credit and trade.


Jean-Charles Bricongne is a senior economist with the Competitiveness and Foreign Trade Research Division. He is also senior lecturer at Sciences Po Paris and professor at Paris Dauphine University.

Costs, demand and producer price changes

What are the main determinants of producer price changes in the French manufacturing industry? To answer this question, Claire Loupias and Patrick Sevestre use data from the Banque de France monthly business surveys, merged with the data from the ACEMO survey (activity and working conditions survey) of the French Ministry of Labor, to estimate an ordered probit model. Their results show that changes in intermediate input prices are the main driver of producer price changes. Changes in firms’ labor costs, in their production level or in the producer price index of their industry contribute less to the occurrence of price changes. Moreover, when they face a change in their costs, firms adjust their prices upward more often and more rapidly than they do it downward, especially when the shock is perceived as permanent.


Patrick Sevestre is Professor at Université Paris 1-Panthéon Sorbonne, currently on leave at the Banque de France. The bulk of his research is devoted to the empirical analysis of firms’ behaviour (financing, price-setting, innovation, etc.) using microeconometric techniques. He has published papers in journals such as the Journal of Econometrics, the Journal of Business and Economic Statistics, the Oxford Bulletin of Economics and Statistics, the Oxford Review of Economic Policy, Empirical Economics and the Annales d’Économie et de Statistique.

Trade, conflicts, and political integration: Explaining the heterogeneity of regional trade agreements

The importance of regional trade agreements (RTAs) has increased over the last decades – as of September 2010, 195 RTAs were in force –, while multilateral liberalisation was abating, suggesting a potential clash between regional and multilateral trade integration. Regional agreements are discriminatory by nature, but provide non-traditional gains on top of the standard gains from trade. Many historians and political scientists argue that politics matters in regional integration processes, and in particular that the main goal of European trade integration was the preservation of peace.

Drawing on insights from international relations, Vincent Vicard shows that RTAs may affect international insecurity through two channels. By increasing trade between members, they increase the opportunity cost of war, and through the creation of supranational institutions they also promote the negotiated resolution of conflicts.

…)
Continuous particle filtering

Many time-series models encountered in finance and economics are characterised by non-linear and/or non-Gaussian state-space representations. This prevents them from being estimated using conventional econometric techniques, i.e. which involve maximising a likelihood function. They are typically estimated using other computation-intensive methods, e.g., Bayesian Markov Chain Monte Carlo (MCMC) techniques or Importance Sampling.

Sheheryar Malik and Michael K. Pitt propose a “continuous particle filtering” method as a feasible alternative which is comparatively more efficient (in the statistical sense) and faster in terms of CPU computation time. It is essentially a unified methodology for filtering and parameter estimation in the spirit of the well-known Kalman filtering strategy which is restricted to linear, Gaussian state-space representations. Objects of interest to the researcher such as filtered paths of the state variables and diagnostics fall out as by-products of the procedure; which for the same models estimated via MCMC (for example) would only have been obtained typically following complicated modifications.

Given that it is based on maximising the ‘approximating’ likelihood, the approach circumvents the issue of prior selection encountered when employing Bayesian techniques. It is shown to be straightforward to implement and applicable to a wide range of models found in the financial economics and macroeconomics literatures.


Sheheryar Malik is an Economist in the Directorate of Business Conditions and Macroeconomic Forecasting. He completed his Ph. D. in Economics at the University of Warwick and has previously held teaching and research positions at Warwick Business School and the IMF before joining the Banque de France in September 2009.

Investigating heterogeneity in local borrowing

The “Golden rule” should constrain the borrowing behaviour of French regions, as they are forced to balance their budget and can borrow only to finance investment expenditures. Philippe Frouoté shows with Gilles Dufrénou and Christophe Schalck that until now the Golden rule has only had a pure accounting rather than an economic impact on local administration, in the sense that its constraining power is weak.

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Monetary policy analysis

For the analysis of monetary policy, the Monetary Policy Analysis and Research Division (POMONE) regularly uses two DSGE models, developed and estimated by the division. The first, based on Smets and Wouters (2003), applies to the euro area. Particular attention has been paid to the representation of long-term trends. The second is an extension to two economies – the euro area and the rest of the world. It is specifically designed for issues related to the international environment.

These models are used each month to analyse the ECB’s forecasts and monetary policy stance. They are also helpful for the simulation of different scenarios regarding interest rates setting and for other monetary policy variants. They have been used, for example, to study the impact of public spending on private consumption, the effect of inflation targeting on the probability of reaching the zero bound to interest rates, the merits of price level targeting versus inflation targeting, the consequences of higher oil prices and the quantification of second-round effects on wages.

Using a quantile regression analysis over the period 1999-2007, the authors provide empirical evidence on French regions’ heterogeneous borrowing. The heterogeneity is pronounced when the regions face a negative shock on debt. The Golden rule can be thought of as a “soft” budget constraint for local administrations if a bailout from the central government is believed to be implicit (as the former receive transfers from the latter). In this event, they find it advantageous to consider borrowing as an adjustment variable when making their budget decisions.

Under a tightening of financing conditions, which is likely in the context of the crisis, the situation could change if the central government lacks the resources to increase transfers. French regions could be confronted with a trade-off between investment reduction, which would be detrimental to public investment projects and growth, and non-compliance with the Golden rule, which would raise questions about the sustainability of local public finance and the public administration as a whole.


After graduating from Paris 1, Philippe Frousté obtained a post-doctoral fellowship at Paris X Nanterre and joined Banque de France’s Public Finance unit in 2008. His research and teaching are devoted to corporate bankruptcy law, regulation and budget rules.

Acknowledgement of discussants

The following discussants contributed insightful remarks and suggestions to the DGEI’s weekly seminars in the first half of 2011. They are warmly thanked for their support.

Andrea Attar (PSE), Melika Bensalem (CREST), Florin Bilbrie (PSE), Fabrice Collard (Bern), Balazs Egert (OCDE), Thierry Foucault (HEC), Gael Giraud (PSE), Zorana Grbac (Evry), Christophe Hurlin (Orléans), Luciana Juvenal (Fed St Louis), Francis Kramarz (ENSAE), Wolfgang Lemke (BCE), Benoît Mojon (Banque de France), Kristoffer Nimark (Pompeu Fabra), Stefan Straetmans (Maastricht), David Thesmar (HEC), Dimitrios Tsomocos (Oxford), Nicholas Oulton (LSE), Simon Van Norden (Banque de France), Thierry Verdier (PSE), Anne Villamil (Illinois)

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