Research Newsletter

DeNederlandscheBank
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Latest news

Wilko Bolt appointed as Professor of Payment Systems at VU University

Since January 1st 2017, Wilko Bolt - senior economist in the Economics & Research department of DNB - has been appointed as a Professor of Payment Systems at the Faculty of Economics and Business Administration of the VU University Amsterdam. The new part-time chair is a joint initiative of the Finance department at the VU, the Dutch Payments Association and De Nederlandsche Bank.

Wilko Bolt will be researching the behavioral aspects of the various players in the payment system: from consumers to retailers and from banks to fintech companies. According to Wilko Bolt, the payment system is at the intersection of monetary economics, banking and industrial organization: "Pricing, competition, security and regulation all play an important role. Think for example of all the rules imposed by Brussels that apply to payment services – they make the economic decision-making process even more complex." Innovation and »

Conference Avoiding and Resolving Banking Crises

Amsterdam, 20-21 April 2017

On April 20-21, De Nederlandsche Bank, the European Banking Center-Tilburg, and CEPR organized a conference which brought together academics and policymakers to discuss topics related to how to avoid and resolve banking crises. The program included the presentation of eleven selected papers and two keynote speeches given by Javier Suarez (CEMFI) and Stijn Claessens (BIS). LINK

The conference was opened by Marc Roovers (DNB division director, Resolution) who introduced the topic of the conference and highlighted the practical perspective of the resolution regimes. He pointed to the time dimension of the paradigm shift we are going through, arguing that resolvability is not something that can be achieved overnight as the discussion is not only about bail-in vs. bail-out procedures, but involves also other issues such as reducing complexity, interconnectivennes, operational readiness of authorities and firms. He concluded with a discussion on the consequences of regulation and innovation (i.e., fintech) on bank business models, which poses challenges from the resolution point of view.

The first session started with a presentation by Diana Bonfim (Banco de Portugal, joint work with João Santos) on the importance of ex-ante credibility of deposit insurance schemes. Using bank level data on deposits at banks operating in Portugal, the authors find that depositors actively react to events that raise doubts about the reliability of such insurance. In particular, after an incident that threatens the credibility of the deposit insurance scheme, depositors move their savings to financial institutions whose deposits are guaranteed by other countries, or to intrinsically sounder banks. These effects suggests that depositors actively monitor banks, even in the presence of deposit insurance.

Next, Helmut Stix (Österreichische Nationalbank, joint work with Martin Brown and Ioanna Evangelou) discussed the reaction of households to an unprecedented banking crisis in Cyprus where bank customers experienced in a short period of time the temporary closure of all banks, the resolution of the two main banks (which ended up with a bail-in process of uninsured depositors), and the introduction of capital controls limiting withdrawals. The authors provide novel evidence on the consequences of bail-in on depositors' behavior by documenting a significant 'flight to cash' which affected mainly the bailed-in banks and those customers who personally suffered a bail-in. Furthermore, they show that in the medium term the bail-in may erode the confidence in the banking sector, suggesting that from a policy perspective it is very important to weight carefully the »

Latest news
Continued

technology in the payment system are also high on Bolt's research agenda. Wilko Bolt will also be teaching. "I want to encourage students to discover this new area. Payment systems are at the core of the economy, and have an increasingly international dimension. These systems are not a "free lunch" and the distribution of costs and revenues is a very complicated issue. Payment systems open up new opportunities, but also gives rise to new risks and problems. I look forward to giving students the chance to study these issues."

Journal of International Money and Finance

Jakob de Haan has become member of the editorial board of the *Journal of International Money and Finance* (JIMF). Since its launch in 1982, the JIMF has built up a solid reputation as a high quality scholarly journal devoted to theoretical and empirical research in the fields of international monetary economics, international finance, and the rapidly developing overlap area between the two. Its Impact factor is 1.524 and its 5-year impact factor is 1.703.

The paper by Mark Mink and Jakob de Haan "Contagion during the Greek sovereign debt crisis" is among the three most down-loaded papers published in the *Journal of International Money and Finance*.

■ LINK

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benefits and the costs of the bail-in process.

Ansgar Walther (University of Warwick, joint work with Lucy White) concluded the first session of the conference with insights on the optimal design of regulatory regimes from the perspective of bail-in policies and the resolution of banks. The authors argue that regulatory discretion may create incentives for regulators to act too late and to conduct interventions with limited impact in order to avoid signaling bad news to the market. In this context it is optimal to make the extent of regulatory discretion contingent on the realization of public signals: discretion is beneficial after good news, while commitment to rules is desirable in the aftermath of bad news. Finally, the authors argue that the optimal regime can be implemented by supplementing bail-in powers with contingent capital instruments.

In the first keynote speech of the conference, Javier Suarez (CEMFI) discussed about the cyclical implications of the new international accounting standard for the measurement of financial assets and liabilities (known as IFRS 9). The central innovation of IFRS 9 relates to the measurement of impairment allowances, which will shift from the incurred loss approach to the more forward-looking and comprehensive expected loss approach. Javier stressed the striking features of the new method, highlighting the existence of different stages in evaluating the quality of the credit rating. He also pointed to some unintended consequences of IFRS 9, such as the increased correlation between the volume of banks' impairment allowances and prospects for the economy, which may affect the banks' credit supply.
Saverio Simonelli (University of Naples Federico II, joint work with Carlo Altavilla and Marco Pagano) presented the first paper of the afternoon session. The paper discusses the nexus between the government and banks during and after the euro-area sovereign debt crisis and shows how the publicly-owned and recently bailed-out banks responded to sovereign stress by increasing their holdings of domestic public debt significantly more than other banks. Furthermore, the authors argue that banks exposures to domestic sovereign risk amplified the transmission of stress to the banking system and had a negative impact on lending.

Next, Andre Silva (Cass Business School, joint work with Thorsten Beck and Samuel Da-Rocha-Lopes) provided empirical evidence for the real effects of a bail-in of a major Portuguese bank (i.e, Banco Espirito Santo). He showed that those banks that have been more exposed to the bail-in significantly reduced credit supply. While the affected firms were able to compensate this credit contraction with other sources of funding (e.g., new bank relationships with less exposed banks), there were significant negative real outcomes in the form of reduction of investment and employment (in particular by SMEs).

Concluding the day, Olivier De Jonghe (Tilburg University, joint work with Hans Dewachter and Steven Ongena) addressed the impact of bank-specific capital requirements on banks. The authors find that higher capital requirements may lead to balance sheet adjustments as well as to lower credit supply to corporations and strong contraction in supply of mortgages and term lending. These effects are more pronounced for smaller, riskier and less profitable banks for which the cost of raising capital is higher.

On the second day of the conference, Giovanni Dell'Ariccia (IMF, joint work with Tito Cordella and Robert Marquez) presented a model of bank risk taking and government guarantees. The paper focuses on the distortions associated with the provision of guarantees and highlights a key trade-off between risk insensitiveness of debt and banks' charter value. The author showed how the extent of moral hazard depends on bank's opaqueness, with higher risk-taking incentives at more transparent banks. The paper delivers interesting policy implications on » the interaction between guarantees, transparency and the role of capital regulation. The theoretical implications of the model suggest a need for coordination between resolution and prudential regulation policies, with a special focus on how to design efficient bailouts and not necessarily on the right balance between the bail-in vs. bail-out.

Next, Michael Koetter (Leibniz - Institut für Wirtschaftsforschung Halle, IWH) discussed a novel channel through which banks can bridge political connections: the purchase of government debt. Using security-level data from German banks, he finds that holdings of state-government-issued bonds increase strongly and significantly after an election that leads to the loss of state-owned banks' political connections. Moreover, the authors uncover the existence of a bailout insurance mechanism, by showing that state-owned banks that are not politically connected are more likely to be bailed out by the state government when they hold larger stocks of state sovereign debt.

Stijn Claessens (BIS) gave the second keynote speech of the conference and provided an overview of the core issues in financial systems from the perspective of financial stability. He argued that financial structure matters for efficiency and risk and that regulation should take account of financial structure. He focused the discussion on the two faces of market-based finance, which may act both as a stabilizer as well as an amplifier of pro-cyclicality. In this context the macroprudential policies are seen as important components of the regulatory toolkit despite their limitations. In his speech Stijn also argued that regulators and supervisors should ensure the systemic oversight of non-bank financial markets and extend the macroprudential approach to non-bank finance.

Next, Christopher Martin (Federal Deposit Insurance Corporation, joint work with Manju Puri and Alexander Ufier) discussed the depositor behavior at a distressed US bank. The authors find that uninsured depositors are more likely to withdraw their funds and that outflow of deposits may be mitigated by the government deposit guarantees. Interestingly, the failing bank has been able to attract large quantities of new insured deposits thus raising concerns about the effectiveness of market discipline.

Todd Keister (Rutgers University, joint work with Yuliyan Mitkov) presented the first paper in the last session of the conference. He proposed a theoretical model which highlights the interaction between the ex-post government's bailout policy and banks' willingness to impose losses on their investors via a bail-in procedure. The authors argue that when the government cannot commit on a bailout policy, the expectation of a bail-out may create incentives for a delayed (bail-in) response to an unfolding crisis. In this context, even complete contracts are less likely to solve the bank run problem.

Finally, Hans Degryse (KU Leuven and CEPR, joint work with Johannes Bersch, Thomas Kick and Ingrid Stein) presented evidence on how bank distress may affect borrowers' probability of default as perceived by an external credit rating agency. Using firm level data from Germany over the period 2000 to 2012, the authors find that a bank bailout leads to a bank-induced increase in the firms' probability of default, and that the direction and magnitude of the effect depend on firm quality and the bank business model (i.e., relationship or transaction banks). These documented effects were more pronounced during the 2008/2009 financial crisis.

Latest news
Continued

Best corporate governance paper award

Dennis Veltrop, Jakob de Haan and Floor Rink received the best corporate governance paper award at the European Academy of Management (EURAM) in Glasgow for their paper "Supervising your in-group? How the "revolving door" shapes external supervision of the financial sector". Financial sector supervisory agencies depend to a large extent on financial sector supervisors coming from the financial sector. The current field study conducted among 254 financial sector supervisors from two Dutch supervisory agencies demonstrates that the more prior financial sector experience supervisors have, the more likely they are to identify with the financial sector and the less effective they are in carrying out their supervisory work because of this. Importantly though, supervisors' identification with their supervisory profession represented an important boundary condition to this mediation chain, such that the negative indirect is attenuated if supervisors identify with their supervisory profession.

DNB-Riksbank Macroprudential Conference Series
third meeting - June 20-21 2017

On June 20-21 2017, De Nederlandsche Bank and Sveriges Riksbank organized a conference which brought together academics, policymakers, and practitioners to discuss topics related to financial stability and macroprudential policy. The program included a keynote speech by Stanley Fischer (Federal Reserve System), six paper presentations, and a panel discussion.
Link to programme and link to papers

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The conference was opened by Klaas Knot (governor of De Nederlandsche Bank) who introduced the topic of the conference and highlighted policy areas that may affect the financial system, their interlinkages, and the role of monetary policy in addressing financial stability. He discussed financial stability risks in a two-by-two dimension (structural or cyclical, specific or general) and outlined possible monetary, fiscal, and macroprudential policy responses. He concluded that financial stability is a multifaceted issue and entails more extensive and diversified macroprudential policy responses as well as coordination of monetary and macroprudential policies.

The keynote speech was delivered by Stanley Fischer (Federal Reserve System) who discussed the role of the housing market in triggering the 2008 financial crisis and the challenges it poses for macroprudential policy. The distortions caused by extensive government support led to excessive mortgage growth and house price booms, while widespread securitization weakened housing finance and raised the risk of a default. Fischer reflected on the effectiveness of macroprudential policy instruments mentioning tighter capital requirements, loan-to-value and debt-to-income ratios as tools that could slow credit and house price growth and strengthen financial stability. Fischer advocated strengthening the resilience of the housing market by limiting mortgage lending, implementing new capital and liquidity requirements, and making government support for homeownership explicit and balanced. Additionally, a well-capitalized banking system, stress testing of the financial system, and housing sector reforms could improve financial stability.

In the first session, Gary Gorton (Yale School of Management, joint work with Ping He) discussed the optimal monetary policy in a collateralized economy. He noted that the quality of collateral is becoming increasingly important as the scarcity of Treasuries forces the private sector to use substitutes in the form of mortgage-backed and asset-backed securities (MBS). The central bank influences the quality of collateral through open market operations by trading cash for Treasuries. An increase in money supply not only leads to a housing boom, large amounts of MBS, higher output and inflation, but also causes higher fragility. Financial fragility rises when the ratio of MBS to Treasuries increases. The central bank faces a trade-off between maximizing output and consumption against minimizing the costs of financial fragility. In equilibrium, the central bank may optimally trigger recessions to reduce fragility.

The first discussant, Douglas W. Diamond (University of Chicago) described a simpler static model, which, unlike the model of Gorton, treats a credit good as a store of value and an input into the production of cash. The optimum in this economy is deflation which increases the real value of collateral. The discussant suggested treating cash as a medium of exchange for large transactions when too many bonds are purchased. The second discussant, Randy Kroszner (University of Chicago), added that more international evidence on private production of safe assets is needed to account for countries' differences in institutions and regulations. Further, he mentioned alternative policies to deal with financial fragility (cash elimination, liquidity auctions, direct regulation of ABS, Temporary Liquidity Guarantee Program) and noted the importance of financial stability implications for monetary policy.

In the second session, Tano Santos (Columbia University) provided a narrative of the Spanish banking crisis and the evolution of its banking system in the recent decade. The main factors explaining the run-up to the crisis included an accumulation of real estate risk in portfolios of banks and cajas, an exposure to wholesale funding and large capital inflows, and flawed governance in the cajas sector. The author reviewed the policy actions during the crisis, namely the debt guarantee program, consolidation, recapitalization and changeover of cajas into banks, and finally the assistance provided. He argued that the political economy of cajas, large foreign funding exposure and the lack of a national lender of last resort hindered the ability of the Bank of Spain to deal with the crisis.

The first discussant, Claudia M. Buch (Deutsche Bundesbank), reasoned that it is vital to develop and test hypotheses for policy evaluation and identification. She proposed evaluating financial reforms analogously to "Growth Diagnostics" used as a guideline to economic policy making. Such financial stability diagnostics need to focus on intermediate indicators, both quantitative and qualitative. She also noted that institutional differences may influence the outcomes of policy assessments. The discussion was continued by Jose Manuel Campa (Banco Santander), who pointed out that not only cajas, but also some banks ›› contributed to the crisis since they have experienced similar problems. He expressed concern about the banking system in the whole EMU due to a large share of assets owned by non-privately funded institutions resembling cajas.

Elena Carletti (Bocconi University, joint work with Giuseppe Ferrero) presented in the third session. The paper examines financial stability consequences in the low interest rate environment (LIRE) using the micro-macro approach. The authors distinguish a short and long period of low interest rates. A period with low interest rate is detrimental only if it is prolonged, as the benefits of LIRE are dominated by the vulnerabilities related to profitability pressures, search for yield, increased credit risk, booms and busts through mispricing, and uncertainty about asset values. This leads to stagnating investment and output growth and threatens the resilience and sustainability of business models in the sectors with long-term return guarantees and maturity mismatch.

The first discussant, Eric S. Rosengren (Federal Reserve Bank of Boston) pointed out that LIRE is not only cyclical but also a secular problem, reflecting the slowing population and productivity growth in developed countries and low inflation targets. In LIRE, monetary policy is less able to react to negative shocks, which motivates the use of less traditional tools in future recessions. In addition, Rosengren mentioned repercussions of LIRE for financial intermediation and risk exposure of households. The second discussant, Mark Gertler (New York University), offered his views on the usefulness of macro-financial models and emphasized the need to understand and quantify the macro-finance linkages.

The panel discussion focused on the future of financial regulation. First, Patrick Bolton (Columbia Business School) described the existing cycle which goes from crisis to regulatory reforms, their undoing, and into the next crisis. He noted that these cycles are asynchronous across countries: while the U.S. is already in the reverse mode, Europe is still consolidating and China is having a boom in shadow banking. He warned of the risks of greater financial protectionism and regulatory arbitrage. Next, Jon Cunliffe (Bank of England) discussed the challenges for macroprudential policy based on the experience in the U.K. He asserted that macro-prudential policy in the U.K. is obstructed by the lack of proper market-based tools, institutions and data, as well as the existence of long lags in the system which may cause inconsistent reforms. He suggested monitoring the whole financial cycle and considering possible unintended consequences of financial reforms. Finally, Thomas Hoenig (Federal Deposit Insurance Corporation) talked about financial regulation in the U.S. and compared the benefits of regulatory reforms with the benefits of having a larger, highly subsidized and concentrated U.S. banking system. He advocated the restructuring of the banking system and the increase of tangible equity, which would make financing more stable and allow regulatory relief.

On the second day of the conference, Jean-Edouard Colliard (HEC Paris, joint work with Dennis Gromb) presented a paper on financial restructuring and bank resolution that uses a bargaining model under asymmetric information. The paper analyzes the impact of resolution on voluntary debt restructuring through two effects – surplus and signaling. The surplus effect means that tougher resolution increases private losses in default, which gives incentives to restructure quickly and to speed up negotiations. The signaling effect implies that tougher resolution makes debt value more sensitive to asset quality, which gives stronger incentives to delay restructuring and to slow down negotiations. The trade-off between the signaling and surplus effect determines the banks' restructuring strategy. Government subsidies to banks for restructuring could increase incentives for creditors to misrepresent the quality of their assets.

The first discussant, Thomas Philippon (New York University) showed stylized data on bank resolution in Europe. Referring to the paper, he suggested to account for other factors of asymmetric information as well as characteristics of the regulating authority. He argued that higher credibility and predictability of resolution, legal clarity on collateral securities laws, and credible bail-in could help to avoid delays in restructuring. The second discussant, Andrew Gracie (Bank of England), agreed on this point adding that an effective bank resolution needs to be transparent and well planned, and it should minimize the adverse systemic effects. He also highlighted regulatory cooperation, recovery planning, and appropriate liquidity support as relevant conditions for restructuring.

The presenter in the next session, Ralph Koijen (New York University, joint work with Motohiro Yogo) discussed the fragility of market risk insurance in the U.S., focusing on variable annuities sold by life insurance companies. These retail financial products package mutual funds with guaranteed lifetime withdrawal benefits. The author found that after the 2008 financial crisis, life insurers experienced large increase in reserve valuation and risk exposure. As a result, they made guarantees less generous, reduced sales, increased fees, and moved liabilities off the balance sheets through reinsurance. In this paper, financial frictions and market power define pricing, contract characteristics, and the degree of market incompleteness.

The discussion was opened by Arvind Krishnamurthy (Stanford University) who suggested including a corporate finance aspect in the paper, by examining the effects of increased market fragility on equity and capital costs, on broader range of financial products that insurers invest in, and on spillovers to the broader financial sector. The second discussant, Emanuel Mönch (Deutsche Bundesbank), explored policy implications, in particular the role of capital regulations and implicit incentives in the insurance sector. He disagreed that regulation hinders market competitiveness. Additionally, he suggested that apart from supply side frictions, the paper could consider the impact of potential demand shifts.

The last session was devoted to the paper of Luigi Zingales (University of Chicago, joint work with Paolo Angelini and Marcello Bofondi) who presented evidence on the causes of the non-performing loans (NPLs) problem of Italian banks. Based on sectoral data, Zingales reported that banks exposed to the construction sector had the largest share of NPLs and the highest default rate, while 40% of all loans before 2007 were given to firms with high default risk. The empirical analysis showed that less profitable banks which received fines from the Bank of Italy or had more CEOs indicted experienced a higher default rate. At least half of all defaults were inevitable, while disproportionate concentration of loans in the construction sector explained 30-40% of defaults. Zingales argued that bad loans were largely due to the recession and not because of poor lending policies of Italian banks.

The first discussant, Mariassunta Giannetti (Stockholm School of Economics), offered a view that the problems of Italian banks could be explained by the use of inefficient banking technologies. She proposed to look for the evidence of loan 'evergreening' and to evaluate the efficiency of credit allocation and screening techniques as factors that led to the accumulation of bad loans. The second discussant, Giovanni Dell'Ariccia (International Monetary Fund), provided a broader reflection on the topic. He reviewed the impact of structural changes on the accumulation of NPLs, the regulatory pressure on banks, and the role of monetary policy conditions in Italy. He also suggested to explore ex-ante bank-level heterogeneity in terms of linkages with markets and pricing of risk taking into loans.

Conferences

9-10 October 2017: 20th Annual DNB Research Conference "Fiscal and Monetary Policy in a changing Economic and Political Environment
Location: De Nederlandsche Bank, Amsterdam, The Netherlands
Please use the following link for the Call for Papers

DNB working-papers

Since April 2017 the following Working Papers have been published, please use the following link: Working Papers

- **No 559 -** The shift in bank credit allocation: new data and new findings Dirk Bezemer, Anna Samarina and Lu Zhang - 21 June 2017
- **No 558 -** Cyclical patterns in risk indicators based on financial market infrastructure transaction data Monique Timmermans, Ronald Heijmans and Hennie Daniels - 9 June 2017
- **No 557 -** Risk indicators for financial market infrastructure: from high frequency transaction data to a traffic light signal Ron Berndsen and Ronald Heijmans - 9 June 2017
- **No 556 -** Home biased expectations and macroeconomic imbalances in a monetary union Dennis Bonam and Gavin Goy - 2 June 2017
- **No 555 -** Pension funds illiquid assets allocation under liquidity and capital constraints Dirk Broeders, Kristy Jansen and Bas Werker - 19 April 2017
- **No 554 -** Pension funds carbon footprint and investment trade-offs Martijn Boermans and Rients Galema - 12 April 2017
- **No 553 -** SenSR: A sentiment-based systemic risk indicator Svetlana Borovkova, Evgeny Garmaev, Philip Lammers and Jordi Rustige - 10 April 2017

DNB Occasional Studies

Since May 2017 the following occasional studies have been publisched, please use the following link: Occasional Studies

Nr 1 (2017): The housing market in major Dutch cities. May 2017. Melanie Hekwolter of Hekhuis, Rob Nijskens en Willem Heeringa

Published articles

Since April 2016 the following papers have been published.
For published articles in journals please use the following link:
Published articles

- **The pitch rather than the pit: Investor inattention, trading activity, and FIFA World Cup matches**, Michael Ehrmann and David-Jan Jansen, *Journal of Money, Credit and Banking, 2017, 49(4), 807-821*
- **Measuring expectations of inflation: Effects of survey mode, wording, and opportunities to revise**, Wändi Bruine de Bruin, Wilbert van der Klaauw, Maarten van Rooij, Federica Teppa and Klaas de Vos, *Journal of Economic Psychology, 2017, 59, 45-58*
- **Is there an optimal pension fund size? A scale-economy analysis of administrative costs**, Jacob Bikker, *Journal of Risk and Insurance, 2017, 84(2), 739-770*
- **Limited asset market participation, sticky wages and monetary policy**, Guido Ascari, Andrea Colciago and Lorenza Rossi, *Economic Inquiry, 2017, 55(2), 878–897*

Forthcoming articles

For forthcoming articles in journals please use the following link: Forthcoming Articles

- **Determinants of interest rates on time deposits and savings accounts: macro factors, bank risk, and account features**, Jacob Bikker and Dirk Gerritsen, *International Review of Finance*
- **The missing links: A global study on uncovering financial network structures from partial data**, Kartik Ananda, Iman van Lelyveld, Ádám Banai, Soeren Friedrich, Rodney Garratt, Grzegorz Hałaj, Jose Fique, Ib Hansen, Serafín Martínez Jaramillo and Hwayun Lee, *Journal of Financial Stability*
- **Determinacy analysis in high order dynamic systems: The case of nominal rigidities and limited asset market participation**, Guido Ascari, Andrea Colciago and Lorenza Rossi, *Economics Letters*
- **Did a public campaign influence debit card usage? Evidence from the Netherlands**, Nicole Jonker, Mirjam Plooij and Johan Verburg, *Journal of Financial Services Research*
- **Drivers of payment patterns at the point-of-sale: Stable or not?**, Carin van der Cruijsen and Mirjam Plooij, *Contemporary Economic Policy*
- **Does the impact of financial liberalization on income inequality depend on financial development?** Some new evidence, Jakob de Haan, Regina Pleniger, and Jan-Egbert Sturm, *Applied Economics Letters*
- **Finance and income inequality: A review and new evidence**, Jakob de Haan and Jan-Egbert Sturm, *European Journal of Political Economy*
- **The propagation of financial turbulence: Interdependence, spillovers, and direct and indirect effects**, Zhongbo Jing, Paul Elhorst, Jan Jacobs and Jakob de Haan, *Empirical Economics*
- **Necessity as the mother of invention: Monetary policy after the crisis**, Alan Blinder, Michael Ehrmann, Jakob de Haan and David-Jan Jansen, *Economic Policy*

Links

Homepage
Research at DNB
Research Seminars
Research Policy
Publications
Occasional Studies
Visiting Scholar Programme

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