December 2020

DNB Research Newsletter

DeNederlandscheBank
EUROSYSTEEM

Research highlights

1. 23rd DNB Annual Research Conference

On 29 October 2020, De Nederlandsche Bank organized its 23rd Annual Research Conference (online). The conference theme this year was "Monetary Non-Neutrality: The Real Effects of Monetary Policy in Short and Long Run". The conference featured two keynote speeches by Giancarlo Corsetti and Amir Sufi and five research papers that addressed several important questions: Which are the relevant channels of the monetary policy transmission mechanism? How strong and long-lasting are the effects of monetary policy? Are there any long-run consequences of persistently low nominal interest rates? What are the limits of monetary policy? Are there undesired or unexpected effects from QE? What are the long-run implications of the massive monetary expansion triggered by the coronavirus pandemic?
A summary of the conference and information on the program, papers, and presentations are available on the conference website.

2. An early stablecoin? The Bank of Amsterdam and the governance of money

Jon Frost, Hyun Shin, and Peter Wierts draw lessons on the central bank underpinnings of money from the rise and fall of the Bank of Amsterdam (1609-1820). The Bank started out as a "stablecoin", evolved in the direction of a modern central bank as its deposits took on attributes of fiat money, but remained a "half-way house" up to its downfall. Read more

3. Monetary policy, prudential regulation, and mortgage credit

Mary Everett, Jakob de Haan, David-Jan Jansen, Peter McQuade, and Anna Samarina have published a piece in the Review of International Economics, dedicated to interaction of monetary and macroprudential policies. The authors find that restrictive euro-area monetary policy shocks reduce the growth of mortgage lending in Ireland and the Netherlands. Stricter prudential regulation mitigates this effect in Ireland, but not in the Netherlands. There is weak evidence for an international bank lending channel. The article is part of a special issue based on a project by the International Banking Research Network. Read more

4. The power of flexibility: optimal quantitative easing in a monetary

union

Serdar Kabaca, Renske Maas, Kostas Mavromatis, and Romanos Priftis investigate quantitative easing in a monetary union, when the policy rate is subject to a zero lower bound constraint. They show that it can be optimal to purchase more from regions that are subject to stronger portfolio frictions, given a strong commitment to a stable path for government debt. Read more

5. "Rapid financial integration reinforced vulnerabilities in the Economic and Monetary Union"

Interview with Jeroen Hessel, DNB financial stability economist and researcher. On November 9, Jeroen defended his PhD thesis "Financial Factors in the Economic and Monetary Union" at the Rijksuniversiteit Groningen. Read more

Christmas quiz – Test your econ knowledge :)

1. In percent of monthly income, which country spends the most on Christmas?
    A. United States
    B. Netherlands
    C. United Kingdom
    D. Romania

2. In the novella "A Christmas Carol" by Charles Dickens, what was the profession of the main character, Ebenezer Scrooge?
    A. Lawyer
    B. Creditor
    C. Politician
    D. Central bank economist

3. Where does Santa Claus originally come from?
    A. The North Pole
    B. The United States
    C. Turkey
    D. Spain

4. Who strongly disagrees that giving specific presents is inefficient because preferences of recipients could be better satisfied with cash?
    A. Markus Brunnermeier
    B. Alberto Alesina
    C. Carl Shapiro
    D. All three

5. What is the official currency of Christmas island?
    A. Australian dollar
    B. Euro
    C. Christmas Island dollar

6. Which of these famous persons does not hold an economics degree?

A. Mick Jagger
B. Arnold Schwarzenegger
C. Lionel Richie

7. “Bad money drives good money out of circulation” is known as
A. Gresham’s law
B. J.S. Mill law
C. Fisher law
D. Monetary law

8. Who is known as the father of economics?
A. Thomas Robert Malthus
B. Francois Quesnay
C. Adam Smith
D. David Ricardo

9. Which central bank’s total assets will be largest on December 31st 2020, when expressed in USD?
A. US Fed
B. Bank of Japan
C. Eurosystem

10. What kind of music is popular in central bank communication?
A. Hard rock
B. Hip hop
C. Reggae
D. Soul

Answers can be found here

Publications (since October)

Working Papers

700 - A convenient truth: The convenience yield, low interest rates and implications for fiscal policy
Dennis Bonam

699 - Tax multipliers across the business cycle
Dennis Bonam and Paul Konietschke

698 - The impact of trustees’ age and representation on strategic asset allocations
Rob Bauer, Rien Bogman, Matteo Bonetti and Dirk Broeders

697 - Optimal quantitative easing in a monetary union
Serdar Kabaca, Renske Maas, Kostas Mavromatis and Romanos Priftis

696 - An early stablecoin? The Bank of Amsterdam and the governance of money
Jon Frost, Hyun Song Shin and Peter Wierts

695 - Unemployment, firm dynamics, and the business cycle
Andrea Colciago, Stefano Fasani and Lorenza Rossi

694 - Monetary policy effects in times of negative interest rates: What do bank stock prices tell us?
Joost Bats, Massimo Giuliodori and Aerdt Houben

Published journal articles

Trust in the central bank and inflation expectations
Dimitris Christelis, Dimitris Georgarakos, Tullio Jappelli and Maarten van Rooij
International Journal of Central Banking, 2020, 16(6), 1-37

Individual inflation forecasts and monetary policy announcements Jakob de Haan, Kostas Mavromatis and Garyn Tan
Economics Letters, 2020*,* 197, 109602.

Sectoral allocation and macroeconomic imbalances in EMU
Niels Gilbert and Sebastiaan Pool
Review of World Economics, 2020, 156, 945–984

Does institutional quality condition the impact of financial stability transparency on financial stability?
Tim van Duuren, Jakob de Haan and Henk van Kerkhoff
Applied Economics Letters, 2020, 27(20), 1635-1638

Crime, deterrence and punishment revisited
Maurice Bun, Richard Kelaher, Vasilis Sarafidis and Don Weatherburn
Empirical Economics, 2020, 59, 2303–2333

Finite sample properties of the GMM Anderson-Rubin test
Maurice Bun, Helmut Farbmacher and Rutger Poldermans
Econometric Reviews, 2020, 39(10), 1042-1056

Benchmark selection and performance
Dirk Broeders and Leo de Haan
Journal of Pension Economics and Finance, 2020, 19(4), 511-531

Loan to value caps and government-backed mortgage insurance: Loan-level evidence from Dutch residential mortgages
Leo de Haan and Mauro Mastrogiacomo
De Economist, 2020, 168, 453–473

Bank profitability, leverage constraints and risk-taking
Natalya Martynova, Lev Ratnovski and Razvan Vlahu
Journal of Financial Intermediation, 2020, 44, 100821

Forthcoming journal articles

The impact of central bank liquidity support on banks' sovereign exposures
Leo de Haan, Jan Willem van den End and Sarah Holton
Applied Economics

A survey of institutional investors' investment and management decisions on illiquid assets
Kristy Jansen and Patrick Tuijp
Journal of Portfolio Management

The impact of size, composition and duration of the central bank balance sheet on inflation expectations and market prices
Jan Willem van den End and Stephanie Titzck
European Journal of Finance

The economics of sharing macro-longevity risk
Dirk Broeders, Roel Mehlkopf and Annick van Ool
Insurance: Mathematics and Economics

Pension funds' herding
Dirk Broeders, Damiaan Chen, Peter Minderhoud and Willem Schudel
International Journal of Central Banking

The interaction between macroprudential policy and monetary policy: Overview
Matthieu Bussière, Jin Cao, Jakob de Haan, Robert Hills, Simon Lloyd, Baptiste Meunier, Justine Pedrono, Dennis Reinhardt, Sonalika Sinha, Rhiannon Sowerbutts and Konstantin Styrin
Review of International Economics

Effects of Fed policy rate forecasts on real yields and inflation expectations at the zero lower bound
Gabriele Galati and Richhild Moessner
Economics Letters

Forthcoming books/articles in books

Bos, J. and L. Zhang. Room to move: why some industries drive the trade-specialization nexus and other do not. In: *Advances in Efficiency and Productivity Analysis*, C. Parmeter and R. Sickles (eds.), Springer Proceedings in Business and Economics.

Other publications

Monetary policy effects in times of negative interest rates
Joost Bats, Massimo Giuliodori and Aerdt Houben
VoxEU Column, 17 November

Monetary policy effects in times of negative interest rates
Joost Bats, Massimo Giuliodori and Aerdt Houben
SUERF Policy Note 212.

The interaction of monetary and financial tasks in different central bank structures
Aerdt Houben, Jan Kakes and Annelie Petersen.
In: How Do Monetary, Micro- and Macroprudential Policies Interact?

Proceedings of OeNB Workshops 22, pp. 73-86, 2020.

What does the size of the banking sector mean for financial stability?
Rob Nijskens and Jan Kakes
In: A passion for research and PhD supervision in financial economics, Liber Amicorum, offered to Prof. Dr Sylvester Eijffinger with contributions by past PhD students, pp. 108-122, 2020.

For a complete list of publications see our website: Link

Events

Research seminars

Past

3 Nov 2020: Monetary policy uncertainty and firm dynamics
Stefano Fasani (Queen Mary University)

10 Nov 2020: The macroeconomics of sticky prices with generalized hazard functions
Francesco Lippi (Luiss University)

17 Nov 2020: Monetary policy and intangible investment
Robin Döttling (Erasmus University)

24 Nov 2020: Agnostic output gap estimation in large cross-sections

Samad Sarferaz (KOF ETH Zurich)

8 Dec 2020: Banking barriers to the green economy
Tarik Roukny Ornia (KU Leuven)

Forthcoming

TBA

Workshops and conferences

Past

29 Oct 2020: DNB Annual Research Conference "Monetary non-neutrality: the real effects of monetary policy in the short and long run"

16-20 Nov2020: Nederlandse Economenweek 2020

Other news

PhD defense of Melanie de Waal, 22 Oct 2020, University of Groningen. Thesis: "The Balancing act of effective supervision"

PhD defense of Jeroen Hessel, 9 Nov 2020, University of Groningen. Thesis: "Financial factors in the economic and monetary union"

PhD defense of Francesco Caloia, 9 Nov 2020, Vrije Universiteit Amsterdam. Thesis: "Micro effects of macro policies"

Data and code sharing at DNB

Working with data has always been a core competency at DNB. By working with data, we aim to do this in a responsible and replicable manner. At DNB, we perform quite some research and analyses which are also published externally. The importance of replication and reproducibility is key to being transparent as a central bank and a supervisor. We should therefore aim for reproducible analyses, and this stresses the importance of storing and sharing our data and code underlying the analyses. In collaboration, the Chief Data Office, the Data Science Hub and the Research Department at EBO introduce a DNB "Data in Brief". In short: before the publication of a study (i.e. Working Paper, Occasional Study or DNBulletin) and from January 2021 onwards, we will ask to share the code and information about the data used (i.e. metadata), such that this information is available for everyone within DNB. This process follows the policy by, e.g., Elsevier (Data in Brief). With a little additional effort this template – that links to the CDO Datacatalogus - helps to contribute to working with data in a responsible manner by recording the data, and to share experiences, facilitate reproducibility, make data easier to find and open up doors for new collaborations. More information will follow beginning next year, on @DNB.

New DNB website will be launched soon

The new site is more user-friendly, also for the general public. Some of the information you may be looking for could have been moved, so please update any favorites, links or bookmarks.

What has changed?

Our previous site needed to be improved in terms of its technical performance, usability, and search functionality. All these areas have now been improved. Because we want to communicate faster and more regularly with the general public, we also want to be able to respond more quickly to current issues. The main layout of the new website is therefore based on themes for public engagement, with the latest data, research and background information, clearly presented and accessible for everyone. The search functionality and archive have also been updated. Information on our research remains largely the same, and will still only be available in English.

Any Questions?

If you have any questions about the new website, or if you can't find what you are looking for, please contact us by info@dnb.nl.

Research highlights, details

2. An early stablecoin? The Bank of Amsterdam and the governance of money

Early central bank or stablecoin?

The Bank of Amsterdam is often seen as a predecessor of modern central banks. The early operational framework of the Bank of Amsterdam resembled a "stablecoin" – where account-based money is backed by assets of stable value and where the money stock is managed passively by the inflows and outflows of assets. Over time, the Bank began to use its balance sheet in a more elastic manner, and to take on some functions of a central bank, including lending activity through overdrafts. In the 1780s, the Bank's lending activity grew excessive, and led ultimately to its downfall.

Downfall

Empirical analysis with monthly balance sheet data shows that confidence in Amsterdam Bank money as reflected in the premium over metal coins was eroded as the share of loans in the assets of the Bank increased. While short-term fluctuations in lending had little impact on confidence in Bank money, the relationship reasserted itself in the medium run.

Lessons

The Bank of Amsterdam and its rise and fall provide many useful lessons, but two lessons resonate particularly loudly for current debates on the nature of the money and the role of the central bank. First, rigid stablecoins are poorly suited as the foundation for a modern monetary system. Second, for a central bank to play its role, the fiscal backing of the sovereign and its fiscal sustainability are essential.

Read more? See DNB Working Paper 696 An early stablecoin? The Bank of Amsterdam and the governance of money.

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3. Monetary policy, prudential regulation, and mortgage credit

Interaction of monetary and macroprudential policies

The global financial crisis had a deep impact on monetary and macroprudential policies. Central banks lowered short-term rates, sometimes below zero. Since the crisis macroprudential instruments have been used more widely to prevent a build-up of financial vulnerabilities and raise the financial system's resilience. In a setting where monetary and prudential policies are used actively and simultaneously, interaction between the two comes to the forefront. Prudential policies may work through the same transmission channels as monetary policy, in particular bank lending and balance sheet channels. Additionally, monetary policy affects financial conditions but could also increase future financial vulnerabilities, if it remains accommodative for a long time.

Why focus on mortgage credit in Ireland and the Netherlands?

The authors conduct a joint analysis for mortgage lending in Ireland and the Netherlands. These countries represent

interesting cases. First, they are small members of the EA. Consequently, the monetary policy stance of the EA is not necessarily in line with that of domestic business and financial cycles. Second, housing markets showed strong volatility in both countries. Third, in the post-crisis period both countries implemented prudential policies aimed at increasing the resilience of the banking system and alleviating the amplitude of the credit cycle. This occurred during a period of accommodative monetary policy in the EA. Finally, as small open economies with trade and financial linkages with the UK and the US, the monetary policy stance of these economies may matter for domestic financial conditions in both economies. This research focuses on mortgage lending for two reasons. First, in both countries growth in housing prices and household mortgage credit were above the EA-average before the financial crisis, and below it afterwards. Developments in the housing market have a major impact on the real side of the economy. Second, in both countries several macroprudential decisions were aimed at the mortgage market. This makes mortgage lending ideal for the joint analysis.

Way forward

Macroprudential and monetary policies may have complementary, conflicting or independent outcomes on financial stability. This study finds that prudential policies can mitigate monetary policy shocks, but this does not have to be the case. Future work could focus on precise circumstances in which prudential policies affect transmission of policy shocks, by considering intensity and intentions of prudential measures.

Read more? See Mortgage lending, monetary policy, and prudential measures in small euro-area economies: Evidence from Ireland and the Netherlands, *Review of International Economics*

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4. The power of flexibility: optimal QE in a monetary union

Optimal QE in a monetary union

The ECB has engaged in large-scale asset purchase programs over the last five years. During those programs, the private sector inside and outside the euro area has been involved in portfolio rebalancing. This paper focuses on this channel and explores its dimensions within the monetary union. One of the key features in euro area asset markets is the existence of asymmetries. Asymmetries refer to the degree of substitution across maturities and assets issued by different member-states as well as the composition of assets in aggregate portfolios.

The model

The model features a monetary union consisting of two regions: the Core and the Periphery. The central bank uses the policy rate and conducts asset purchases to stabilize economic activity when the policy rate is at the zero lower bound. The private sector in both regions holds short- and long-term government bonds, issued either in the Periphery or at the Core. The model allows for various kinds of asymmetries. The degree of substitution between maturities impacts the effectiveness of QE. This research shows that as the elasticity of substitution between short- and long-term bonds in the Periphery increases, the optimal asset purchases of the Peripheral debt decline. Intuitively,

higher elasticity of substitution generates a smaller term premium effect from a given amount of Periphery purchases and a smaller marginal benefit for the union. Another important feature of long-term portfolios, especially in the Periphery, is home bias. It is found that the optimal asset purchases increase with home bias. Finally, the size of each region matters for the optimal asset purchases. A larger country implies a larger market size for domestic bonds and thus a larger fraction of these bonds in portfolios. Therefore, the monetary union's central bank can stabilize the economy by purchasing more from the larger region.

Lessons

The results show that it can be optimal to purchase more from regions that are subject to stronger portfolio frictions, as these amplify the transmission of QE to the real economy. Of course, this is under the condition of a strong commitment to a stable path for government debt. This underscores the rationale of the ECB's Pandemic Emergency Purchase Programme (PEPP), which was launched in March 2020 to address the economic repercussions from the COVID-19 pandemic in the euro area. Under the PEPP, the ECB allows for a more flexible allocation of purchases across euro area jurisdictions than what the benchmark capital key would suggest, thereby boosting activity in regions that have been hit harder by the pandemic.

Read more? See DNB Working Paper 697 Optimal quantitative easing in a monetary union.

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5. "Rapid financial integration reinforced vulnerabilities in the Economic and Monetary Union"

What are the main findings of your study?

The main theme of my thesis is how the growing importance of financial factors in the economy affected the functioning of EMU. I find that rapid financial integration and development amplified existing vulnerabilities in the monetary union, but also created new ones that were not foreseen when the Maastricht treaty was signed. I specifically looked at a number of aspects that were controversial during the crisis, such as the increase in bond yields in Southern Europe, the emergence of current account imbalances and the asymmetry of fluctuations. I argue that these aspects can only be understood properly by taking into account financial factors.

How did you get involved in this topic?

I got inspired by my daily policy work! When I worked in the Economics and Research Division, I closely followed the European sovereign debt crisis in 2010-2012. I started to see narratives on the crisis that I didn't agree with. This provided fruitful topics for research papers.

Are you findings also relevant in the current era?

I believe so. Discussions on the future of EMU continue, and even more so with

the COVID-crisis. The importance of better managing financial factors in EMU is underpinned by European initiatives such as the banking union and capital market union. I have also used my research during secondments to the Dutch Council of State, where I contributed to advice on EMU to the Parliament.

Do you plan to continue doing research after graduating or are you simply happy that the job is done?
I am very happy that the job is done, but I also hope to continue doing research next to my policy work. My thesis research has left me with a few ideas to elaborate on, and I also want to further explore my new field of work: financial stability.

You can download Jeroen's PhD thesis here.
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Christmas quiz – answers with explanations

1-D, 2-B, 3-C, 4-D, 5-A, 6-A, 7-A, 8-C, 9-C, 10-C

1-D. Source: https://www.worldatlas.com/articles/which-countries-spend-the-most-on-christmas.html

2-B. Source: https://www.enotes.com/homework-help/what-was-ebenezer-scrooges-job-572571

3-C. Santa Claus started his career as Saint Nicholas, the 4th-century bishop of Myra (now Turkey) who was famous for giving presents to the poor; also known as Sinterklaas in Belgium and the Netherlands.

4-D. Source: https://www.igmchicago.org/surveys/bah-humbug/

5-A. Christmas Island is an Australian external territory.

6-A. Mick Jagger studied at the London School of Economics but stopped after one year. Lionel Richie graduated with a Bachelor of Science degree in economics at Tuskegee University in 1974. Arnold Schwarzenegger was a distance education student at the University of Wisconsin and received his bachelor's degree in business administration and marketing in 1980.

7-A. Source: https://www.investopedia.com/terms/g/greshams-law.asp

8-C. Source: https://www.investopedia.com/updates/adam-smith-economics/

9-C. In early December 2020, total assets were USD 7243 bln for the Fed, USD 6771 bln (JPY 705305 bln) for the Bank of Japan and USD 8377 bln (EUR 6923 bln) for the Eurosystem. So, unless something really extreme happens, the Eurosystem's total assets in USD are highest. Note that as a percentage of GDP, the Bank of Japan's total assets are highest.

10-C. Enjoy: https://www.youtube.com/watch?v=wtQAkWjyuDg
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