BANQUE DE FRANCE
EUROSYSTÈME

Research Newsletter

EDITED BY THE DIRECTORATE GENERAL ECONOMICS AND INTERNATIONAL RELATIONS OF THE BANQUE DE FRANCE

2nd half 2013

Upcoming events

Seminars

BDF, Selma Chaker (Bank of Canada), "Volatility and liquidity costs", April 10

BDF, Juan Carluccio (Banque de France), "International trade, wage outcomes and firm-level bargaining: Evidence from France", April 16

BDF/TSE, Jun Yu (Singapore Management University), "Testing for multiple bubbles 1: Historical episodes of exuberance and collapse in the S&P 500", May 21

Conferences et workshops

Workshop RECFIN, "Liquidity and organisation of OTC markets", June 2

ACPR/BDF/SoFIE Conference, "Systemic risk and financial regulation", July 3-4

10th Annual central bank workshop, "The microstructure of financial markets", September 4-5

International Symposium, "Central banks: What role for the future?", November 7

Past events...

BDF, Rémy Lecat (Banque de France), ''Productivity trends from 1890 to 2012 in advanced countries", January 8

BDF/TSE, Miguel Leon-Ledesma (University of Kent), "External constraints and endogenous growth: Why didn't some countries benefit from capital inflows?", January 14

BDF, Guillaume Vuillemey (Banque de France), "Endogenous derivative networks", January 15

BDF/TSE, Pooyan Amir (Goethe Universität Frankfurt), "Drifts, volatilities and impulse responses over the last century", January 21

BDF, Claire Labonne (ACPR), "Credit growth and bank capital requirements in the french banking sector", January 22

BDF, Grégory Levieuge (Banque de France), "*Cohérence et contenu prédictif des indicateurs du* Bank Lending Survey *pour la France*", January 29

BDF/TSE, Angelo Ranaldo (University St. Gallen), "The Euro interbank repo market", January 30

BDF, Matthieu Lemoine (Banque de France), "Taxation and protectionism", February 12

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What conditions are required to ensure a lasting reduction in euro area imbalances?

Gilbert Cette,
Director, Microeconomic and Structural Analysis Directorate (DEMS)

The recent cyclical improvement in the euro area, combined with the narrowing of peripheral sovereign yield spreads over the Bund, the successful return to the sovereign debt market by one of the peripheral nations, Ireland, and diminishing or extinguished current account deficits, all suggest that the crisis in the euro area is over. However, unemployment is still exceptionally high (12.1% in the euro area as a whole, 26.7% in Spain), debt ratios have climbed to levels never before seen in peacetime and in some quarters low inflation is fuelling fears of a "Japanese-style" deflation scenario.

Analyses carried out at the Banque de France help provide a better understanding of the mechanisms that have led to macroeconomic imbalances and the conditions needed to redress them that would be compatible with a reduction in mass unemployment.

Gaulier and Vicard (2012) have put forward an analysis of the increase in current account imbalances in the euro area. They have found that the dynamics of domestic demand in deficit countries, partly driven by capital flows, created a situation whereby these nations were unable, due to inadequate competitiveness, to offset the ensuing growth in imports through higher exports. When it was created, the single currency was indeed expected to facilitate capital flows (doing away with currency risk). However, it proved difficult to control the risks tied to massive flows. In a number of countries, a property bubble fuelled by capital from the rest of Europe led to strong growth in imports and sent inflation higher than in the rest of the euro area (notably by comparison with Germany, which was experiencing wage moderation). The production capacities required to repay foreign debt were not created as funds were channelled into sectors with least exposure to international competition – sectors where the least-productive firms operate.

The downtrend in private capital flows, while largely offset by public funds, namely liquidity injections from the Eurosystem and the use of the TARGET2 payment system (see Kalantzis and Zignago, forthcoming), played a part in weakening foreign as well as domestic demand due to a preponderance of intra-European trade for most countries. Until now, peripheral nations have, by and large, balanced their current accounts through a drop in domestic demand: imports moved down while at the same time foreign demand from outside of the euro area was trending upwards and demand from euro area countries in surplus was stabilising.

In order to put net international investment positions (assets less liabilities) – aggravated by the accumulation of current account deficits – back on sustainable trajectories, export-driven growth conditions need to be created. This requires a decrease in relative prices in the countries concerned (see Durand and Lopez, 2012, as well as Coudert, Couharde and Mignon, 2013) for an assessment of misalignments in real exchange rates). While there have been substantial adjustments in equilibrium exchange rates for certain countries (Spain and Portugal), this has worked against France and Italy more than Germany, which has expanded its current account surplus (Carton and Hervé, 2013).

In the current macroeconomic context, it is important to examine the conditions needed for the success of internal devaluation policies.

The success of internal devaluation strategies is compromised when such strategies are introduced simultaneously by too many member states of a monetary union, especially in the context of a liquidity trap. When key lending rates are close to zero, wage moderation cannot go hand in hand with a cut in nominal interest rates to drive up investment. In fact, disinflation makes for a hike in real interest rates, which can dampen investment, offsetting profitability and the competitiveness gains expected from lower labour costs and increasing the real private and public debt burden. Cuts in investment by businesses that see deleveraging as a priority then makes for a decrease in current account deficits but at a high cost and with no lasting impact.

BDF, Jean-Paul Renne (Banque de France), "A quadratic Kalman filter", February 26

BDF, Enisse Kharroubi (BRI), "Monetary policy, financial regulations and industry growth", March 10

BDF, Eric Monnet (Banque de France), "The price of stability. The balance sheet policy of the Banque de France and the gold standard (1880-1914)", March 12

Banque de France Working Papers 2013

- 472 "Market shares in the wake of the global crisis: The quarterly export competitiveness database", Gaulier (G.), Santoni (G.), Taglioni (D.) and Zignago (S.)

- 471 "Network analysis of world trade using the BACI-CEPII dataset", De Benedictis (L.), Nenci (S.), Santoni (G.), Tajoli (L.) and Vicarelli (C.)

- 470 "Euro area structural convergence? A multi-criterion cluster analysis", Irac (D.) and Lopez (J.)

- 469 "Which size and evolution of the government expenditure multiplier in France (1980-2010)?", Cléaud (G.), Lemoine (M.) and Pionnier (P.-A.)

- 468 "Assessing the losses in euro area potential productivity due to the financial crisis", Chouard (V.), Fuentes Castro (D.), Irac (D.) and Lemoine (M.)

- 467 "French firms exports during downturns: Evidence from past crise", Bellas (D.) and Vicard (V.)

- 466 "Fiscal Sustainability and the value of money: Lessons from the British Paper Pound, 1797-1821", Antipa (P.)

- 465 "Financial literacy and financial planning in France", Arrondel (L.), Debbich (M.) and Savignac (F.)

- 464 "Heterogeneous banking efficiency: Allocative distortions and lending fluctuations", Duprey (T.)

- 463 "What has been the impact of the 2008 crisis on firms' default?", Fougère (D.), Golfier (C.), Horny (G.) and Kremp (E.) (in French)

- 462 "The dynamics of bank loans short-term interest rates in the Euro area: What lessons can we draw from the current crisis?", Avouyi-Dovi (S.), Horny (G.) and Sevestre (P.)

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Using a multi-country macroeconometric model, Berthou and Gaulier (2013) simulated wage moderation by lowering the annual pace of growth in labour costs in deficit countries of the euro area. The simulation showed that an adjustment solely by the deficit countries had a deflationary impact on the euro area as a whole. Symmetrical adjustment (factoring in faster wage growth in Germany) is more effective, does not negatively impact growth and does not hinder deleveraging. Carton and Hervé (2013) also highlighted the difficulty of adjusting real exchange rates in the euro area in a context of low inflation. Simply put, in a period of low average inflation, it is harder to achieve a strong and sustained inflation rate hierarchy between countries. In the euro area, such a hierarchy would help rapidly redress current account imbalances.

Coordination of economic policies is therefore essential. Common policies (first and foremost monetary policy) and those implemented in individual countries need to be compatible with the achievement of adequate levels of demand and inflation for the area as a whole. Domestic demand can be driven by additional investment in undervalued countries. Fiscal devaluation (lowering employers' social security contributions by shifting the burden to households or cuts in public spending; see Aghion 2012, Cette, Fahri and Cohen 2012), which can help adjust the competitiveness of deficit countries, can be balanced using symmetrical "revaluation" policies in countries displaying a surplus. Wage stimulation in countries in surplus, such as the introduction of a minimum wage in Germany for example, may also have a balancing effect.

Aghion (P.), Cette (G.), Farhi (E.) and Cohen (E.) (2012), "*Pour une dévaluation fiscale*", *Le Monde*, 24 october.

Berthou (A.) and Gaulier (G.) (2013), "Wage dynamics and current account rebalancing in the euro area", Banque de France, *Quarterly Selection of Articles* No. 30.

Carton (B.) and Hervé (K.) (2013), "Is there any rebalancing in the euro area?", CEPII Working Paper, No. 2013-32.

Coudert (V.), Couharde (C.) and Mignon (V.) (2013), "*Les mésalignements de taux de change réels à l'intérieur de la zone euro*", *Revue de l'OFCE*, No. 127.

Durand (C.) and Lopez (C.) (2012), "Equilibrium exchange rate and competitiveness within the euro area", Banque de France, *Quarterly Selection of Articles* No. 28.

Gaulier (G.) and Vicard (V.) (2012), "Current account imbalances in the euro area: competitiveness or demand shocks?",Banque de France, *Quarterly Selection of Articles* No. 27.

Kalantzis (Y.) and Zignago (S.) (2014), "*Ajustement international et rééquilibrage de la demande mondiale : où en sommes sommes-nous ?*", Banque de France, *Bulletin de la Banque de France*, No. 195.

• 461 "Choosing the variables to estimate singular DSGE models", Canova (F.), Ferroni (F.) and Matthes (C.)

• 460 "The impact of worker bargaining power on the organisation of global firms", Carluccio (J.) and Bas (M.)

• 459 "Voting in committee: Firm value vs. back scratching", Ravanel (M.)

• 458 "The impact of urban enterprise zones on establishment location decisions: Evidence from French ZFUs", Mayer (T.), Mayneris (F.) and Py (L.)

• 457 "Securitisation, competition and nonitoring", Ahn (J.-H.) and Breton (R.)

• 456 "Regime switching and bond pricing", Gouriéroux (C.), Monfort (A.), Pegoraro (F.) and Renne (J.-P.)

• 455 "Pricing default events: Surprise, exogeneity and contagion", Gouriéroux (C.), Monfort (A.) and Renne (J.-P.)

• 454 "Forecasting growth during the Great Recession: Is financial volatility the missing ingredient?", Ferrara (L.), Marsilli (C.) and Ortega (J.-P.)

• 453 "Aggregate fluctuations and international migration", Beine (M.), Bricongne (J.-C.) and Bourgeon (P.)

• 452 "Optimal exchange rate policy in a growing semi-open economy", Bacchetta (P.), Benhima (K.) and Kalantzis (Y.)

• 451 "The discriminatory effect of domestic regulations on international trade in services: Evidence from firm-level data", Crozet (M.), Milet (E.) and Mirza (D.)

• 450 "Currency union with and without banking union", Bignon (V.), Breton (R.) and Rojas Breu (M.)

• 449 "Limited attention and news arrival in limit order markets", Dugast (J.)

• 448 "Net interoffice accounts of global banks: The role of domestic funding", D'Avino (C.)

• 447 "Big push or big grab? Railways, government activism and export growth in Latin America, 1865-1913", Bignon (V.), Esteves (R.) and Herranz-Loncán (A.)

• 446 "Credit and liquidity in interbank rates: A quadratic approach", Dubecq (S.), Monfort (A.), Renne (J.-P.) and Roussellet (G.)

• 445 "Firms' export dynamics: Experience vs. size", Berthou (A.) and Vicard (V.)

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Workshop on the economics of cross-border banking

Banque de France and Paris School of Economics – December 13 and 14, 2013

The unprecedented freeze in bank funding markets and the subsequent events that unfolded during the 2008-09 financial crisis have motivated a rich research agenda on the behaviour of international banks, the transmission of shocks through global banking flows and the nature of international financial integration. The Banque de France, in cooperation with the Paris School of Economics (PSE), the Federal Reserve Bank of New York and the Centre for Economic Policy Research, organised an international conference on the "Economics of Cross-Border Banking" in Paris.[1]

The first session on Friday, December 13, addressed the modeling of international banking integration. José Fillat (FRB Boston) presented a model of entry into the banking sector from the point of view of the host country whereas Friederike Niepmann (FRB New York) suggested a model of heterogeneous banks, which are constrained in their ability to enter foreign markets. Mathias Hoffmann (Universität Zürich) presented a paper on the interaction between financial development and financial integration of banks at the intra-national level.

The second session featured a presentation by Ivan Jaccard (ECB) on the role of capital flows to the adjustment to common shocks as well as a presentation by Jean-Christophe Poutineau (University of Rennes) on the role of the cross-border lending channel for the business cycle of a monetary union. The third session concentrated on empirical studies of international banking: the paper by Eugenio Cerutti (IMF) investigated the factors that led to a retrenchment in cross-border lending during the financial crisis whereas the paper by Neeltje van Horen (DNB) analysed the transmission of shocks by international banks in host countries.

The keynote speech was held by Linda Goldberg (FRB New York) who elaborated on the increasing complexity and size of banks, which have expanded both in scope and scale over the recent years. Particularly noteworthy, she stressed that banking groups are often part of (international) firms, which not only engage in financial services, but actually offer a wide range of services and products. Complexity is important when it comes to issues of resolution mechanisms, interconnectedness and risk exposure as well as the way banking activities are conducted.

On Saturday, December 14, the fourth session of the conference featured presentations on financial crises and banking regulation. Adrian Penalver (PSE) presented a model of banks' behavior in setting credit standards to analyse whether the observed decline in pre-crisis credit standards can be attributed to low interest rates or to the savings glut hypothesis. Addressing the question of the drivers of financial crises, Moritz Schularick (Universität Bonn) spoke about the role of private and public debt accumulation as well as their interaction. Vania Stavrakeva (LBS) presented a model of optimal bank regulation when governments are constrained in their ability to bail out banks.

The last session featured presentations by Silvia Gabrieli (Banque de France) and Galina Hale (FRB San Francisco) who both used network analysis to study the interactions and transmission channels between different banks. Whereas the first presentation concentrated on the liquidity allocation among European banks during the Lehman crisis, the second presentation concentrated on the international transmission of shocks through interbank relationships and exposure to crisis countries.

1 *The conference program is available on-line at* https://www.banque-france.fr/fileadmin/user_upload/banque_de_france/Economie_et_Statistiques/Programme-2013_11_24.pdf

Are individuals inattentive when they form their macroeconomic expectations?

Several recent theoretical papers show that imperfect information, in the form of inattentiveness on the part of economic agents, is a promising way to account for macroeconomic empirical regularities that are problematic, such as the persistence of inflation. Persistence in price dynamics can thus be explained in relation to the sluggish adjustment of inflation expectations to the shocks underlying inflation, rather than by resorting to the ad-hoc and counterfactual assumption of price indexation.

There are two main approaches in this literature: models where agents adjust their information sets infrequently ("sticky information" models), and models where individuals have continuous access to noisy and idiosyncratic information on the state of the economy ("noisy information" models). Each of these approaches has different implications for the dynamics and heterogeneity of expectations.

In " Inattentive Professional Forecasters", written jointly with Hervé Le Bihan, we use individual expectations from the ECB Survey of Professional Forecasters (SPF) to design new empirical tests for these models. We show that, despite the fact that new information is released each quarter, professional forecasters do not systematically update their forecasts on a quarterly basis. This is consistent with the sticky information approach. Furthermore, for a given quarter, there is a substantial diversity of opinions about future macroeconomic outcomes among the forecasters who updated their forecasts. In line with the "noisy information" approach, disagreement across forecasters is not merely due to the infrequent updating of information sets.

In light of this qualitative evidence, we develop an expectations model that features both types of imperfect information. We show that the model has difficulty matching quantitatively the empirical properties of both the forecast errors and the disagreement across forecasters as observed in the SPF data. Intuitively, to account for the observed sluggishness in the forecasts of professionals, one has to postulate a set of parameter values that corresponds to a large degree of information imperfection. However, this gives a level and a variance of disagreement that are much higher than those observed in the actual survey. In other words, the forecasters' opinions are too similar for us to be able to account for the persistence in their forecast errors with our hybrid imperfect information model.

Andrade (P.) and Le Bihan (H.) (2013), "Inattentive professional forecasters", *Journal of Monetary Economics*, Vol. 60(8), pp. 967-982.

Philippe Andrade is a senior economist in the Monetary Policy division. His work focuses on the formation of expectations and their impact on macroeconomic fluctuations, as well as the dynamics of prices in an international setup. He has published articles in journals such as: *The International Journal of Forecasting*, the *Journal of Econometrics* and the *Oxford Bulletin of Economics and Statistics*.

- 444 "Procyclical debt as automatic stabilizer", Wesselbaum (D.)
- 443 "A growth perspective on foreign reserve accumulation", Cheng (G.)
- 442 "Non-uniform wage-staggering: European evidence and monetary policy implications", Juillard (M.), Le Bihan (H.) and Millard (S.)
- 441 "Upstream product market regulations, ICT, R&D and productivity", Cette (G.), Lopez (J.) and Mairesse (J.)
- 440 "Learning leverage shocks and the Great Recession", Pintus (P. A.) and Suda (J.)
- 439 "Strict fiscal rules and macroeconomic stability: The case of social VAT", (in French) Fève (P.), Matheron (J.) and Sahuc (J.-G.)
- 438 "The laffer curve in an incomplete-market economy", Fève (P.), Matheron (J.) and Sahuc (J.-G)
- 437 "The financial content of inflation risks in the euro area", Andrade (P.), Fourel (V.), Ghysels (E.) and Idier (J.)
- 436 "Nowcasting French GDP in real-time from survey opinions: Informations or forecast combinations?", Bec (F.) and Mogliani (M.)
- 435 "Policy uncertainty spillovers to emerging markets – Evidence from capital flows", Gauvin (L.), McLoughlin (C.) and Reinhardt (D.)
- 434 "Belief shocks and the macroeconomy", Suda (J.)
- 433 "Market-implied inflation and growth rates adversely affected by the Brent", Cette (G.) and de Jong (M.)
- 432 "Domino effects when banks hoard liquidity: The French network", Fourel (V.), Héam (J.-C), Salakhova (D.) and Tavolaro (S.)
- 431 "Age biased technical and organisational change, training and employment prospects of older workers", Behaghel (L.), Caroli (E.) and Roger (M.)
- 430 "Dynamic factor models: A review of the literature", Barhoumi (K.), Darné (O.) and Ferrara (L.) (in French)
- 429 "Social networks and wages in Senegal's formal sector", Berardi (N.)
- 428 "Fiscal sustainability in the presence of systemic banks: The case of EU countries", Bénassy-Quéré (A.) and Roussellet (G.)

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• 427 “Contagion effects in the aftermath of Lehman’s collapse: Evidence from the US financial services industry”, Dumontaux (N.) and Pop (A.)

• 426 “Calibrating initial shocks in bank stress test scenarios: An outlier detection based approach”, Darne (O.), Levy-Rueff (G.) and Pop (A.)

• 425 “More facts about prices: France before and during the Great Recession”, Berardi (N.), Gautier (E.) and Le Bihan (H.)

• 424 “Exchange rate pass-through in the global economy”, Bussière (M.), Delle Chiaie (S.) and Peltonen (T.A.)

• 423 “Commodity price volatility and tax revenue: Evidence from developing countries”, Ehrahart (H.) and Guerineau (S.)

• 422 “On the evolution of specie: Circulation and weight loss in 18th and 19th century coinage”, Velde (F.R)

• 421 “Commodity and equity markets: Some stylised facts from a copula”, Delatte (A.-L.) and Lopez (C.)

• 420 “In defense of early warning signals”, Bussière (M.)

• 419 “Elections and the structure of taxation in developing countries”, Ehrhart (H.)

• 418 “Tax revenue instability in Sub-saharan Africa: Consequences and remedies”, Ebeke (C.) and Ehrhart (H.)

• 417 “Surplus consumption ratio and expected stock returns”, Ghattassi (I.)

• 416 “Rational inattention to news: The perils of forward guidance”, Gaballo (G.)

Publications 2013

First half

“The Financial crisis: Lessons for international macroeconomics”, Bussière (M.), Imbs (J.), Kollmann (R.) and Rancière (R.), *American Economic Journal : Macroeconomics*, February

“Financial variables as leading indicators of GDP growth: Evidence from a MIDAS approach during the Great Recession”, Ferrara (L.) and Marsilli (C.), *Applied Economics Letters*, February

“Median-unbiased estimation in DF-GLS regressions and the PPP Puzzle”, Lopez (C.), Murray (C.) and Papell (D.), *Applied Economics,* February

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Civic capital and the size distribution of plants

What determines the size of economic organisations? Economists usually explain differences in firm size by variations in factors such as market size, financial development and tax and labor regulations.

In this article, Matthias Bürker and G. Alfredo Minerva claim that societal values and beliefs, the so-called civic capital, shape the size distribution of plants. Employing Italian census data, the authors show that the stock of provincial civic capital increases both the average and the dispersion of plant size. The reason is that civic capital restrains opportunistic behavior, implying that in provinces where civic virtues are more pronounced agents have a lower propensity to shirk. This favors cooperation in intra-plant transactions and reduces the incidence of principal-agent problems. The empirical findings are consistent with models from organisational economics that predict a negative relationship between the incidence of agency problems and firm size.

Results show that the stock of civic capital, proxied by electoral turnout in referendums, blood donations and volunteering, increases the average size of plants in a given province. Similarly, civic capital raises the standard deviation of the plant size distribution. Analysing specific points of the size distribution reveals that the effect of civic capital is more pronounced for larger plants. The findings are economically important: a standard deviation increase of one in civic capital raises average plant size by 16%. The econometric specification allows for potential dynamics in plant size, addresses problems related to the measurement of civic capital, and includes fixed effects on a highly disaggregated industry and spatial scale as well as an extensive set of provincial controls. Moreover, civic capital is instrumented by historical measures from the 14th and 19th century to demonstrate that results are not driven by reversed causation.

Bürker (M.) and Minerva (A.), “Civic capital and the size distribution of plants: Short-run dynamics and long-run equilibrium”, *Journal of Economic Geography,* forthcoming.

Matthias Bürker is an economist in the Companies Directorate. His research focuses on applied microeconomics, in particular the behavior and organisation of firms as well as the geography of civic capital. He holds a PhD in Economics from the University of Bologna (Italy). His works have been published in the *Journal of Economic Geography* and *Regional Science and Urban Economics.*

"Balance of payment crises in emerging markets – How early were the "early" warning signals?", Bussière (M.), *Applied Economics,* April

"Breakeven inflation rates and their puzzling correlation relationships", Cette (G.) and de Jong (M.), *Applied Economics,* June

"Fiscal policy and asset prices", Agnello (L.) and Sousa (R.), *Bulletin of Economic Research,* April

"National borders matter… where one draws the lines too", Lavallée (E.) and Vicard (V.), *Canadian Journal of Economics,* February

"Granularity adjustment for efficient portfolios", Monfort (A.) and Gourieroux (C.), *Econometric Reviews,* April

"Unit roots, level shifts and trend breaks in per capita output: A robust evaluation", Kejriwal (M.) and Lopez (C.), *Econometric Reviews,* April

"Sovereign debt and fiscal policy in the aftermath of the financial crisis: Introduction", Bussière (M.), *Economic Journal,* February

"The welfare effect of access to credit", Breu (M.-R.), *Economic Inquiry,* January

"The exchange rate pass-through in the new EU member states", Jimborean (R.), *Economic Systems,* June

"L. Walras and C. Menger: Two ways on the path of modern monetary theory", Bignon (V.) and Alvarez (A.), *European Journal of the History of Economic Thought,* March

"Where there is a will, there is a way?", Sevestre (P.), Blanchard (P.), Huiban (J.-P.) and Musolesi (A.), *Industrial and Corporate Change,* June

"An integrated framework for analysing multiple financial regulations", Goodhart (C.), Kashyap (A.), Tsocomos (D.) and Vardoulakis (A.), *International Journal of Central Banking,* January

"The financial content of inflation risks in the euro area", Andrade (P.), Fourel (V.), Ghysels (E.) and Idier (J.), *International Journal of Forecasting,* June

"Regional integration of trade in South America: How far has it progressed and in which sectors?", Curran (L.) and Zignago (S.), *International Trade Journal,* January

"Market-implied inflation and growth rates adversely affected by the brent", Cette (G.) and de Jong (M.), *Journal of Asset Management,* June

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Do product market regulations hinder growth?

Distortions of competition in the intermediate goods markets may hamper total factor productivity in product markets, even more so when firms are close to their technological frontier. Indeed, anti-competitive regulations enable firms in upstream sectors to extract a share of the innovation rents of firms in downstream sectors, which are therefore less inclined to innovate.

Based on an endogenous growth model, Gilbert Cette and his co-authors show that imperfections in intermediate goods markets can curb incentives to improve productivity in downstream industries. These predictions are confirmed by estimating a model of multifactor productivity growth in which the effects of upstream competition vary with the distance to frontier of downstream industries.

Estimates are realised on a panel of 15 OECD countries and 20 sectors over the period 1985-2007. Competitive pressures are proxied with sectoral product market regulation data. Anti-competitive upstream regulations appear to have curbed multifactor productivity growth (MFP) over the past 15 years, and the effect is stronger for observations that are close to the productivity frontier. Some simulations show that all countries could expect significant MFP growth gains from structural reforms consisting in adopting best regulation practices in sectors that are important providers of intermediate inputs to the economy. However, these MFP growth gains differ across countries. The larger the excess regulatory burden, the higher the intermediate consumption of regulated products, the greater the sectoral composition effect and the smaller the distance to the productivity frontier, the stronger the gains in productivity from aligning regulations in upstream sectors with best international practice. These MFP gains could significantly improve potential output growth, thereby also facilitating the adjustment of public finances.

Bourlès (R.), Cette (G.), Lopez (J.), Mairesse (J.) and Nicoletti (G.), "Do product market regulations in upstream sectors curb productivity growth? Panel data evidence", *Review of Economics and Statistics*, 2013, 95(5), pp. 1750-1768.

Gilbert Cette is Director, Structural and Microeconomic Studies, at the Banque de France and Habilitated Doctor and Associate Professor at the Aix-Marseille School of Economics. He has published several articles on growth, productivity and the labor market.

"No-arbitrage near-cointegrated VAR(p) term structure models, term premia and GDP growth", Jardet (C.), Monfort (A.) and Pegoraro (F.), *Journal of Banking and Finance,* February

"Limits of floating exchange rates: The role of foreign currency debt and import structure", Towbin (P.) and Weber (S.), *Journal of Development Economics,* March

"Default, liquidity, and crisis: An econometric framework", Monfort (A.) and Renne (J.-P.), *Journal of Financial Econometrics,* Spring

"Bank monitoring incentives and optimal ABS", Pagès (H.), *Journal of Financial Intermediation,* May

"Foreign entry and spillovers with technological incompatibilities in the supply chain", Carluccio (J.) and Fally (T.), *Journal of International Economics,* May

"The 'forward premium puzzle' and the sovereign default risk", Coudert (V.), *Journal of International Money and Finance,* February

"Welfare implications of heterogeneous labour markets in a currency union", Poilly (C.) and Sahuc (J.-G.), *Macroeconomic Dynamics,* March

"Discretionary government consumption, private domestic demand, and crisis episodes", Agnello (L.), Furceri (D.) and Sousa (R.), *Open Economies Review,* February

"Testing the number of factors: An empirical assessment for forecasting purposes", Barhoumi (K.), Darné (O.) and Ferrara (L.), *Oxford Bulletin of Economics and Statistics,* February

"Editorial introduction to special issue on large data sets", Banerjee (A.), *Oxford Bulletin of Economics and Statistics,* February

"Competition, R&D, and the cost of innovation: Evidence for France", Askenazy (P.), Cahn (C.) and Irac (D.), *Oxford Economic Papers,* April

"The ECB's separation principle: Does it 'rule ok'? From policy rule to stop and go", Bordes (C.) and Clerc (L.), *Oxford Economic Papers,* April

"Labor relations quality and productivity: An empirical analysis on French firms", Cette (G.), Dromel (N.), Lecat (R.) and Paret (A. C.), *Review of Economics and Institutions,* Spring

"Costs, demand, and producer price changes", Loupias (C.) and Sevestre (P.), *Review of Economics and Statistics,* February

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Production factor returns: The role of factor utilisation

In the short run, returns to scale increase when estimated solely on the basis of production factors, and total factor productivity is procyclical. Gilbert Cette, Nicolas Dromel, Rémy Lecat and Anne-Charlotte Paret test whether omitting production factor utilisation (labor workweek, capacity utilisation rate, capital workweek) can explain this surprising result.

Measuring short-term returns to scale creates a puzzle, which has given rise to several hypotheses. A classical microeconomic explanation attributes these returns to insufficient competition, which leads firms to restrain their production in order to increase prices. A second explanation is that externalities linked to the production level yield increasing returns. Another hypothesis is that factor services are poorly measured due to the omission of factor utilisation. Indeed, capital stock cannot fully account for capital services if its use varies across the cycle, in terms of rhythm or workweek length. Similarly, without taking into account the length of the labor workweek, the number of employees alone is a poor reflection of labor's contribution to the production process.

Using firm-level data from the Banque de France's factor utilisation survey, the authors test this last hypothesis. In this survey, firms specify in a detailed manner the degree of utilisation of their production factors and the obstacles they may face when increasing the capital workweek. Once factor utilisation is taken into account, returns to scale are indeed constant in the short run. Crucially, this result relies on the capital workweek length. Indeed, firms have substantial leeway on this matter as they can change the number of shifts. Hence, it is crucial to take into account factor utilisation when measuring total factor productivity in order to capture technical progress and not cyclical factors.

Cette (G.), Dromel (N.), Lecat (R.) and Paret (A.-C.), "Production factor returns: The role of factor utilisation", *The Review of Economics and Statistics*, forthcoming.

Rémy Lecat is Head of the Microeconomic Analysis Division at the Banque de France. He graduated from Sciences Po, Cambridge University and Paris-X-Nanterre University and holds a PhD from the EHESS-Paris School of Economics. His research focuses on production functions, firm productivity and the housing market. He has published articles in *The Review of Economics and Statistics*, the *Review of Economics and Institutions*, *Economics Letters* and *Économie et Statistique*.

"On currency misalignments within the euro area", Coudert (V.), Couharde (C.) and Mignon (V.), *Review of International Economics,* February

"*Le* shadow banking *en Europe*", Clerc (L.), *Revue d'Économie Financière,* March

"*Les risques du* shadow banking *en Europe : le point de vue du superviseur bancaire*", Nouy (D.), *Revue d'Économie Financière,* March

"Les perspectives des Unions monétaires africaines", Cabrillac (B.) and Rocher (E.), *Revue d'Économie Financière,* June

"*Bulle immobilière et politique d'octroi de crédit*", Antipa (P.) and Lecat (R.), *Revue de l'OFCE,* April

"How do multi-product exporters react to a change in trade costs?", Berthou (A.) and Fontagné (L.), *Scandinavian Journal of Economics,* April

"Do Latin American central bankers behave non-linearly? The experience of Brazil, Chile, Columbia, and Mexico", de Mello (L.), Mogliani (M.) and Moccero (D.), *Studies in Nonlinear Dynamics & Econometrics,* April

"A smooth transition long-memory model", Dufrénot (G.), Aloy (M.), Lai Tong (C.) and Peguin-Feissolle (A.), *Studies in Nonlinear Dynamics & Econometric,* May

"Ambiguity in asset pricing and porfolio choice: A review of the literature", Guidolin (M.) and Rinaldi (F.), *Theory and Decision,* February

"Remittances, inflation and exchange rate regimes in small open economies", Lopez (C.), Ball (C.) and Reyes (J.), *World Economy,* April

"Assessing barriers to trade in the distribution and telecom sectors in emerging countries", Fontagné (L.) and Mitaritonna (C.), *World Trade Review,* January

Second half

"Capital controls with international reserve accumulation: Can this be optimal?", Bacchetta (P.), Brahima (K.) and Kalantzis (Y.), *American Economic Journal: Macroeconomics,* July

"Estimating trade elasticities: Demand composition and the trade collapse of 2008-09", Bussière (M.), Callegari (G.), Ghironi (F.), Sestieri (G.) and Yamano (N.), *American Economic Journal: Macroeconomics,* July

"A pitfall with DSGE-Based, estimated, government spending multipliers", Fève (P.), Matheron (J.) and Sahuc (J.-G.), *American Economic Journal: Macroeconomics,* October

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Risk shifting in an opaque financial system

The ongoing global financial and economic crisis has revived interest in systemic risk in the financial system and its dramatic spillover to the real economy, and has raised the question of whether and how it should be addressed by public policies.

We show how the level of economy-wide risk taking depends on the distribution of equity among intermediaries and the level of interest rates in the economy. Our key assumption is that outside providers of funds cannot tell apart "prudent" and well-diversified banks and "imprudent" ones that are overly exposed to a particular asset, because the balance sheets of individual intermediaries are imperfectly observable or opaque. Opacity implies that intermediaries with low levels of capital may be tempted to hold high-risk portfolios, or even to gamble for resurrection in the face of worsening economic conditions. The limited liability of intermediaries creates incentives for them to increase leverage and hold insufficiently diversified portfolios, which raises their return on equity in the event of success while transferring much of their losses to their creditors in the event of failure. However, this tendency is alleviated by the inside equity stake held by intermediaries' shareholders, which disciplines risk taking and thereby limits leverage and favors diversification.

This trade-off gives rise to an endogenous sorting of intermediaries along the equity dimension, with well-capitalised intermediaries holding diversified portfolios and maintain a limited level of leverage, and poorly capitalised ones resorting heavily to leverage and investing in correlated assets. One implication of our analysis is that an exogenous increase in the supply of funds to the intermediary sector lowers interest rates and raises the number of imprudent intermediaries. Another one is that easy financing may lead an increasing number of intermediaries to gamble for resurrection following a severe shock to the sector's capital, again raising economy-wide systemic risk.

Challe (E.), Mojon (B.) and Ragot (X.) (2013), "Equilibrium risk shifting and interest rate in an opaque financial system", *European Economic Review,* 63, pp. 117-133.

Benoît Mojon is Director, Monetary and Financial Studies, at the Banque de France and Associate Professor at École polytechnique. His research covers various topics in applied macroeconomics, including the transmission of monetary policy, the dynamics of inflation, and real and financial cycles. He has made numerous contributions in books and journals such as the *Journal of Monetary Economics*, the *Review of Economics and Statistics*, or the *European Economic Review*.

"An international comparison of the impact of the 2008 crisis on productivity", Fuentes Castro (D.), *Applied Economics Letters,* September

"Capital utilisation and retirement", Bonleu (A.), Cette (G.) and Horny (G.), *Applied Economics,* July

"Minimum wage and the average wage in France: A circular relationship?", Cette (G.), Chouard (V.) and Verdugo (G.), *Economics Bulletin,* July

"Eductive learning and the rationalisability of oligopoly games", Gaballo (G.), *Economics Letters,* October

"Modelling the world economy at the 2050 horizon", Fouré (J.), Bénassy-Quéré (A.) and Fontagné (L.), *Economics of Transition,* October

"Equilibrium risk shifting and interest rate in an opaque financial system", Challe (E.), Mojon (B.) and Ragot (X.), *European Economic Review,* October

"Financial integration and external sustainability", Towbin (P.), *International Journal of Finance and Economics,* October

"Comments on: Examining the quality of early GDP component estimates", Ferrara (L.), *International Journal of Forecasting,* October-December

"Did the crisis induce credit rationing for French SMES?", Kremp (E.) and Sevestre (P.), *Journal of Banking and Finance,* October

"Good luck or good policy? An expectational theory of macro-volatility switches", Gaballo (G.), *Journal of Economic Dynamics and Control,* December

"Civic capital and the size distribution of plants: Short-run dynamics and long-run equilibrium", Bürker (M.) and Minerva (A.), *Journal of Economic Geography,* September

"Regime switching and bond pricing", Gourieroux (C.), Monfort (A.), Pegoraro (F.) and Renne (J.-P.), *Journal of Financial Econometrics,* September

"Monitoring financial distress in a high-stress financial world: The role of option prices as bank risk metrics", Coffinet (J.), Pop (A.) and Tiesset (M.), *Journal of Financial Sercices Research,* December

"Short-term forecasts of French GDP: A dynamic factor model with targeted predictors", Bessec (M.), *Journal of Forecasting,* September

"Inattentive professional forecasters", Andrade (P.) and Le Bihan (H.), *Journal of Monetary Economics,* November

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Pricing default events: Surprise, exogeneity and contagion

Debtor defaults affect the cash flows of various financial instruments such as bonds issued by debtors or credit default swaps (CDS) written on reference entities. Various methods have been proposed in the literature aimed at valuing these financial products in a tractable and maturity-consistent way. Nevertheless, computational simplicity often comes at the cost of strong assumptions. In particular, standard credit-risk models price the default intensities, not the default events themselves: in pricing formulas, the default indicator is replaced by an appropriate prediction and the prediction error, that is the default-event surprise, is neglected.

Christian Gourieroux, Alain Monfort and Jean-Paul Renne develop an approach to get closed-form expressions for the prices of credit derivatives written on multiple names without neglecting the default-event surprises. It is important to keep track of the number of names in the portfolio, as the occurrence of new defaults may have its own impact on the pricing of risk, beyond that captured by risk factors. Hence, an appealing feature of the framework lies in its ability to model the propagation of defaults as the pool size shrinks.

Applying this approach to US bond data shows how it can account for the credit spread puzzle. This puzzle corresponds to the observation of both low bond prices and low default probabilities for issuers. The mechanism implicitly developed by the authors relies on the fact that defaults tend to occur during crisis periods: when buying defaultable bonds, investors act as insurers and ask for a discount in bond prices, on top of the risk premiums already taken into account by standard models.

Gourieroux (C.), Monfort (A.) and Renne (J.-P.), "Pricing default events: Surprise, exogeneity and contagion", *Journal of Econometrics*, forthcoming.

Jean-Paul Renne has been a senior economist in the Financial Economics Research Division since July 2009. Prior to joining the Banque de France, he worked at the French Treasury. He holds a PhD in Applied Mathematics (Paris-Dauphine University). His research interests cover Dynamic Term Structure Models, Credit Risk, Financial Econometrics and Monetary Policy. His research has appeared in the *Journal of Financial Econometrics*, *European Economic Review* and the *Review of Finance*.

"How do anticipated changes to short-term market rates influence banks' retail interest rates? Evidence from the four major euro area economies", Banerjee (A.), Bystrov (V.) and Mizen (P.), *Journal of Money, Credit and Banking*, October

"Elections and the structure of taxation in developing countries", Ehrhart (H.), *Public Choice*, July

"Foreign ownership, firm performance, and the geography of civic capital", Bürker (M.), Franco (C.) and Minerva (A.), *Regional Science and Urban Economics*, November

"The determinants of intrafirm trade: Evidence from French firms", Corcos (G.), Irac (D.), Mion (G.) and Verdier (T.), *Review of Economics and Statistics*, July

"Wage rigidity, collective bargaining and the minimum wage: Evidence from French agreement data", Fougère (D.), Gautier (E.) and Avouyi-Dovi (S.), *Review of Economics and Statistics*, October

"Do product market regulations in upstream sectors curb productivity growth? Panel data evidence for OECD countries", Bourlès (R.), Cette (G.), Lopez (J.), Mairesse (J.) and Nicoletti (G.), *Review of Economics and Statistics*, October

"The interactions between the credit default swap and the bond markets in financial turmoil", Coudert (V.) and Gex (M.), *Review of International Economics*, August

Acknowledgement of discussants

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A seminar on DSGE models

At the start of 2014, we organised an introductory seminar on DSGE models within the framework of the International Banking and Finance Institute (IBFI) training programme. For one week, economists from around 20 central banks attended lectures in the morning and carried out practical exercises in the afternoon. The sessions were run by economists from the Directorate General Economics and International Relations (DGEI): Simona delle Chiaie, Filippo Ferroni, Michel Juillard, Julien Matheron and Daniele Siena.

The lectures focused on: the neoclassical growth model, on which all subsequent studies were based, the New Keynesian developments that introduce nominal and real rigidities into the model, the techniques for solving DSGE models and an introduction to Dynare software, an introduction to Bayesian econometrics, and an in-depth presentation of the Smets-Wouters Model (2007).

A second, more advanced seminar will be offered internally in May-June and within the IBFI framework at end-September. This second seminar will focus on: analyses of optimal policy; Open-Economy DSGE Models; models for emerging economies; the introduction of financial frictions; and the use of DSGE Models for forecasting.

Michel Juillard is coordinator of the DSGE network at the Banque de France

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