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The ACPR's research focuses on the impact of regulations and aims to meet the highest international standards

Olivier de Bandt

Olivier de Bandt is Head of the Research Directorate at the Autorité de contrôle prudentiel et de résolution. He holds a PhD in economics from the University of Chicago. He notably published papers in the *Journal of Banking and Finance* and the *Journal of Financial Stability*. His current research concentrates on stress testing methods, the impact of prudential regulation and the analysis of systemic risk.



The ACPR (Autorité de contrôle prudentiel et de résolution) contributes to the Banque de France's research agenda with the aim of assessing risk management by the institutions under its supervision, namely banks and insurance companies. Its objective is also to participate in the policy-making process in terms of the assessment of microprudential regulation and the interlinkages between micro- and macroprudential policies. The Research Directorate was created five years ago in order to help identify supervisory priorities. Much of ACPR research is data-driven. Producing quality research is a way to ensure that the Authority's analyses are of the highest standards. To this end, it is useful to mention a few recent research papers that were produced by the ACPR. Three areas are highlighted: stress testing, assessing the impact and consistency of prudential regulation, and monitoring life insurance contracts.

Building stress testing models, including contagion effects

Significant efforts have been undertaken by the ACPR to design new stress testing models or update existing ones. Alongside "bottom-up" exercises, the ACPR has developed a "top-down" stress testing model, the Mercure model (see Camara et al., 2015). This model was primarily focused on credit risks. Over the years, its risk coverage has substantially been extended. Some risks are explicitly included in a dedicated analysis – for example those related to banks' retail activities. More attention is now given to contagion effects, sectorial shocks and concentration risks, building on network models constructed at the ACPR. In particular, Hauton and Heam (2014) study the network of 21 financial institutions in France, including 6 conglomerates, 4 pure banks and 11 pure insurers. Three groups of institutions are identified: institutions that are systemically important, institutions that are systemically fragile and institutions that are neither systemically important nor systemically fragile.

Research is also in progress to design methods for the ex post validation of stress tests, focusing on the 2014 ECB-EBA exercise. Estimating the elasticity of individual stress tests to the macroeconomic environment, the preliminary conclusion is that these exercises are relatively robust to the underlying macroeconomic assumptions.

Assessing the impact and consistency of prudential regulation

A key priority of the ACPR's Research Directorate is the assessment of the impact of regulation. Two areas are considered here: the impact on credit distribution and the overall consistency of regulation.

A) As regards the impact of regulation on credit distribution, two pieces of research should be mentioned. For loans to NFCs, Fraise et al. (2015) measure the impact of bank capital requirements on corporate borrowing and business activity. The authors exploit the intrinsic heterogeneity of the Basel II regulatory framework. The latter has been in place in France since 2008, and has resulted in variations in capital requirements across both banks and firms. The authors find a large effect of capital requirements on bank lending: a one percentage point increase in capital requirements leads to a reduction in lending of approximately 10%. Aggregating at the firm level, bank borrowing is reduced but to a lesser extent (– 5%), due to substitution effects. Overall, capital requirements have a real impact on corporate investment, although this impact is somewhat dampened by firms' decisions.

For residential real estate loans, the paper by Labonne and Welter-Nicols (2015) may be useful for measuring the effects of macroprudential policies. They use changes in the interest-free loan policy ("IFL" hereafter) in France to assess the causal relationship between credit availability, housing prices and homeownership. The IFL subsidy varies at the local level and has been reformed three times between 2009 and 2011. In order to take into account the endogeneity between housing prices and policy, they sample municipalities bordering administratively-defined policy areas. They find IFLs trigger a positive housing credit shock. The elasticity of housing prices to credit that they estimate for France is rather high in comparison to the rest of the literature.

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Labonne (C.) and Welter-Nicols (C.) (2015)

"Cheap credit, unaffordable houses?", *Débats économiques et financiers*, No. 20.

B) Regarding the overall consistency of regulation,

and contributing to the current debate on the finalisation of the Basel III agenda in 2016, Birn, Dietsch and Durant (2016) use a large dataset of granular banking data compiled by the Basel committee (the "QIS database") and covering 156 banks worldwide. The paper models how banks are expected to adjust their balance sheet structure in order to meet all Basel III solvency and liquidity requirements simultaneously. Two models are used, depending on whether only accounting and regulatory constraints are imposed, or whether profit maximisation is also taken into account. The predictions of the models are compared to actual changes between end-2011 and end-2014 and indicate a good fit. Changes in high-quality liquid assets and "available stable funding" are correlated, which tend to prove that the two liquidity regulations (LCR and NSFR) are, to some extent, substitutable.

Similarly, de Bandt and Chahad (2016) investigate in more detail the interaction between the implementation of the new Basel III regulations and the macroeconomic environment, including monetary policy. Indeed, it is important to take into account the fact that the period was characterised by very accommodative monetary policy (see Cecchetti, 2014). The authors use a DSGE Model, calibrated to the euro area, including a very detailed description of regulatory requirements for both solvency and liquidity. In comparison with Clerc et al. (2015) who focus on capital requirements from a welfare point of view, de Bandt and Chahad (2016) assume the existence of the long-term benefits of the regulatory reforms in terms of lower defaults, but consider their short- and medium-run impact. Nevertheless, it appears that at the current level of solvency requirements the negative impact on GDP from additional capital requirements is small and of similar magnitude in the two aforementioned models.

Furthermore, as regards regulatory consistency, Dietsch et al. (2016) assess the special regulatory advantage that benefits loans to SMEs. Based on a unique and comprehensive data set for France and Germany, their results suggest that the relative differences between the capital requirements for large corporates and those for SMEs (in other words the capital relief for SMEs) are lower in the Basel III framework than implied by empirically-estimated asset correlations.

Monitoring returns distributed by life insurance companies

Against the backdrop of the persistently low interest rate environment, and given the ACPR's mandate regarding both consumer protection and financial stability, Borel-Maturin et al. (2015) assess the drivers of the participation rates (equivalent to annual yields) served on euro-denominated life-insurance contracts over the 1999-2013 period. Their analysis confirms the insight of practitioners on the alignment with the 10-year French government bond. Different strategies are revealed by the companies under review. While higher returns on insurers' assets can imply a better yield for policyholders, riskier portfolios do not necessarily translate into better participation. Such an empirical model is useful for monitoring potentially unsustainable strategies or sudden changes from past behaviour that would call for supervisory vigilance.

In addition to continuing work on stress testing methods, the ACPR's future research priorities include the analysis of the impact of the low interest rate environment on the resilience of banks and insurance firms, including possible search-for-yield strategies.

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What is your profile?

My career path is a combination of operational work and management, research and publications, and teaching. My research work has always focused on economic growth and economic policy, approached from different angles, for example productivity and its determinants, the use of production factors and structural reforms. Throughout my career I have also strived to be more directly and concretely involved in economic policy. For example, at present, I am seeking to combine my academic research on the effects of structural reforms with very concrete work on the pertinent reforms that could be undertaken, mainly in France, to boost growth and employment.

What does the French economy have to gain from conducting structural reforms today?

Among the most developed countries, France is one of the few countries to experience mass unemployment. France shares this specificity mainly with countries such as Italy, Spain, Portugal and Greece. The crisis is not the only cause of mass unemployment, since it also affected many other countries which have returned to full employment. The few countries that are still suffering from a situation of mass unemployment (for almost four decades for France!) are therefore characterised by institutional and structural specificities which prevent them from returning to full employment. Part of my work seeks to identify and characterise these specificities and to propose reform scenarios for reducing them to lower unemployment. This is an example, and I could give many more in the fields of income or access to employment inequality, or in that of social mobility. These fields are in fact closely linked.

What are the most fundamental reforms to be implemented?

There are no "miracle reforms" which alone would provide a comprehensive response to the problems faced by an economy such as for example the French economy. Only a comprehensive reform strategy covering the goods market, the labour market, taxation, the State, etc. can provide an appropriate response to these problems. In a recent book,¹ Philippe Aghion, Elie Cohen and I have analysed very ambitious reform strategies that have been carried out in different countries. It is worth mentioning the case of the Netherlands in the early 1980s, following the agreements of Wassenaar, but also Australia, Canada and Sweden in the early 1990s. These strategies were comprehensive and the results in the following years were very impressive, in terms of growth and employment but also in terms of the current account and the balance of public finances. These countries were able to find ambitious solutions tailored to their difficulties. Why would France not succeed likewise?

Are there reliable indicators for measuring the effects of structural reforms?

There are indicators for characterising the institutions in a large number of countries. The OECD, for example, has played a key role over the last decades in developing such comparative tools, but such indicators are inevitably simplistic. In addition, there are many

¹ See "Changer de modèle", Aghion (Ph.), Cette (G.), Cohen (E.), Editions Odile Jacob, 2014.

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analyses that quantify the effects of changes in these indicators. Like all empirical studies, these analyses are questionable and the criticisms that are levelled against them must be taken into account to improve them. Similarly, there are numerous analyses of specific reforms conducted in such or such a country. Like those previously mentioned, these more targeted analyses are the subject of criticisms (for example that of attributing to the reforms under review effects that are also linked to many other factors) that cannot be ignored. The robustness of the data used, that of the statistical methods mobilised and that of the inferences made must continuously be developed and tested before reaching economic policy recommendations. I strive, for my part, to continuously go back and forth between the two types of analysis that I have mentioned.

What are the contributions of the Banque de France to the discussions on this point?

A few years ago, Jimmy Lopez, Jacques Mairesse and I launched at the Bank a research programme on the quantification of the effects of structural reforms. With all the limitations of this approach, of which we are very aware, we have worked on international data and using composite indicators that I mentioned above. In our last publication,² we quantify the long-term effects on GDP that many countries could experience by reducing the rigidities in the goods and labour markets to the lowest levels observed in most developed countries. These gains are often considerable. For France, they would be around 6%, of which 2.5% and 3.5% via reforms of the labour and goods markets respectively. However to be convincing, these figures are to be discussed and compared to those obtained by other research teams, and based on other approaches. We are currently working on the effects of labour market reforms, on the production function, and we show that such reforms can boost employment but lower investment while raising the quality of the latter, this quality being measured by the share of investment in ICT and R&D... These results illustrate the complexity of the mechanisms involved.

What advantage(s) does the Banque de France and, more generally any central bank, have in conducting research in this field?

The different areas of economic policy (monetary, fiscal, structural) are interdependent. In the last few decades, many studies have shown that stabilisation policies associated with fiscal or monetary actions affect the long-term equilibria, through various channels including hysteresis effects in the labour market or innovation expenditure. Other studies have shown that structural policies influence the resilience of economies to shocks that hit them, and thus their stability which is not solely dependent on monetary and fiscal policies. Central banks in charge of monetary policy therefore cannot ignore the other fiscal and structural fields. A debate is currently underway to find out precisely whether the mobilisation of these different areas of economic policy is the most pertinent and whether the inadequacy of structural policies does not result in expecting too much from the other components, especially the monetary component.

What can/should be done (in terms of research) on structural reforms in the coming years?

Much work still needs to be conducted in these areas of structural policy assessment, to continue to strengthen the robustness of economic policy recommendations. The characterisation of the interactions between different areas of reforms and the possible effects of the latter requires further developments. Moreover, research is unevenly abundant on the different structural fields that may concern countries like France. For example, characterising the quality of the State and its impact on growth is a real subject for future research.

² See «Market regulations, prices, and productivity», Cetto (G.), Lopez (J.), Mairesse (J.), *American Economic Review*, Vol. 106, No. 5, May 2016, 104-108.

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He has held visiting research positions at the University of Pennsylvania and George Mason University in Virginia. Before joining the Banque de France staff in September 2011, he was an associate professor at the IUFM in Créteil, at Sciences Po Paris, and at the Graduate Institute of International and Development Studies in Geneva.



What is your research profile?

My profile is at the crossroads between economics, finance and social sciences: I am an economic historian with a theoretical and accounting background. My research focuses on the economic and financial crises and the policies to mitigate them. I use a vast array of tools ranging from monetary history to the fundamental theory of money as well as empirical methods for studying the transmission of monetary policy.

How is it useful to the Banque de France?

One line of research in my recent work has dealt with policy issues such as the institutional complementarity between the European monetary and banking union, or the collateral framework in the Eurosystem.² The other line of research has been my work in economic history, which provides other ways of providing new evidence, the relevance of which I have to justify for each paper, but more importantly, which gives rise to the formulation of new ideas, positioning the Banque de France at the frontier of current economic policy debates.³

Since September 2015, I have worked with the Payment Systems and Market Infrastructure Directorate of the Directorate General Financial Stability and Operations in the framework of a research secondment on the resolution tools of central clearing houses (CCP thereafter), which are the main operators of European interbank markets: they process more transactions than OTC markets. Using a more restrictive collateral framework than central banks, the CCPs proved to be especially resilient during the subprime and euro area crises, as shown notably by a recent paper that used data from the German CCP Eurex. Because they are crucial intermediaries in limiting the severity of crises, international discussions are taking place on the contingency plans to be implemented for the resolution of these systemic entities. These plans must limit the extent of future crises. My contribution consisted in writing a paper on the issues associated with the resolution of these entities during liquidity crises; In addition, I co-organised a conference on this topic, bringing together regulators, academics, bank and end-user representatives and executives of clearing houses as well as the authorities of the Banque de France.

Thus, if I were to summarise the relevance of my research for the Banque de France, I would say it rests on its eclecticism since pluridisciplinarity is a powerful way of enhancing knowledge on topics that are at the heart of the business of central banks.

It is often teasingly said about researchers that they search but do not find. Vincent, how do you go about "finding"?

I first carry out a detailed qualitative study of the legal, regulatory and institutional context and the economic mechanisms at work. This unrewarding job takes time because you have to know the details to be convincing about the relevance of a strategy to prove a point.

1 <https://sites.google.com/site/drvincentbignon/home>

2 See Bignon, Flandreau and Ugolini (2012), "Bagehot for beginners: the making of lending of last resort operations in the mid-19th Century, *Economic History Review* 65(2), p. 580-608; Bignon, Breton, Rojas-Breu (2015), "Monetary union with a single currency and imperfect credit market integration", *Working Paper* Banque de France; Ahn, Bignon, Breton, Martin (2016), "Interbank market and central bank policy", *New York Fed Staff Report* 763.

3 See "Protectionism and the education-fertility trade-off in late 19th century France", AMSE 2016-04 working paper, co-written with Cécilia Garcia Peñalosa and *The Economist review* "The toll of tariffs" published in its print edition of 16 April 2016 <http://www.economist.com/news/finance-and-economics/21697023-historians-find-yet-another-way-protectionism-harms-development-toll-tariffs>

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"La monnaie fiduciaire en France en 2015", Ninlias (E.), Torre (G.), *Bulletin Banque de France*, No. 205, pp. 73-84, May-June 2016.

As a second step, I use abstract theories to uncover the potential economic mechanism at play as they shed new light on what may be at work. This is the lesson I have learnt from my work on German history: very abstract models of the search and matching literature applied to money enabled me to understand how cigarettes were used as currency prior to 1948 and their deleterious effect on productivity.⁴

Finally, a convincing strategy for identifying causality is required. In my work in economic history, crises are emulated by the impact of agricultural diseases such as the phylloxera that destroyed vines, because this excludes reverse causality issues triggered by moral hazard. It is indeed important to convince the skeptics of the direct impact of crises on, say, crime rates or show that the severity of crises in the 19th century was contained by the density of the network of branches of the Banque de France, as each opening must be viewed as an extension of eligibility.⁵

This research allowed me to convince skeptics of the importance of studying the impact of the eligibility of collateral on loans to the economy during the euro area crisis.⁶ The results of the two policy papers dealing with this issue are that loans to non-financial corporations and households increase when the Eurosystem accepts as collateral in its monetary policy operations residential loans and loans to low-risk non-financial corporations. This question has long been seen as a purely technical problem of monetary policy implementation. Answering it is nevertheless important for two reasons. From an operational standpoint, my two coauthored studies provide an assessment of very technical non-standard monetary policy measures which are at the heart of our collateral framework. From an organisational standpoint, our monetary policy framework is partly derived from the transmission of good practices acquired through concrete experiences and transmitted generation after generation. However, we know little about the quantitative importance of this embedded knowledge and sometimes find it hard to explain their importance, even in-house. This research contributes to increasing awareness of their relevance.

What outlook?

It is a pleasure to be a central bank economist. I enjoy working on cross-disciplinary operational issues, with the Directorate General Financial Stability and Operations or other central banks such as the New York Fed. This is an intellectually very stimulating process that takes me out of my comfort zone and enables me to build relevant abstractions that are directly useful for decision-making. I am also working on more theoretical or historical topics with academics from Aix, Rouen and Dauphine but also Geneva, Oxford and São Paulo. This provides the intellectual exercises needed to build new research tools and provide new arguments for the decision-making process.

At the same time, I understand the tensions triggered by this double culture, as the long time horizon of research production often runs counter to the time horizon of decision-making where speed is clearly an asset. But because complementarity between one and the other is an invaluable source of creativity, I will relinquish neither one nor the other.

4 See Bignon (2004), "Une théorie de l'élection de la cigarette comme monnaie", *Revue Économique* 55(3), p. 383-93; Bignon (2007), "La crise monétaire allemande de 1945-1948", in *La monnaie dévoilée par ses crises*, publisher Bruno Théret, EHESS publishing, or my thesis "La crise monétaire allemande de 1945-1948".

5 See Bignon, Caroli, Galbiati (2016), "Stealing to survive? Crime and income shocks in 19th century France", forthcoming in *Economic Journal*. See also Bignon and Jobst (2016), "Economic crises and the lender of last resort: evidence from 19th century France", WP Banque de France in preparation.

6 The first study shows that this is the case in France for additional credit claims implemented in February 2012, see Bignon, Boissay, Cahn, Harpedanne de Belleville (2016), "Conséquences de l'extension d'éligibilité des crédits aux entreprises cotées 4 en garantie des opérations de refinancement de l'Eurosystème", *Banque de France Monthly Bulletin*, July. The second study focuses on the euro area and looks at whether the acceptability of loans helped cushion the sharp drop in interbank funding, see Barthélémy, Bignon, Nguyen (2016), "Interbank run, collateral liquidity and loans supply during the Euro crisis (2011-2014)", *typescript*.

The dynamics of gasoline prices

Gautier (E.) (University of Nantes and Banque de France) and Le Saout (R.) (Insee-CREST), (2015) "The dynamics of gasoline prices: evidence from daily French micro data", *Journal of Money, Credit and Banking*, Vol. 47, Issue 6, pp. 1063-1089.

Erwan Gautier is a consultant at the Microeconomic Analysis Division of the Banque de France and Professor at the University of Nantes. He graduated from ENSAE and holds a PhD in Economics from EHESS. His work focuses on price and wage rigidity and on the use of individual data for monetary policy. His articles have been published in journals such as the *Economic Journal*, the *Journal of Economic Dynamics and Control*, the *Journal of Money, Credit and Banking* and the *Review of Economics and Statistics*.



The gasoline market is a particularly interesting case for testing the relevance of price rigidity models since a precise and economically meaningful proxy for marginal costs – the wholesale price – is available at a daily frequency. Based on French data, Erwan Gautier and Ronan Le Saout investigate the empirical relevance of price rigidity micro-foundations using gasoline retail prices. They find that menu costs and information imperfections are key factors accounting for the distribution of gasoline price changes.

The speed with which agents incorporate specific or common shocks into their prices is a crucial issue for monetary policy. If prices do not adjust continuously to shocks, inflation will only react slowly to a monetary policy shock and an increase in the short-term nominal interest rate will be passed on to real interest rates, affecting real output. Different theoretical models are used to rationalise infrequent price changes but all these models have different implications for macroeconomic dynamics. Thus, a number of recent papers have examined patterns of micro prices to assess the empirical relevance of price rigidity models. However, at the micro level, one difficulty is linking prices to firm-level shocks: do prices change infrequently because shocks are rare or because adjustment costs are high?

Erwan Gautier and Ronan Le Saout match millions of French retail gasoline prices with wholesale gasoline prices to investigate the empirical relevance of price rigidity micro-foundations. In addition, they provide more evidence on the sources of infrequent price changes. More concretely, they use more than 5 million individual gasoline prices collected at a daily frequency from more than 8,000 gas stations in France to investigate the rigidity of retail gasoline prices and to assess the length of time taken by gas stations to incorporate an oil price shock.

First, they find that gasoline prices do not adjust daily like the price of wholesale gasoline, but only on a weekly basis. Moreover, the timing of price adjustments is not only driven by changes in wholesale prices but also by the amount of time that has passed since the last price adjustment: the probability that prices will change is much higher exactly one week after the previous price change, consistent with a periodic revision of gasoline prices. Second, they also show that the degree of pass-through of wholesale market prices to retail gasoline prices is 0.77 on average for diesel and 0.67 for unleaded petrol. This pass-through is somewhat larger in supermarkets than at other gas stations. Third, more generally, local competition variables play a significant role in explaining differences in pricing strategies across firms: price reviews are much more frequent in supermarkets and in areas where competition is fiercer. Fourth, the adjustment of gasoline prices to wholesale price shocks is fairly rapid: it takes about 10 days for a shock to be fully transmitted to retail prices. This adjustment is faster in supermarkets than at other gas stations. Finally, Erwan Gautier and Ronan Le Saout do not find any asymmetry in the response of retail prices: there is no significant difference in the speed of the retail price reaction to a positive or a negative wholesale price shock.

From a macroeconomic perspective, Erwan Gautier and Ronan Le Saout draw two main conclusions. First, gasoline prices, which are often considered to be highly flexible, are in fact somewhat rigid. The authors show that menu costs and information imperfections are strong candidates for the sources of this rigidity; in other words, these factors play a significant role in accounting for the distribution of gasoline price changes. Second, gasoline prices have made a substantial contribution to the volatility of CPI inflation and the need to improve the understanding of the implications of firm heterogeneity for the aggregate dynamics of prices is often underlined. Erwan Gautier and Ronan Le Saout find some significant heterogeneity in the pricing behavior of firms, but this appears to have only a limited impact on the aggregate response of prices to a shock.

The stability of short-term interest rate pass-through in the euro area during the financial and sovereign debt crises

Avouyi-Dovi (S.), Horny (G.) and Sevestre (P.): *"The stability of short-term interest rate pass-through in the euro area during the financial and sovereign debt crises", forthcoming in the Journal of Banking and Finance.*

Guillaume Horny joined the Banque de France in 2008. He is currently an economist in the service de Recherche en Économie financière and Treasurer of the Banque de France Foundation for Research. He has worked on the economics of banking, capital stock and the labor market. His research papers have appeared in journals such as the *Journal of Business Economics and Statistics* and *Applied Economics*.



Since the 2008 financial crisis, major monetary authorities have shifted to an accommodative policy stance. Interest rates on new bank loans have decreased accordingly, but questions have been raised about the transmission of such an accommodative policy stance to the economy. Given that funding in the euro area is mostly bank-based, a breakdown in transmission to bank lending rates would be a major obstacle to the conduct of monetary policy.

Sanvi Avouyi-Dovi, Guillaume Horny and Patrick Sevestre explore the issue of heterogeneous development in the price of new bank loans in relation to structural changes in banks' marginal costs. They carefully scrutinise developments in the transmission mechanism over the period 2003-2014 and focus on three sub-groups of the euro area countries: a first group comprising France and Germany, a second made up of Greece and Portugal, and a third comprising Italy and Spain. Their study represents a departure from the standard analyses of the transmission mechanism and makes several contributions to the literature.

First, they identify change points in the transmission mechanism. This is important as shocks or major policy events can interrupt the co-movement of variables. Second, they take into account changes in the co-movement relationships between variables, which are generally assumed to be constant in the literature. Third, they assess the significance of introducing country risk into the cost of bank resources. They measure banks' marginal costs using the rate on new deposits, which reacts to factors such as access to financial markets, country risk, and bank and borrower risk. The rate on new deposits evolves in a similar way to the cost of bank wholesale funding. For the sake of clarity and robustness, the authors focus on the price of short-term credit, meaning loans with a maturity of up to one year; in contrast, the existing literature generally investigates rates on loans with different maturities. They compare the price of short-term credit to the rate on new deposits with a similar maturity.

Sanvi Avouyi-Dovi, Guillaume Horny and Patrick Sevestre show that the long-run relationship between bank lending rates and their marginal costs changed during the last few crises. Therefore, assuming that this relationship is permanent, as is commonly the case in studies preceding the 2008 crisis, is irrelevant. According to them, the most important changes have occurred since the onset of the sovereign debt crisis. Changes in banks' marginal costs in the wake of the financial crisis have been transmitted particularly rapidly to rates on new loans. Conversely, after 2010, the decrease in the cost of bank resources was followed by a much smaller decrease in rates on new bank loans than might be expected on the basis of the relationship prevailing before 2008. The authors also indicate that the impairment of the transmission mechanism becomes less significant when the cost of bank resources is measured using rates on deposits rather than with rates set on the interbank market. The breakdown in the pass-through mechanism for policy rates results from a failure to take risk into account in the measurement of banks' costs. Moreover, whereas the results for the financial crisis are consistent with some form of rationing, those for the sovereign debt crisis indicate an increase in banks' spreads, compatible with greater bank funding difficulties. The increase in bank mark-ups is especially pronounced on loans to smaller, and thus more risky, borrowers. It therefore seems plausible that non-financial corporates' default risk suddenly became more substantial, or more heavily priced, in the wake of the sovereign debt crisis.

Finally, Sanvi Avouyi-Dovi, Guillaume Horny and Patrick Sevestre highlight the fact that developments in the pass-through mechanism are heterogeneous across the above mentioned countries. To ensure a similar transmission of monetary policy, country risks should also be similar. This supports the case for greater integration in the euro area, for instance by breaking the doom loop between banks and sovereign risk. Progress towards a banking union such as the implementation of the Single Supervisory Mechanism, is a step in this direction.

How do households allocate their assets? Stylised facts from the Eurosystem Household Finance and Consumption Survey¹

Arrondel (L.), Bartiloro (L.), Fessler (P.), Lindner (P.), Mathä (T. Y.), Rampazzi (C.), Savignac (F.), Schmidt (T.), Schürz (M.), Vermeulen (P.), (2016) "How do households allocate their assets? Stylised facts from the Eurosystem Household Finance and Consumption Survey", International Journal of Central Banking, Vol. 12, No. 2, p. 129-219.

Frédérique Savignac is Head of the Microeconomic Analysis Division. She has participated in the Eurosystem Household Finance and Consumption Network since 2007. Her research focuses on household portfolio choices, savings and consumption and the financing of innovation. Her papers have been published in journals such as: the *International Journal of Central Banking*, *Applied Economics*, *Economics of Innovation and New Technology*.

Using the Household Finance and Consumption Survey (HFCS), which was established by the central banks of the Eurosystem to provide detailed household-level information on wealth, assets and debt holdings, income and consumption, Frédérique Savignac and her co-authors try to answer the following questions: how do households choose to allocate their wealth across available assets? Is there a systematic relationship between underlying household characteristics and asset holding patterns across countries? Frédérique Savignac et al. document differences in asset participation and holdings across a broad range of assets for 15 countries in the euro area to shed light on this strand of literature and consider some policy-relevant questions.

Using the first wave of the HFCS, Frédérique Savignac and her co-authors study the determinants of both asset holdings (extensive margin) and the portfolio share invested in each asset by households (intensive margin). To do so, they examine the main components of household wealth: housing assets (decomposed into the main household residence and other real estates), risky financial assets (mutual funds, bonds and shares), and safe financial assets (defined as deposits, life insurance contracts, and voluntary private pension plans) and business wealth (defined as self-employment participation).

First, Frédérique Savignac et al. confirm the standard finding that wealthier households tend to participate in a wider range of asset categories. However, there are some substantial differences across countries, in particular for housing wealth. Second, they analyse the household level determinants of asset participation and the portfolio shares by estimating probit and tobit models respectively. A considerable overlap in the factors that determine asset participation choices and the portfolio shares invested is found. A number of household characteristics are robust predictors of household portfolio choices, despite differences in institutional policies across euro area countries.

Nevertheless, there are still some differences across the fifteen countries in the estimated effects of demographic variables. Identifying the potential sources of these differences is not an easy task. Many factors, including culture, history, welfare state, housing and credit markets, financial institutions, are likely to affect the wealth accumulation process and portfolio choices of households.

Finally, Frédérique Savignac and her co-authors find some evidence that suggests that the influence of socio-demographic factors (income, net wealth, inheritance) on the choice of holding real and risky financial assets is correlated with the institutional factors in a given country, such as the functioning of the mortgage market or the stock market capitalisation.

¹ The paper has been written by Luc Arrondel (CNRS-PSE), Laura Bartiloro (Banca d'Italia), Pirmin Fessler (Oesterreichische Nationalbank), Peter Lindner (Oesterreichische Nationalbank), Thomas Y. Mathä (Banque centrale du Luxembourg), Cristiana Rampazzi (Banca d'Italia), Frédérique Savignac (Banque de France), Tobias Schmidt (Deutsche Bundesbank), Martin Schürz (Oesterreichische Nationalbank), Philip Vermeulen (European Central Bank).

Labor disputes and job flows

Fraisse (H.), Kramarz (F.) and Prost (C.)
"Labor disputes and job flows", *ILR Review*,
October 2015, 68: 1043-1077.

Henri Fraisse is Head of the Macroeconomic Risk Division of the French Banking and Insurance Supervisory Authority. His main research interests are in labor economics, consumer finance and banking with a strong emphasis on the influence of regulations and their enforcement. His current research focuses on the impact of banking regulation on credit distribution and real effects.



The effects of employment protection legislation (hereafter EPL) on labor markets have been extensively examined through cross-country analyses. A more recent strand of literature measures the impact of a change in legislation targeted at a specific category of employees within a country, or the impact of timing differences in the implementation of new EPL across different geographical zones (controlling for the specific institutional features that can potentially impact labor markets). However, even when labor laws do not modify the functioning of the labor courts, the latter tends to vary over time and space. Judicial activity may sometimes matter more than the content of the law

Henri Fraisse, Francis Kramarz and Corinne Prost analyse the judicial process and its impact on the French labor market. The French EPL system produces a large volume of legal cases relating to individual labor disputes: roughly 160,000 new cases are launched each year. About one in four dismissed workers challenge their dismissal before a labor court. These proceedings can last for several months and create significant uncertainty. They thus represent indirect costs for both firms and workers.

On the theoretical side, taking into account economic conditions, Henri Fraisse, Francis Kramarz and Corinne Prost show that there is no simple, unequivocal interpretation of judicial outcomes in terms of dismissal costs. For instance, an increase in the number of cases filed may be the result of higher dismissal costs for firms if it is due to a decrease in workers' litigation costs. Conversely, a larger number of filed cases may also stem from lower dismissal costs if the firms' litigation costs have decreased: employers take more risks when firing workers as it leads to more trials.

On the empirical side, Henri Fraisse, Francis Kramarz and Corinne Prost find that the available data on outcomes of judicial proceedings – the filing rate, the fraction of cases leading to a settlement or a trial, the fraction of trials won by workers – give an indirect and partial measure of the dismissal costs faced by firms.

However, problems of endogeneity abound: i) economic conditions have an effect on the quality of the cases brought to courts, leading to variations in the judicial outcomes; ii) market conditions may influence the courts' decisions.

To cope with such endogeneity, Henri Fraisse, Francis Kramarz and Corinne Prost explore the location of universities training French lawyers, irrespective of their legal specialisation, and the large increase in the number of lawyers during the period under review. The geographical location of lawyers is shown to be disconnected from local business conditions. Using this instrument, they show that judicial outcomes have a causal effect on job flows. Higher filing rates dampen employment fluctuations, particularly for shrinking firms. It leads to a small positive effect on net employment growth.

The size and evolution of the government spending multiplier in France

Cléaud (G.), Lemoine (M.), Pionnier (P.-A.)
"The size and evolution of the government spending multiplier in France", *Annales d'Économie et de Statistique*, forthcoming.

Matthieu Lemoine holds a PhD in economics and is the Deputy Head of the Macroeconomic Analysis and Forecasts Division of the Banque de France. From 2002 to 2009, he worked in the French Economic Observatory (OFCE). His research topics focus on fiscal policy, taxation, economic cycles and potential growth. He has published, or is set to publish, articles in the following reviews and journals: *European Economic Review*, *Annales d'Économie et de Statistique*, *Applied Economics*, *Journal of Forecasting*, *OFCE Review*, *Économie et Statistique*.



Focusing on government spending on private goods and services from 1980 to 2010, Guillaume Cléaud, Matthieu Lemoine and Pierre-Alain Pionnier find that the fiscal multiplier in France is significant and close to 1 on impact, and becomes statistically insignificant after about three years. Moreover, using a time-varying SVAR model in order to check if the multiplier increases during recessions, they conclude that (i) this multiplier does not evolve significantly over any time horizon from the beginning of the 1980s onwards and (ii) the variance of shocks hitting the economy evolves more than the model's autoregressive parameters.

The magnitude of the stimulus packages that were injected into most advanced economies from the start of the financial crisis, and the speed at which budgets are now being consolidated in Europe, have revived the long-standing debate over the size of fiscal multipliers. They have also triggered a new debate regarding their possible evolution over time. There is no clear theoretical answer to these questions. Fiscal multipliers may not be unique and may change over time. For example, opposite effects may have influenced the size of the multiplier during the Great Recession: on the one hand, the zero lower bound may have muted the response of monetary policy and pushed multipliers above one; on the other hand, the rapid increase of public debt in many countries may have led consumers to behave in a more Ricardian way.

Guillaume Cléaud, Matthieu Lemoine and Pierre-Alain Pionnier focus their analysis on the size and evolution of the government spending multiplier in France from 1980 to 2010. France looks like a good candidate country to shed light on the evolution of the government spending multiplier for two reasons. First, contrary to the United States where some empirical studies have found time-variation of the government spending multiplier, a specific feature of the French economy is the high level of unemployment over these decades, which makes difficult to assert that there was not some slack present in the French economy during the main part of the sample. Second, France has seen big changes concerning the conduct of monetary policy, which might have changed its response to government spending shocks: in particular, the French central bank became independent in 1993 and monetary policy decisions were transferred to the Eurosystem in 1999. Guillaume Cléaud, Matthieu Lemoine and Pierre-Alain Pionnier draw two main conclusions from their study.

First, they measure the average size of the spending multiplier over the whole sample using a fixed-coefficient model. They obtain an impact multiplier which is statistically significant and close to 1, and a medium-term multiplier over a 5-year horizon which is not significantly different from 0. They use a quarterly VAR model with five variables: real government spending, real government net receipts, real output, the output price and the short-term interest rate. The last two variables allow them to take account of the feedback of prices and monetary policy. For the identification of structural shocks to government spending, the main standard assumption is that spending does not react to activity or to net receipts or interest rates within a quarter. Indeed, there is no evidence of an automatic response of government spending to business cycle conditions and any discretionary response is necessarily delayed due to the existence of decision and implementation lags.

Second, Guillaume Cléaud, Matthieu Lemoine and Pierre-Alain Pionnier examine the evolution of the government spending multiplier in France between 1980 and 2010. Their assessment is based on the estimation of a time-varying SVAR model with Bayesian techniques. Our conclusion is that, from 1980 onwards, while they find some time-variation for the variance of shocks, the size of the government spending multiplier in France did not evolve statistically significantly over any time horizon. This result is in line with rolling-window estimates of the much simpler constant-parameter model. One possible explanation of this absence of time-variation could be that the unemployment rate, generally considered as an indicator of slack, has remained high in France since the mid-1980s. If we consider that the last 30 years of data only enable us to measure the government spending multiplier during bad times for France, the practical relevance of conclusions reached on the US data for the evolution of the spending multiplier seems to be limited for the French economy.

Rational inattention to news: the perils of forward guidance

Gaballo (G.) (2016), "Rational inattention to news: the perils of forward guidance", *American Economic Journal: Macroeconomics*, Vol. 8, Issue 1, pp. 42-97, January.

Gaetano Gaballo is a macroeconomist in the Monetary Policy Division. His work focuses on the formation of expectations, the informational role of prices and the nature of liquidity. His articles have been published in: *The Journal of Monetary Economics*, *the Journal of Economic Dynamics and Control*, *the American Economic Journal*, and *Economic Letters*.



Communication about future policies is more likely to generate disagreement when it does not constitute a commitment of the board but rather the views of some members of the board. Does this imply that transparency is not beneficial when the news is liable to generate diverse interpretations? Or, should we presume that every piece of information is beneficial to agents? Might the free release of information about the future foster inefficient economic fluctuations? Gaetano Gaballo tries to answer these questions by analysing the costs and benefits of releasing information about future fundamentals when the announcement is not uniformly perceived by agents.

On 22 May 2013, Ben Bernanke surprisingly announced that the Fed might be ready to taper its quantitative easing programme. The announcement generated substantial disagreement about the actual informational content of the news. In the following weeks, financial markets displayed exceptional turmoil. This is an example of how forward guidance is not only an issue relating to the projection of future policy rates, but also pervades the overall strategy of the monetary conduct.

In many models, agents use asset markets to allocate resources over time. Asset prices depend on both current and future fundamentals. On the one hand, information about future fundamentals helps agents to improve their forecasting of asset prices, which contributes to making their intertemporal allocation decisions more efficient. On the other hand, this information increases the unconditional volatility of asset prices. Therefore, the release of economic and financial information may generate a coordination failure. Each individual relies on his perception of the news to improve his forecast of asset prices. However, the fact that each individual is acquiring information can make the price more volatile, which makes forecasting harder.

For illustrative purposes, assume that without any release of information, price volatility equals one. As a consequence, the forecast error variance on agents' forecasts is also one. Let's now consider the case of a release of information that allows agents to explain 50% of price volatility. Nevertheless, this release can increase price volatility from one to four due to a general equilibrium externality in information acquisition. In such a case, the release of information is welfare detrimental as the forecast error variance of agents (which is inversely proportional to agents' ability to optimise their portfolio) increases.

Gaetano Gaballo explains that such a paradoxical welfare effect is obtained when agents, besides the announcement, also look at current prices to extract information on the consensual understanding of the announcement. The current market price aggregates information but also moves with exogenous disturbances. By looking at current market prices, agents refine their forecasts, although they cannot distinguish between price movements due to information and those due to exogenous price changes. Therefore, by reacting to a current price change, agents also amplify the effect of price disturbances which are not related to the announcement.

In this way, Gaetano Gaballo shows that, in the presence of market-generated information, the release of poor information is detrimental to welfare. However, he finds that monetary policy could correct the distortion generated by price feedback by reacting to financial disturbances and make the announcements beneficial instead. In this sense, the coordination of communication with monetary policy is necessary to transform the perils of institutional communication into opportunities.

Hadrien Camatte graduated from the University of Paris X and Sup de Co Reims. He worked as an inflation analyst in the French Treasury and at INSEE and Crédit Agricole CIB as an economic analyst. He's presently a forecaster for France. He is an expert in economic forecasting.



Camille Fabre graduated from ESCP-Europe and University of Paris 1 Panthéon-Sorbonne. She works as a macroeconomist in the European Relations Division. She is an expert in international economics.



Bertrand Garbinti graduated from ENSAE and has a Ph.D from the Paris School of Economics. He was a researcher at Crest before joining the Micro Economic Analysis Division and is presently working on household behaviour (savings, transmission and accumulation of wealth). He is an expert in household behaviour.



Gregory Grellet graduated from ESSEC Business School in Paris. He worked in the private sector before joining the ACPR - Banque de France before moving to the ECB. He is currently working in the Monetary Relations Division as senior economist and expert in the banking sector.



Urszula Szczerbowicz has a PhD in Economics from Sciences Po and LUISS Guido Carli. She worked at CEPII as an economist specialised in monetary issues. She joined the International Macroeconomics Division where she focuses on exchange rates evolutions and the IMF-type DSGE models.



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Research Newsletter

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