March 2024

DNB Research Newsletter

Research highlights

1. Global supply chain pressures, inflation, and implications for monetary policy

In a recent publication in the Journal of International Money and Finance, Guido Ascari, Dennis Bonam, and Andra Smadu argue that global supply chain pressure shocks were the dominant driver of euro area core inflation in 2022, and their impact on inflation is persistent and hump-shaped. Their model simulations suggest that the optimal monetary policy response to global supply-induced inflation is non-linear in the economy's reliance on global value chains. Read more.

2. Managing the transition to central bank digital currency

In a recent DNB working paper, Maria Sole Pagliari and co-authors use a two-country DSGE model to study the impact of a central bank digital currency (CBDC) on the home economy. Notably, they assess the macroeconomic effects along the transition from a CBDC-less to a CBDC steady state. Policies are explored that the central bank can implement to avoid a crowding out of bank deposits. Read more.

3. Optimal normalization policy under behavioral expectations

In this DNB working paper, Alexandre Carrier and Kostas Mavromatis analyze the normalization of monetary policy in an environment where agents' expectations deviate from rational expectations and the economy experiences stagflationary shocks. Read more.

4. PhD defense - Interview with Ralph Verhoeks (Financial Stability Division)

The main topic being investigated in this PhD thesis is whether asset prices are affected by limited attention. Standard neoclassical models assume that individuals form expectations and make decisions using all available

information, implying that all new information is instantaneously reflected in asset prices. This thesis investigates empirically whether departing from this assumption allows us to better understand asset price dynamics. Obviously, it is difficult to measure attention directly. A novel element of the thesis is to investigate the use of proxies such as the Google search volume, Bloomberg usage and news article popularity to capture the attention allocation of investors. Read more.

Publications (since December 2023)

Working Papers

807 - Consumer participation in the credit market during the COVID-19 pandemic and beyond
Evangelos Charalambakis, Federica Teppa and Athanasios Tsiortas

806 - Harnessing Machine Learning for Real-Time Inflation Nowcasting
Richard Schnorrenberger, Aishameriane Schmidt and Guilherme Valle Moura

805 - Gender gaps in the world of payments
Carin van der Cruijsen and Marie-Claire Broekhoff

804 - Keeping up with the Jansens: causal peer effect on household spending, beliefs and happiness
Maarten van Rooij, Olivier Coibion, Dimitris Georgarakos, Bernardo Candia and Yuriy Gorodnichenko

803 - Managing the transition to central bank digital currency
Katrin Assenmacher, Massimo Ferrari Minesso, Arnaud Mehl and Maria Sole Pagliari

802 - Exclusive Portfolio Dealing and Market Inefficiency
Natalie Kessler, Iman van Lelyveld and Ellen van der Woerd

801 - Pension Liquidity Risk
Kristy Jansen, Sven Klingler, Angelo Ranaldo and Patty Duijm

800 - Optimal normalization policy under behavioral expectations
Alexandre Carrier and Kostas Mavromatis

799 - What Drives Households' Knowledge about Cryptocurrencies?
Nils Brouwer and Jakob de Haan

798 - The European Carbon Bond Premium
Dirk Broeders, Marleen de Jonge and David Rijsbergen

797 - Funding the Fittest? Pricing of Climate Transition Risk in the Corporate Bond Market
Martijn A. Boermans, Maurice Bun and Yasmine van der Straten

796 - Floods and financial stability: Scenario-based evidence from below sea level
Francesco Caloia, David-Jan Jansen and Kees van Ginkel

Consumers' payment preferences and banking digitalisation in the euro area
Justus Meyer and Federica Teppa
ECB Working Paper 2915

DNB Analyses

Een analyse van de klimaatactieplannen van financiële instellingen
Isabelle Dorhout, Loes van der Jagt, Mignon Kroon and Yvo Mudde

Nature-related financial risks in our own account investments: An exploratory case study and deep dive in electric utilities
Isabelle Tiems, Victor Smid and Carlijn Ginther

Distinguishing payment user groups by clustering transaction data
Jelmer Reijerink

Arbeidsmarktkrapte - het nieuwe normaal?
Maikel Volkerink, Maarten van Rooij and Frank van Moock

Published journal articles

Local constant-quality housing market liquidity indices
Dorinth Van Dijk
Regional Science and Urban Economics, 2024, 106, 103997

Does monetary policy affect income inequality in the euro area?
Anh Nguyen and Anna Samarina
Journal of Money, Credit and Banking, 2024, 56(1), 35-80

Are cryptocurrencies cryptic or a source of arbitrage? A genetic algorithm approach
Oluwasegun Bewaji, Sania Hamid, Timothy Aerts, Shaun Byck, Ronald Heijmans and Ellen Van der Woerd
Journal of Financial Market Infrastructures, 2024, 11(1), 37-65

What triggers consumer adoption of Central Bank Digital Currency?
Michiel Bijlsma, Carin van der Cruijsen, Nicole Jonker and Jelmer Reijerink
Journal of Financial Services Research, 2024, 65, 1-40

Towards financial inclusion: trust in banks' payment services among groups at risk
Marie-Claire Broekhoff, Carin van der Cruijsen and Jakob de Haan
Economic Analysis and Policy, 2024, 82, 104-123

Not all data are created equal - Data sharing and privacy
Michiel Bijlsma, Carin van der Cruijsen and Nicole Jonker
Applied Economics, 2024, 56, 1250-1267

Endogenous uncertainty and the macroeconomic impact of shocks to inflation expectations
Guido Ascari, Stefano Fasani, Jakob Grazzini and Lorenza Rossi
Journal of Monetary Economics, 2023, 140, 48-63

Paying in a blink of an eye: it hurts less, but you spend more
Marie-Claire Broekhoff and Carin van der Cruijsen
Journal of Economic Behavior and Organization, 2024, 221, 110-133.

Forthcoming journal articles

Global supply chain pressures, inflation, and implications for monetary policy
Guido Ascari, Dennis Bonam and Andra Smadu
Journal of International Money and Finance

No more tears without tiers? The impact of indirect settlement on liquidity use in TARGET2
Jan Paulick, Ron Berndsen, Martin Diehl and Ronald Heijmans
Empirica

Effects of QE on sovereign bond spreads through the safe asset channel
Jan Willem van den End
International Journal of Finance and Economics

Coherence without Rationality at the Zero Lower Bound
Guido Ascari, Sophocles Mavroeidis and Nigel McClung
Journal of Economic Theory

The International Dimension of Trend Inflation
Guido Ascari and Luca Fosso
Journal of International Economics

Other publications

Financieel sentiment vormt goede voorspeller voor bbp-groei een jaar vooruit
Economisch Statistische Berichten
Ad Stokman

Central banks' targeted refinancing operations and the climate transition
SUERF Policy Brief 793
Chiara Colesanti Senni, Maria Sole Pagliari and Jens van 't Klooster

Measuring the affordability of houses for first time buyers
SUERF Policy Brief 769
Gerard Eijsing and Dorinth van Dijk

Global supply chain pressures, inflation, and implications for monetary policy
VoxEU Column
Guido Ascari, Dennis Bonam and Andra Smadu

The Long-run Phillips Curve is… a Curve
SUERF Policy Brief 764
Guido Ascari, Paolo Bonomolo and Qazi Haque

For a complete list of publications see our website.

Events

Research seminars

Past

09 Jan 2024: "HBANK: Monetary Policy with Heterogeneous Banks"
Tommaso Monacelli (Bocconi)

16 Jan 2024: Long-Run Inflation Expectations
Leonardo Melosi (University of Warwick)

23 Jan 2024: Does Monetary Policy Shape the Path to Carbon Neutrality?
Robin Doettling (Rotterdam School of Management)

30 Jan 2024: to Carbon Neutrality?
Tim Willems (Bank of England)

06 Feb 2024: Monetary Policy in the Age of Automation
Martin Wolf (University of St Gallen)

13 Feb 2024: Payments and Price
Dirk Niepelt (University of Bern)

27 Feb 2024: The Role of Unemployment Risk, Aging, and Retirement for Business Cycles
Annukka Ristiniemi (Europen Central Bank)

05 Maart 2024: The Effect of Monetary Policy on Inflation Heterogeneity Along the Income Distribution
Michael Ehrmann (Europen Central Bank)

19 Maart 2024: Macro and micro of the external finance premium
Rogier Quaedvlieg (Europen Central Bank)

Forthcoming

09 April 2024: Interest Rate Uncertainty and Firm Decisions
Klodiana Istrefi (Banque de France)

11 April 2024: TBA
Giovanni Ricco (École Polytechnique and University of Warwick)

23 April 2024: TBA
Elisa Faragliai (Cambridge)

07 May 2024: TBA

Fiorella de Fiore (Bank for International Settlements)

14 May 2024: TBA

Elmar Mertens (Deutsche Bundesbank)

21 May 2024: TBA

Sarah Mouabbi (Banque de France)

28 May 2024: TBA

Michele Piffer (King's Business School)

04 June 2024: TBA

Gianluca Violante (Princeton)

25 June 2024: TBA

Aleksandar Andonov (UvA)

Other news

In February, Samet Kütük defended his PhD thesis at the VU Amsterdam, on the topic "Essays on Risk Creation in the Banking Sector".

Yasmine van der Straten was a panellist for a podcast of Economisch Statistische Berichten about a more comprehensive approach to wellbeing.

Yasmine van der Straten was interviewed for a podcast of VoxEU at the 2023 Paris Symposium of the Centre for Economic Policy Research, where she is one of three young economists talking about their research and offering advice for new researchers.

Research highlights, details

1. Global supply chain pressures, inflation, and implications for monetary policy

We quantify the effects of shocks to global supply chain pressures on euro area core inflation using a Phillips curve and a Bayesian Vector Autoregressive (BVAR) model with sign, zero and narrative restrictions. First, global supply chain pressure shocks are an important driver of the euro area post-pandemic inflation surge. Second, an adverse global supply chain pressure shock leads to a positive and highly persistent hump-shaped response of euro area core inflation.

A global supply chain pressure shock resembles that of a domestic demand or supply shock, depending on how much the economy relies on global value chains. When the share of foreign intermediate goods used in the production of domestic final goods is low, the global supply shock is akin to a positive

demand shock. However, stronger reliance on global value chains makes this shock similar to a negative supply shock. Therefore, the optimal monetary policy response to a global supply chain pressure shock is a non-linear function of the economy's reliance on global value chains. Specifically, when global value chain reliance is greater, the trade-off between stabilising inflation and output becomes less favourable and monetary policy should respond with greater caution.

Read more?

See Journal of International Money and Finance paper Global supply chain pressures, inflation, and implications for monetary policy by Guido Ascari, Dennis Bonam, and Andra Smadu. Go to the Top.

2. Managing the transition to central bank digital currency

We develop a two-country DSGE model with financial frictions to study the transition from a steady-state without CBDC to one where the home country issues a CBDC. The CBDC provides households with an additional means of payment which reduces the market power of banks on deposits.

In the steady-state, CBDC improves welfare without disintermediating the banking sector. However, it increases the macroeconomic volatility in the transition period to the new steady-state. Demand for CBDC and money crowd out bank deposits, thus leading to initial declines in investment, consumption and output.

Through non-linear solution methods, we explore different policies a central bank can implement to reduce volatility in the transition, such as restrictions on non-residents, binding caps, tiered remuneration and asset purchases. We find that binding caps reduce disintermediation and output losses in the transition most effectively, with an optimal level of around 40% of steady-state CBDC demand.

Read more?

See the DNB working paper no. 803 Managing the transition to central bank digital currency by Katrin Assenmacher, Massimo Ferrari Minesso, Arnaud Mehl, and Maria Sole Pagliari.

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3. Optimal normalization policy under behavioral expectations

Compared to the case where private sector's expectations are not subject to mistakes (rational expectations), the DNB working paper shows that monetary policy should be more aggressive facing inflationary shocks, consistent with existing literature. When it comes to the central bank balance sheet, the paper showcases that anchored expectations about the path of quantitative tightening are an important element in the central bank's effort to control inflation and mitigate downturns. Importantly, a key result when designing optimal normalization policy is that the policy rate proves to be sensitive to the private sector expectations formation mechanism, whereas the optimal balance sheet path is immune to it. Go to top

Read more?

See the DNB working paper no. 800 Optimal normalization policy under behavioral expectations, by Alexandre Carrier and Kostas Mavromatis.
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4. PhD defense - Interview with Ralph Verhoeks (Financial Stability Division)

What were the main findings?

Firstly, attention plays a larger role in explaining asset price dynamics than one might expect. One of the chapters, investigating the role of investor attention in stock market behavior during the pandemic, shows that investors shifted their attention from firm-specific news to common health news, increasing volatility and leading to co-movement of asset prices. Secondly, limited attention is not only limited to retail investors - also professional fund managers may be susceptible to the phenomenon. This again suggests that the impacts of limited attention may be larger than commonly assumed.

How did you experience doing a part-time PhD? And are you still in touch with the university?

Although doing a part-time PhD resulted in some weekend work, being employed at DNB besides PhD offers many benefits: both the daily interactions with DNB-colleagues and working on other projects gave inspiration for my thesis. The thesis contributes to our understanding of financial markets, obviously an important topic for DNB. I will try to keep the

connection with the academic world: one of the chapters of the thesis will still be published and I am also engaged in supervision of master students.

Finally, how was your defense?

During the preparations for the defense I had imagined very different questions than I actually received. Luckily, the questions from the committee were spot on and allowed us to have a very good discussion. In the end I enjoyed it a lot and the time flew by quickly.

Read more?

See Ralph's thesis

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