

September 2025

DNB Research Newsletter

Research highlights

1. Fearless woman: Financial literacy, confidence, and stock market participation

A well-documented stylized fact across countries and economic domains is that women score lower on financial literacy than men. In a forthcoming article in *Management Science*, Maarten van Rooij and his co-authors use a novel measurement model to show that 30 percent of the gender gap in financial literacy is driven by underconfidence. Moreover, the authors show that both financial knowledge and confidence are linked to stock market participation. [Read more.](#)

2. Corporate acquisitions and bank relationships

In a forthcoming article in *Management Science*, Razvan Vlahu and his co-authors study the dynamics of firm-bank relationships following corporate acquisitions in 23 European countries. They find that acquisitions are associated with substantial changes in bank relationships of target firms. Acquiring firms actively change the composition of these relationships, incorporating banks with superior knowledge of the target's local market or with expertise in the target's industry. This reallocation appears to mitigate informational frictions associated with the acquisition. [Read more.](#)

3. Scenario discovery to address deep uncertainty in monetary policy

In a forthcoming article in the *Journal of Economic Dynamics and Control*, Jan Willem van den End and his co-authors adopt a multidisciplinary approach to deal with fundamental uncertainty in monetary policy. They use exploratory modelling and analysis (EMA) in an economic model to assess how monetary policy performs under deep uncertainty regarding both shocks and model parameters. EMA is commonly used for policy problems in

environmental sciences when deep uncertainty plays a role. This is the first attempt to apply it to an economic model. [Read more.](#)

4. The local supply effect of asset purchases

On September 25, Stefan defended his PhD thesis "Essays in Macroeconomics with Household Heterogeneity" at the University of Amsterdam. Stefan is currently working at DNB in the economic policy and research division.

[Read more.](#)

5. The dynamic relationship between delinquency rates, funding and market liquidity and asset prices in private commercial real estate markets

In a recently published DNB working paper, Dorinth van Dijk and his co-authors study the dynamic interaction between delinquency rates on bank loans, funding and market liquidity, and asset price movement in regional us commercial real estate (CRE) markets. They find that rising delinquency rates can lead to tighter funding liquidity which has a negative impact on asset prices and market liquidity. Their research demonstrates that "liquidity spirals" are also relevant in CRE markets. [Read more](#)

6. The regulatory precondition to sovereign risk transmission

In a new DNB working paper, Eric Cuijpers investigates how banking regulation shapes the transmission of sovereign risk to bank balance sheets. The study focuses on the role of the permanent partial use (PPU) exemption, which allows banks to assign a 0% risk weight to Euro-denominated sovereign debt. Banks that do not benefit from the exemption have to calculate risk weights using the Internal Rating Based (IRB) approach. The key finding is that banks that benefit from the PPU approach respond to sovereign risk shocks by increasing their home sovereign holdings. [Read more](#)

Publications (since May 2025)

Working Papers

[841 – Carbon taxation and precautionary savings](#)

Stefan Wöhrmüller

[840 - Commitment vs Credibility: Macroeconomic Effects of Climate Policy Uncertainty](#)

Fulvia Marotta, Maria Sole Pagliari, Jasper de Winter

[839 - Competition among Dutch pension funds: is there any?](#)

Jaap A. Bikker, Michiel van Leuvensteijn, Jeroen Meringa

[838 - Hedging against inflation: International evidence on investor clientele effects in the bond market](#)

Martijn Boermans

[837 - The local supply effect of asset purchases: evidence from the Eurosystem's CSPP](#)

Jan Kakes, Tom Hudepohl, Casper de Haes

[836 - A liquidity black hole: What is the impact of a failing participant in a large value payment system and does time matter?](#)

Ronald Heijmans, Ellen van der Woerd

[835 - The Dynamic Relationship between Delinquency Rates, Funding and Market Liquidity and Asset Prices in Private Commercial Real Estate Markets](#)

Dorinth van Dijk, Marc Francke, Yumei Wang

[834 - The regulatory precondition to sovereign risk transmission](#)

Eric Cuijpers

[833 - Toward Paris-Aligned Sovereign Investment Portfolios: Utilizing Implied Temperature Rise as a Measure of Alignment](#)

Dylan Dunlop-Barrett

[832 - European SMEs, Corporate Finance and Economic Resilience to Floods](#)

Flavio de Carolis, Vinzenz Peters

[Do common shocks drive changes in aggregate emissions intensity?](#)

Xiyu Ren, Fulvia Marotta, François Lafond
INET Oxford Working Paper Series No. 2025-15.

[Cyclical Time Series: An Empirical Analysis of Temperatures in Central England Over Three Centuries](#)

Liudas Giraitis, Fulvia Marotta, Peter C. B. Phillips
Cowles Foundation Discussion Paper 2409

DNB Analyses

[Inflation differentials as rebalancing mechanism in the EMU: the case of the Netherlands](#)

Jan Willem van den End, Jos de Grip, Marco Hoeberichts, Kostas Mavromatis

[Mapping Physical Climate Risk Exposure in Euro Area firms: Linking E-PRTR and RIAD with a Fuzzy Match](#)

Kitty Rang, Flavio de Carolis, Michiel Nijhuis

[Doorstroming op de Nederlandse woningmarkt](#)

Cindy Biesenbeek, Nikki Rupert

[Energie-inflatie: De impact van de energiecrisis op huishoudens](#)

Laura Lehtonen, Gerard Eijnsink

[Grondslag van een planbatenheffing](#)

Niek de Meijer, Gerbert Hebbink

[Retained earnings and the current account](#)

Rini Hillebrand, Melle Bijlsma, Luuk Verstraaten

[The impact of uncertainty on tail risk in the Dutch economy](#)

Jan Willem van den End, Kasper Goosen, Nander de Vette

[Uncertainty and climate policy in the Netherlands: measure and economic effects](#)

Fulvia Marotta, Maria Sole Pagliari, Jasper de Winter

[Koploper of hekkensluiter? De Nederlandse arbeidsproductiviteitsgroei in internationaal en sectoraal perspectief](#)

Marco Hoeberichts, Frank van Moock, Maikel Volkerink

Published journal articles

[DSGE Nash: Solving Nash games in macro models](#)

Massimo Ferrari Minesso, Maria Sole Pagliari

Journal of Economic Dynamics and Control, Volume 178, 105143

[Skating on thin ice: New evidence on financial fragility](#)

Jasmira Wiersma, Rob Alessie, Adriaan Kalwij, Annamaria Lusardi and Maarten van Rooij

Journal of Consumer Affairs, Volume 59, Issue 2

[Optimal normalization policy under behavioral expectations](#)

Alexandre Carrier, Kostas Mavromatis

Journal of Monetary Economics, Volume 153, 103786

[Macroeconomic reversal rate in a low interest rate environment](#)

Jan Willem van den End, Paul Konietzschke, Anna Samarina and Irina Stanga

International Journal of Central Banking 21(3), 1-68

[The association of high perceived inflation with trust in national politics and central banks](#)

Carin van der Cruijssen, Jakob de Haan and Maarten van Rooij

Journal of Banking and Finance, 171, 107368.

Forthcoming journal articles

[Scenario discovery to address deep uncertainty in monetary policy](#)

Chamon Wieles, Jan Kwakkel, Willem L. Auping, Jan Willem van den End

Journal of Economic Dynamics and Control

[Estimating the Natural Rate of Interest in a Macro-Finance Yield Curve Model](#)

Claus Brand, Gavin Goy, Wolfgang Lemke

Journal of Business and Economic Statistics

[Corporate acquisitions and bank relationships](#)

Steven Poelhekke, Razvan Vlahu and Vadym Volosovych
Management Science

Forthcoming books/articles in Books

Trust in financial institutions and central banks
Carin van der Crujisen and Anna Samarina
Encyclopedia of public choice

Other publications

[The effects of obligatory central clearing for Dutch pension funds](#)

Marnix Driesse en Ellen van der Woerd
Proceedings from the workshop EMIR data analytics for research, financial stability and supervision

[A liquidity black hole: What is the impact of a failing participant in a large value value payment system and does time matter](#)

Ronald Heijmans en Ellen van der Woerd
SUERF Policy Brief 1228

[Why it pays to be payment literate](#)

Carin van der Crujisen and Jakob de Haan
SUERF Policy Brief 1201

[Does it matter to buy local? Evidence from the Eurosystem's Corporate Sector Purchase Programme \(CSPP\)](#)

Casper de Haes, Tom Hudepohl, Jan Kakes
SUERF Policy Brief 1243

[Climate-linked bonds as a catalyst for the green transition](#)

Dirk BroedersDaniel Dimitrov and Niek Verhoeven
SUERF Policy Brief 1156

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Research seminars

Past

08 May 2025: Are Fiscal Transfers Inflationary?

Jonas Arias (Federal Reserve Bank of Philadelphia)

12 May 2025: Interest rate control and the transmission of monetary policy

Federic Holm-Hadulla and Sebastiaan Pool (ECB)

20 May 2025: Hotelling Meets Keynes: Aggregate Adjustment with Spatial Frictions and Nominal Rigidity

Stephanie Schmitt-Grohe (Columbia University)

22 May 2025: Dutch Dilemma: Housing Prices and Flood Risk Exposure

Philibert Weenink (Maastricht University)

05 Jun 2025: Negative rates: evidence from transaction data

Rogier Quaedvlieg (ABN AMRO)

12 June 2025: The pass-through of currency risk premia

Paulo Santos Monteiro (University of York)

26 June 2025: Geopolitical Risk: When it Matters; Where it Matters.

Evidence from International Portfolio Allocations

Enrico Mallucci (Central Bank of Ireland)

10 July 2025: Fiscal R-Star: Fiscal-Monetary Tensions and Implications for Policy

Marijn Bolhuis (International Monetary Fund)

17 July 2025: Liquidity and Safety over the Business Cycle

Alexander Haas (Frankfurt School of Finance)

04 September 2025: Heterogeneous Firms, Growth and the Long Shadows of Business Cycles

Adam Hal Spencer (University of Bonn)

08 September 2025: PIK Now and Pay Later – How Deferred Interest Reshapes Private Credit

Sascha Steffen (Frankfurt School of Finance & Management))

11 September 2025: The Systematic Origins of Monetary Policy Shocks

Matthias Meier (University of Mannheim)

22 September 2025: Business Inflation Exposure and Bank Lending

Ricardo Correa (Fed board)

Forthcoming

02 October 2025: TBA

Romanos Priftis (European Central Bank)

09 October 2025: TBA

Galo Nuno (Banca d'España)

16 October 2025: TBA

Natalya Martynova (Deutsche Bundesbank)

23 October 2025: TBA

Gabor Pinter (BIS)

30 October 2025: TBA

Alexander Kriwoluzky (BIW Berlin)

6 November 2025: TBA

Victoria Vanasco(CREI)

20 November 2025: TBA

Glenn Schepens (European Central Bank)

27 November 2025: TBA

Lena Draeger (University of Hannover/Kiel Institute)

04 December 2025: TBA

Nikola Tarsahev (BIS)

11 December 2025: TBA

Marco Ceccarelli (Vrije Universiteit Amsterdam)

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Conferences

11-12 November 2025 - 28th Annual Research Conference of the Dutch Central Bank

[Program](#)

15-16 December 2025 - 4th XAmsterdam Macroeconomic Workshop
[Call for Papers](#)

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Research highlights, details

1. Fearless woman: Financial literacy, confidence, and stock market participation

To investigate the gender gap in financial literacy, the authors designed two surveys fielded six weeks apart. One survey included the “I don’t know” response option; the other did not. The findings demonstrate that when asked a standard set of financial literacy questions, women are much more likely than men to respond “I don’t know,” even when their actual knowledge is comparable. A latent class model has been estimated to construct a more accurate measure of financial literacy and a measure of underconfidence. It is shown that both matter for financial behavior, such as the decision to invest in stocks.

An important implication of these findings is that educators and policymakers should recognize that financial education programs need to address both

knowledge and confidence. This will especially help underconfident women to take care of their financial lives which contributes to a more inclusive society and enhances the financial resilience of citizens.

Read more?

See Management Science, [Fearless woman: Financial literacy, confidence, and stock market participation](#), by Tabea Bucher-Koenen, Rob Alessie, Annamaria Lusardi and Maarten van Rooij.
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2. Corporate acquisitions and bank relationships

In this paper, Razvan Vlahu and his co-authors explore how information asymmetry drives changes in bank relationships. Identifying the drivers of such changes is challenging, as bank switching decisions are typically endogenous to firm characteristics and prevailing market conditions. To address this, they focus on majority-control corporate acquisitions as quasi-exogenous shocks to the structure of firms' bank relationships.

The findings show that acquisitions lead to significant restructuring of bank relationships. Relative to similar non-acquired firms, acquired firms are more likely to expand their banking networks. This expansion reflects deliberate restructuring by the acquiring firm, rather than passive continuation of the target's pre-existing relationships. The restructuring involves both the addition and removal of banks and is shaped by the acquirer's familiarity with the target's environment. Geographic distance plays a particularly important role: when the acquirer is located in a different region, there is a clear shift toward banks with local market knowledge. Sectoral distance appears to matter less, though acquirers entering less familiar industries do seek banks with relevant sectoral expertise. These patterns provide novel evidence that post-acquisition bank selection is shaped by the need to mitigate informational frictions, and that banks' accumulated knowledge (developed through repeated interactions with firms in similar geographic or sectoral spaces) plays a central role in these decisions.

Read more?

Forthcoming in Management Science, [Corporate acquisitions and bank relationships](#), by Steven Poelhekke, Razvan Vlahu and Vadym Volosovych.
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3. Scenario discovery to address deep uncertainty in monetary policy

The authors explore continuous ranges of model parameters and shock values to identify combinations that are particularly relevant for the policymaker. These combinations concern scenarios that conflict with the policy objectives of the central bank. This scenario-based approach enables a robust evaluation of different monetary policy strategies. The findings suggest that, in the face of a negative supply shock, low interest rate smoothing and a strong response to inflation are the most effective strategies for maintaining price stability under deep uncertainty.

Read more?

Forthcoming in Journal of Economic Dynamics and Control, [Scenario discovery to address deep uncertainty in monetary policy](#), by Jan Willem van den End, Chamon Wieles, Jan Kwakkel and Willem Auping.

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4. The local supply effect of asset purchases

The absence of significant local supply effects of bonds' own purchases is consistent with the Eurosystem's aim of a market-neutral implementation of the CSPP, avoiding any distortionary impact on individual bonds. Moreover, there is evidence for increased bond issuance by corporates whose securities were purchased, which counteracts any potential local supply effects on these bond prices. The presence of local supply effects for substitute bonds implies that, if the central bank wants to achieve a parallel downward shift of the yield curve, it should buy bonds across all maturity segments of the curve.

Read more?

See DNB Working Paper 837, [The local supply effect of asset purchases: evidence from the Eurosystem's CSPP](#), by Casper de Haes, Tom Hudepohl and Jan Kakes.

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5. The dynamic relationship between delinquency rates, funding and market liquidity and asset prices in private commercial real estate markets

The authors study interactions between delinquency rates, funding and market liquidity, and asset prices in U.S. commercial real estate (CRE) markets. Rising delinquencies tighten funding liquidity, which depresses prices and market liquidity. Funding and market liquidity reinforce each other, creating "liquidity spirals". Strong market liquidity, however, helps distressed borrowers sell properties before default, underscoring its critical role. The

policy implication is to adopt counter-cyclical lending standards. In hot markets, tighter credit can curb future delinquencies; in cold markets, easing standards can boost liquidity, enable refinancing and mitigating spirals. These measures can stabilize CRE markets and reduce systemic risk.

Read more?

See DNB Working Paper 835, [The dynamic relationship between delinquency rates, funding and market liquidity and asset prices in private commercial real estate markets](#), by Dorinth van Dijk, Marc Francke and Yumei Wang.

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6. The regulatory precondition to sovereign risk transmission

Based on a dataset of newly constructed exogenous sovereign risk shocks, measured as market response to credit rating agency news, the paper uses a panel local projection approach. The key finding is that banks that benefit from the PPU approach respond to sovereign risk shocks by increasing their home sovereign holdings; when risk increases these banks buy more sovereign debt. It suggests that regulation plays a critical role in enabling the concentrated holdings of home sovereign debt. Also, the paper finds that these increased holdings have real effects; in response to sovereign risk shocks, banks decrease their lending to customers. Banks that do not benefit from the PPU treatment - either because they are on IRB or on the standardized approach - do not show the load up on sovereign debt or the decrease in customer lending. These results highlight the critical role of regulation in enabling the transmission of sovereign risk to the banking sector.

Read more?

See DNB Working Paper 834, [The regulatory precondition to sovereign risk transmission](#), by Eric Cuijpers.

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Contact: Office.ebo@dnb.nl



