

Report on DNB Research programme 2019

In line with the DNB Research Agenda, the DNB Research programme 2019 had seven themes:

1. *Effects of unconventional monetary policies*
2. *The new normal for monetary policy*
3. *Dynamics of inflation*
4. *Credit supply*
5. *Financial stability and financial regulation*
6. *Sustainability*
7. *Payments and market infrastructures*

All projects are available at:

https://www.dnb.nl/en/binaries/DNB%20Research%20Program%202019_tcm47-383265.pdf

Appendix 1 provides an overview of the status of the projects included in the 2019 DNB research programme.

Table 1 summarizes the progress made on individual projects. In 2019 4 (out of 79) projects were stopped due to lack of sufficient results. In 2020, 40 projects of the research programme 2019 will be continued in 2020.

Table 1. Overview of the status of the projects in 2019 DNB research programme

Theme:	Total number of projects:	Published as WP or under review:	Will soon be published:	Will be continued in 2020:	Stopped:
1.	10	1	5	4	0
2.	12	2	2	8	0
3.	7	1	0	6	0
4.	5	2	1	0	2
5.	22	9	5	8	0
6.	12	2	3	7	0
7.	11	0	2	7	2
Total	79	17	18	40	4

In 2019 39 DNB working papers have been published, compared to 38 in 2018 and 27 in 2017.

Working papers can be downloaded at:

<http://www.dnb.nl/en/onderzoek-2/publications/dnb-working-paper-series/index.jsp>.

Appendix 2 provides an overview. DNB Working papers are available in REPEC and are also included in SSRN, which has increased the number of downloads substantially; see:

http://papers.ssrn.com/sol3/JELJOUR_Results.cfm?form_name=journalbrowse&journal_id=193427

[1.](#)

Table 2 provides an overview of publications in international journals, while table 3 summarizes the number of books and contributions to books. All published and forthcoming articles in journals and books and book contributions can be found at the DNB website:

<http://www.dnb.nl/en/onderzoek-2/publications/dnb-published-articles/index.jsp>.

Table 2. Journal publications by DNB staff in 2009-2019

	A journals	B journals	C journals	Others
2009	3	15	4	4
2010	3	19	2	11
2011	4	16	9	3
2012	3	19	9	11
2013	6	27	10	16
2014	5	17	8	7
2015	3	18	9	6
2016	5	20	7	9
2017	3	22	3	4
2018	5	30	11	8
2019	5	20	5	2
Forthcoming ¹	3	6	6	3

Forthcoming papers have been accepted for publication but have not yet been published. As it sometimes takes very long before papers are published, acceptances in a particular year and publications in that same year do not coincide. The number of publications and acceptances in A-rated journals in 2019 is 8. Papers written by DNB staff have been published or accepted for publication in the *American Economic Review*, the *Journal of International Economics*, the *Journal of Financial Intermediation*, the *Economic Journal*, the *Review of Economics and Statistics*, and the *Journal of Money, Credit and Banking*, amongst others.

¹ Measured at the end of January 2019 (includes papers already published in 2020). As several papers included in last year's overview were classified as forthcoming, while they were published in 2018, numbers for 2018 have been corrected compared to the 2018 report.

Table 3. Books and contributions in books by DNB staff in 2010-2019

	Books (monographs and edited volumes) by publishers on DNB list	Other books	Contributions in books by publishers on DNB list	Other contributions
2010	1	--	7	1
2011	1	--	2	2
2012	2	--	4	6
2013	1	--	3	1
2014	1	--	1	--
2015	1	1	4	7
2016	--	--	1	--
2017	1	--	1	3
2018	2	--	5	3
2019	1	--	4	--
Forthcoming	1	--	--	1

In 2019 the following Occasional Studies have been published:

- Nr. 1: *The quality and independence of residential property appraisals* by Remco van der Molen and Rob Nijskens
- Nr. 2: *De toegevoegde waarde van maatwerk in risicotoedeling* by Jurgen Spaanderman
- Nr. 3: *Inflation in the euro area since the Global Financial Crisis* by Dennis Bonam, Gabriele Galati, Irma Hindrayanto, Marco Hoeberichts, Anna Samarina and Irina Stanga
- Nr. 4: *Het spaaroverschot van Nederlandse bedrijven ontrafeld* by Bas Butler, Krit Carlier, Guido Schotten and Maikel Volkerink

In 2019 the DNB Visiting Scholar Programme was able to attract several excellent scholars who gave seminars and/or policy lectures and interacted with DNB staff. Table 4 gives an overview of the visiting scholars who visited DNB in 2019.

Table 4. Visiting scholars 2019

David Geltner	MIT and Center for Real Estate
Athanasios Orphanides	MIT
Francesco Zanetti	University of Oxford

In 2019 the following conferences and workshops have been organized or hosted:

- 30 September - 1 October 2019: DNB Annual Research Conference on Uncertainty and Non-linearities: Policy Challenges and New Perspectives
- 15 November 2019: Workshop on Inequality in the 21st century
- 29 November 2019: Tinbergen Today seminar on “Challenges for Macroeconomic Modelling”

Details about these conferences are available at:

<http://www.dnb.nl/en/onderzoek-2/test-conferences/index.jsp>.

In 2019 there were 44 seminars by external speakers (see Appendix 3) and about 30 seminars by internal speakers. All seminars are announced at the website of DNB and are frequently attended by DNB policy makers and external visitors.

For forecasting purposes, extensive use has been made of DELFI – our macro model of the Dutch economy (see <https://www.dnb.nl/en/news/dnb-publications/economische-ramingen/index.jsp>). Early in 2019, an updated version of DELFI has been made available to the general public (see <http://delfi.dnb.nl/>). The DELFI tool allows users to examine the effects of changes in economic policy or the (international) economic environment on the economy of the Netherlands. A new feature of the tool is that it now also allows the user to gauge the impact of economic shocks on the Dutch banking sector, and of changes in the health of the banking sector on the real side of the economy. DELFI has also been used extensively in 2019 for policy purposes other than forecasting:

- DELFI has been used to gauge the possible impact of unconventional monetary policy measures.
- The model has been used to quantitatively investigate the possible impact on the Dutch macro economy of the new Basel accord (updated assessment).
- The model has been utilized to assess the impact of the EIOPA pension stress test on the Dutch economy.
- DELFI was used to simulate the possible macroeconomic effects of a permanent cut to pension benefits.
- DELFI has been employed to develop future scenarios for government debt.
- The model has been used to assess the impact of changes in risk weights of mortgages on the macro economy.
- The model was used, in conjunction with NiGEM, to gauge the possible impact of various Brexit scenarios on the Dutch economy.

An important ambition is to increase the interaction and synergy of research and policy. Several initiatives have been taken. First, each quarter the management team (MT) of the Division Economic Policy and Research assesses the policy relevance of DNB Working Papers (on a scale of one to five) and the extent to which policy notes have incorporated insights of (DNB) research. Working Papers should at least score 3.5. This objective is also included in the annual performance review targets for researchers. In 2019, substantial progress was made in realizing this objective. Second, in 2019 several project teams of policymakers and researchers worked on important topics, such as the housing market and unconventional monetary policy. This led to several policy notes, while overall outcomes have or will be published in Occasional Studies. Third, the “Regiegroep Onderzoek”, consisting of several

directors of policy divisions, approved the so-called research agenda, which outlines the main issues for research in the near future. This research agenda forms the basis for the 2020 annual research programme. The annual research programmes also needs approval by the regiegroep. In 2020, this approach to determine the DNB research programme will be evaluated.

Appendix 1. Research projects 2019

1. Effects of unconventional monetary policies

1. Banks' net interest income in a low interest rate environment

Leo de Haan, Raymond Chaudron and Marco Hoeberichts

Status: will soon be published.

2. Country-specific risk premium shocks and macro-prudential policy

Emmanuel De Veirman, Dennis Bonam and Gavin Goy

Status: will soon be published.

3. Asset bubbles in risky assets

Nander de Vette

Status: will be continued in 2020.

4. QE and stock market bubbles

Tom Hudepohl, Ryan van Lamoen and Nander de Vette

Status: will soon be published.

5. QE and (international) portfolio rebalancing

Tom Hudepohl and Renske Maas

Status: will be continued in 2020.

6. Risk management principles for central banks: Towards a better understanding of interest rate risks in the central bank balance sheet

Michael Kurz, Dirk Broeders and Paul Wessels

Status: will be continued in 2020.

7. QE and portfolio rebalancing in a monetary union.

Kostas Mavromatis, Renske Maas and Serdar Kabaca (Bank of Canada)

Status: will soon be published.

8. Forward Guidance when horizons are finite

Kostas Mavromatis and Joep Lustenhouwer (University of Bamberg)

Status: will soon be published.

9. Cross-border spillover effects of Quantitative Easing in the Euro Area

Anna Samarina, Yvo Mudde and Robert Vermeulen

Status: will be continued in 2020.

10. Forward guidance, bounded rationality and expectation formation

Maarten van Rooij (DNB), Olivier Coibion (University of Texas Austin), Dimitris Georganakos (ECB) and Yuriy Gorodnichenko (University of California Berkeley)

Status: published as DNB WP 651.

2. The new normal for monetary policy

1. Fundamental uncertainty about the natural rate of interest: Info-gap as guide for monetary policy

Yakov Ben-Heim (Israel Institute of Technology, Haifa) and Jan Willem van den End

Status: published as DNB WP 650.

2. Fear of secular stagnation and the natural interest rate

Paolo Bonomolo and Valentina Gavazza (Stockholm University)

Status: will be continued in 2020.

3. Detecting liquidity traps

Paolo Bonomolo, Yildiz Akkaya (Konjunkturinstitutet) and Ingvar Strid (Sveriges Riksbank)

Status: will be continued in 2020.

4. Re-assessing monetary policy shocks

Paolo Bonomolo, Björn van Roye (ECB) and Alistair Dieppe (ECB)

Status: will be continued in 2020.

5. Nowcasting under structural change

Maurice Bun, Jos Jansen (Ministry of Finance) and Jasper de Winter

Status: will be continued in 2020.

6. Identifying the predictable component in macro-economic forecasting errors

Bas Butler, Dorinth van Dijk and Ad Stokman

Status: will soon be published.

7. Term premia under falling stars

Gavin Goy, Claus Brand (ECB) and Wolfgang Lemke (ECB)

Status: will soon be published.

8. Look for the stars: estimating the natural rate of interest

Irma Hindrayanto, Mengheng Li and Siem Jan Koopman (Free University Amsterdam)

Status: will be continued in 2020.

9. Behavioural learning equilibria in New Keynesian model

Kostas Mavromatis, Cars Hommes (UvA), Mei Zhu (Shanghai University) and Tolga Ozden (UvA)

Status: published as DNB WP 654.

10. Estimating DSGE models with finite horizons

Kostas Mavromatis, Joep Lustenhouwer (Bamberg University), Mike Tsionas (Lancaster University) and Giorgio Motta (Lancaster University)

Status: will be continued in 2020.

11. Estimating behavioural learning equilibria in DSGE models

Kostas Mavromatis, Cars Hommes (UvA) and Tolga Ozden (UvA)

Status: will be continued in 2020.

12. Forecasting with large panel data sets

Andreas Pick

Status: will be continued in 2020.

3. Dynamics of inflation

1. Private beliefs formation and macroeconomic risk

Paolo Bonomolo, Guido Ascari (University of Oxford and University of Pavia) and Leonardo Melosi (Federal Reserve Bank of Chicago)

Status: will be continued in 2020.

2. Non-linearity in the long-run Phillips Curve

Paolo Bonomolo and Guido Ascari (University of Oxford and University of Pavia)

Status: will be continued in 2020.

3. On the sources of business cycle fluctuations in small open economies

Paolo Bonomolo, Vesna Corbo (Sveriges Riksbank) and Jesper Lindé (Sveriges Riksbank)

Status: will be continued in 2020.

4. Inflation fluctuations and liquidity constraints

Jakob de Haan, Emmanuel de Veirman and Irina Stanga

Status: will be continued in 2020.

5. Heterogeneity in inflation forecasts

Kostas Mavromatis, Jakob de Haan, Cars Hommes (UvA), Domenico Massaro (Catholic University of Milan) and Adriana Cornea Madeira (University of York)

Status: will be continued in 2020.

6. Does it matter how you target? Performance of point, band, and range targets for inflation

Anna Samarina and Nikola Mirkov (Swiss National Bank)

Status: will be continued in 2020.

7. Expectations formation and anchoring: new evidence from a high frequency survey (new project)

Federica Teppa, Gabriele Galati, Richhild Moessner (BIS) and Nikkos Apokoritos

Status: published as DNB WP 652.

4. Credit supply

1. Corporates' dependence on banks. The impact of ECB corporate sector purchases

Joost Bats

Status: will soon be published.

2. The impact of negative interest rates on bank intermediation

Joost Bats, Jorien Freriks, Aerdt Houben and Jan Kakes

Status: project stopped.

3. Bank lending to SMEs in the Netherlands

Jasper de Winter, Mark Mink, Bahar Ozturk and Jakob de Haan

Status: project stopped.

4. Proprietary trading, bank lending, and the bank balance sheet

Michael Kurz

Status: published as DNB WP 657.

5. Capital regulations and credit line management during crisis times

Paul Pelzl

Status: published as DNB WP 661.

5. Financial stability and financial regulation

1. Systemic risk of pension funds

Rob Bauer (University of Maastricht), Dirk Broeders and Annick van Ool

Status: will be continued in 2020.

2. Foreign bias in equity portfolios

Martijn Boermans, Ian Cooper (London Business School), Piet Sercu (KU Leuven) and Rosanne Vanpee (KU Leuven)

Status: will be continued in 2020.

3. Does search for duration make investment behaviour procyclical?

Stijn Claessens (BIS) and Robert Vermeulen

Status: will be continued in 2020.

4. Loan to value ratio, loan guarantees, and mortgage defaults: evidence from Dutch banks' loan level data

Leo de Haan and Mauro Mastrogiacomio

Status: published as DNB WP 655.

5. Corporate diversification and risk in the insurance industry

Patty Duijm and Ilke van Beveren

Status: will soon be published.

6. Challenges of macro-prudential policy

Gabriele Galati and Richhild Moessner (BIS)

Status: will soon be published.

7. Networks of financial market infrastructures: Fire walls or fire lighters?

Ronald Heijmans and Froukelien Wendt (IMF)

Status: will soon be published.

8. Liquidity Coverage Ratio in a payments network: Uncovering contagion paths

Richard Heuver and Ron Berndsen (Tilburg University)

Status: will soon be published.

9. Bank run detection using machine learning

Richard Heuver and Ron Triepels (TiU)

Status: published as DNB WP 642.

10. Long-term investors and the yield curve

Kristy Jansen

Status: will be continued in 2020.

11. Being in good hands: Deposit insurance and peers' financial sophistication

Mauro Mastrogiacomio, Francesco Caloia (University of Venice) and Giacomo Pasini (University of Venice)

Status: published as DNB WP 638.

12. Do shocks to financial intermediary capital move financial markets?

Mark Mink, Iman van Lelyveld and Rodney Ramcharan (USC, Price School of Public Policy)

Status: will soon be published.

13. Requirement on the Total Loss Absorbing Capacity for Global Systemically Important Banks

Wayne Passmore (Federal Reserve Board) and Chen Zhou

Status: will be continued in 2020.

14. Trust in financial institutions

Ria Roerink, Carin van der Crujisen and Jakob de Haan

Status: published as DNB WP 662.

15. Macro-prudential policy and the transmission of monetary policy: New evidence on the bank-lending channel for the Netherlands

Anna Samarina, David-Jan Jansen and Jakob de Haan

Status: published as DNB WP 659.

16. Demand and supply reservation price indices for the housing market

Dorinth van Dijk and Marc Francke (UvA)

Status: will be continued in 2020.

17. Consumer reaction to booms and busts in the housing market

Maarten van Rooij (DNB), Dimitris Christelis (University of Naples), Dimitris Georganakos (ECB), Tullio Jappelli (University of Naples) and Luigi Pistaferri (Stanford University)

Status: published as DNB WP 645.

18. The heat is on: Measuring financial stress during disruptive energy transition paths

Robert Vermeulen, Edo Schets, Melanie Lohuis, Barbara Kölbl, David-Jan Jansen and Willem Heeringa

Status: published as DNB WP 625.

19. Regulation, supranational bank supervision, and the corporate structure of foreign affiliates

Razvan Vlahu and Natalya Martynova (Deutsche Bundesbank)

Status: will be continued in 2020.

20. Bank relationships after foreign takeover

Razvan Vlahu, Steven Poelhekke (University of Auckland) and Vadym Volosovych (EUR)

Status: will be continued in 2020.

21. Estimating spillover intensities in financial networks with spatial state space models

Dieter Wang, Julia Schaumburg and Iman Lelyveld

Status: published as DNB WP 619.

22. The Fed and financial stability

Arina Wischnewsky (University of Trier), David-Jan Jansen, and Matthias Neuenkirch (University of Trier, CESifo)

Status: published as DNB WP 633.

6. Sustainability

1. Carbon footprints and pension funds' portfolio investment trade-off

Martijn Boermans and Rients Galema (Utrecht University)

Status: published as DNB WP 554.

2. A granular carbon risk stress test for portfolios

Martijn Boermans and Rients Galema (Utrecht University)

Status: will be continued in 2020.

3. Zombie firms and productivity growth in the Dutch economy

Maurice Bun and Jasper de Winter

Status: will be continued in 2020.

4. The employment effects of corporate income tax shocks: New evidence and some theory

Andrea Colciago, Vivien Lewis (Bundesbank), Branka Matyska (Leuven University)

Status: will be continued in 2020.

5. Competition and income and wealth distribution

Andrea Colciago and Rajssa Mechelli (Milano Bicocca)

Status: will soon be published.

6. Market concentration and the labour share of income

Andrea Colciago and Rajssa Mechelli (Milano Bicocca)

Status: will soon be published.

7. Impact of financial inclusion and financial literacy on financial stability

Anneke Kosse (Bank of Canada) and Nicole Jonker

Status: will be continued in 2020.

8. *Asymmetric shocks in EMU: private or public risk sharing?*
Patrick Kosterink, Dennis Bonam, Matthijs Zaal and Jakob de Haan
Status: will be continued in 2020.

9. *Does monetary policy affect income inequality in the euro area?*
Anna Samarina and Anh D.M. Nguyen (Bank of Lithuania)
Status: published as DNB WP 626.

10. *Monitoring the Dutch business cycle using text-mining techniques*
Dorinth van Dijk and Jasper de Winter
Status: will be continued in 2020.

11. *How value Chains and domestic demand shape euro area trade patterns*
Duncan van Limbergen and Robert Vermeulen
Status: will soon be published.

12. *Financial literacy and pension expectations*
Maarten van Rooij, Rob Alessie (University of Groningen) and Remko Struik
Status: will be continued in 2020.

7. Payments and market infrastructures

1. *E-commerce: use, growth and pricing*
Wilko Bolt (EBO) and Bas Butler (EBO)
Status: will be continued in 2020.

2. *Virtual currencies: dynamics and monetary aspects*
Wilko Bolt and Maarten van Oordt (Bank of Canada)
Status: will be continued in 2020.

3. *PSD2, instant payments and integrity supervision: Consumers' trust in a changing retail payment ecosystem*
Michiel Bijlsma, Carin van der Cruijssen and Nicole Jonker
Status: will soon be published.

4. *International comparison of liquidity efficiency of LVPS*
Anneke Kosse, Ronald Heijmans, Bank of Canada, Danmarks Nationalbank, ECB, Banque de France, Bundesbank, Reserve Bank of India, Central Bank of the Russian Federation, Bank of England, FED Board, Fed New York, University of California, BIS
Status: will be continued in 2020.

5. *Cryptos and illegal activities: Casting light on the dark side of cryptos*
Timothy Aerts, Janko Gorter and Jakob de Haan
Status: will be continued in 2020.

6. *CBDC: Pros and cons*
Wilko Bolt, Peter Wierdsma and Michiel Bijlsma
Status: project stopped.

7. *Contactless payments, the pain of paying, and financial troubles*
Carin van der Cruijssen
Status: will be continued in 2020.

8. *Financial literacy, trust in banks and adoption of new payment technologies*
Carin van der Cruijssen and Nathanael Vellekoop (University of Toronto and SAFE)
Status: will be continued in 2020.

9. Does banknote authentication need time and touch?

Frank van der Horst and Jelle Miedema

Status: will soon be published.

10. Pricing the payments infrastructure

Michiel Bijlsma, Nicole Jonker and Wilko Bolt

Status: will be continued in 2020.

11. Strengthening cyber resilience – quality factors of red teaming frameworks

Raymond Kleijmeer, Ramon van Ingen and Arne de Boer

Status: project stopped.

Appendix 2. DNB Working Papers in 2019

- No. 622 **David-Jan Jansen**, Did spillovers from Europe indeed contribute to the 2010 U.S. flash crash?
- No. 623 **Wilko Bolt, Kostas Mavromatis and Sweder van Wijnbergen**, The global macroeconomics of a trade war: The EAGLE model on the US-China trade conflict
- No. 624 **Ronald Heijmans and Chen Zhou**, Outlier detection in TARGET2 risk indicators
- No. 625 **Robert Vermeulen, Edo Schets, Melanie Lohuis, Barbara Kölbl, David-Jan Jansen and Willem Heeringa**, The Heat is on: A framework measuring financial stress under disruptive energy transition scenarios
- No. 626 **Anna Samarina and Anh D.M. Nguyen**, Does monetary policy affect income inequality in the euro area?
- No. 627 **Stephanie Titzck and Jan Willem van den End**, The impact of size, composition and duration of the central bank balance sheet on inflation expectations and market prices
- No. 628 **Andrea Colciago, Volker Lindenthal and Antonella Trigari**, Who creates and destroys jobs over the business cycle?
- No. 629 **Stan Olijslagers, Annelie Petersen, Nander de Vette and Sweder van Wijnbergen**, What option prices tell us about the ECB's unconventional monetary policies
- No. 630 **Ilja Boelaars and Dirk Broeders**, Fair pensions
- No. 631 **Joost Bats and Tom Hudepohl**, Impact of targeted credit easing by the ECB: Bank-level evidence
- No. 632 **Mehdi El Herradi and Aurélien Leroy**, Monetary policy and the top one percent: Evidence from a century of modern economic history
- No. 633 **Arina Wischnewsky, David-Jan Jansen and Matthias Neuenkirch**, Financial stability and the Fed: Evidence from congressional hearings
- No. 634 **Bram Gootjes, Jakob de Haan and Richard Jong-A-Pin**, Do fiscal rules constrain political budget cycles?
- No. 635 **Jasper de Jong and Emmanuel de Veirman**, Heterogeneity and asymmetric macroeconomic effects of changes in Loan-to-Value limits
- No. 636 **Niels Gilbert**, Euro area sovereign risk spillovers before and after the ECB's OMT
- No. 637 **Dorinth van Dijk**, Local constant-quality housing market liquidity indices
- No. 638 **Francesco G. Caolia, Mauro Mastrogiamomo and Giacomo Pasini**, Being in good hands: Deposit insurance and peers' financial sophistication
- No. 639 **Maurice Bun and Jasper de Winter**, Measuring trends and persistence in capital and labor misallocation
- No. 640 **Florian Heiss, Michael Hurd, Maarten van Rooij, Tobias Rossmann and Joachim Winter**, Dynamics and heterogeneity of subjective stock market expectations
- No. 641 **Damiaan Chen and Sweder van Wijnbergen**, Redistributive consequences of abolishing uniform contribution policies in pension funds
- No. 642 **Richard Heuver and Ron Triepels**, Liquidity stress detection in the European banking sector
- No. 643 **Dennis Vink, Mike Nawas and Vivian van Breemen**, Security design and credit rating risk in the CLO market
- No. 644 **Jeroen Hessel**, Medium-term asymmetric fluctuations and EMU as an optimum currency area
- No. 645 **Dimitris Christelis, Dimitris Georgarakos, Tullio Jappelli, Luigi Pistaferrri and Maarten van Rooij**, Wealth Shocks and MPC Heterogeneity
- No. 646 **Dirk Bezemer and Anna Samarina**, Debt shift, financial development and income inequality
- No. 647 **Jan Willem van den End**, Effects of QE on sovereign bond spreads through the safe asset channel
- Bahar Öztürk and Ad Stokman**, Animal spirits and household spending in Europe and the US
- No. 648
- No. 649 **Garyn Tan**, Beyond the zero lower bound: negative policy rates and bank lending
- No. 650 **Yakov Ben-Haim and Jan Willem van den End**, Fundamental uncertainty about the natural rate of interest: Info-gap as guide for monetary policy
- No. 651 **Olivier Coibion, Dimitris Georgarakos, Yuriy Gorodnichenko and Maarten van Rooij**, How does consumption respond to news about inflation? Field evidence from a randomized control trial
- No. 652 **Nikos Apokoritis, Gabriele Galati, Richhild Moessner and Federica Teppa**, Inflation expectations anchoring: New insights from micro evidence of a survey at high-frequency and of distributions
- No. 653 **Dimitris Mokas and Rob Nijskens**, Credit risk in commercial real estate bank loans: The role of idiosyncratic versus macro-economic factors

- No. 654 **Cars Hommes, Kostas Mavromatis, Tolga Özden and Mei Zhu**, Behavioral learning equilibria in the New-Keynesian model
- No. 655 **Leo de Haan and Mauro Mastrogiacomo**, Loan to value caps and government-backed mortgage insurance: loan-level evidence from Dutch residential mortgages
- No. 656 **Jakob de Haan, Zhenghao Jin and Chen Zhou**, Micro-prudential regulation and banks' systemic risk
- No. 657 **Michael Kurz and Stefanie Kleimeier**, Credit Supply: are there negative spillovers from banks' proprietary trading?
- No. 658 **Patty Duijm**, Foreign funded credit: funding the credit cycle?
- No. 659 **Mary Everett, Jakob de Haan, David-Jan Jansen, Peter McQuade, and Anna Samarina**, Mortgage lending, monetary policy, and prudential measures in small euro-area economies: Evidence from Ireland and the Netherlands
- No. 660 **Tom Hudepohl, Ryan van Lamoen and Nander de Vette**, Quantitative Easing and exuberance in stock markets: Evidence from the euro area
- No. 661 **Paul Pelzl and María Teresa Valderrama**, Capital regulations and the management of credit commitments during crisis times

Appendix 3. Overview of seminars in 2019

1	15 January	Time-varying price flexibility and inflation dynamics	Emiliano Santoro, University of Copenhagen
2	22 January	A central bank theory of price level determination	Pierpaolo Benigno, LUISS Guido Carli
3	29 January	Riskiness of real estate development: A perspective from urban economics and option value theory	David Geltner, MIT
4	04 February	Bright spots, dark clouds, and fuzzy stars: Notes on the US economic outlook and policy	Paolo Pesenti, Federal Reserve Bank of New York
5	05 February	Estimating the optimal inflation target from micro price data	Henning Weber, Bundesbank
6	07 February	Monetary and macro prudential policies in a low interest-rate environment	Jesper Linde, Sveriges Riksbank
7	12 February	Reach for yield by U.S. public pension funds	Andrei Zlate, Federal Reserve Bank Boston
8	05 March	On the persistence of UK inflation: A long-range dependence approach	Guglielmo Caporale, Brunel University London
9	07 March	Rollover risk, bank borrowing and fragility	Toni Ahnert, Bank of Canada
10	12 March	The decline of the labour share: New empirical evidence	Francesco Furlanetto, Norges Bank
11	19 March	Sticky prices and the transmission mechanism of monetary policy: A minimal test of New Keynesian models	Guido Ascari, University of Oxford
12	26 March	Global spillovers of US monetary policy: Is there scope for international coordination?	Paul van den Noord, University of Amsterdam
13	28 March	The nature of firm growth	Petr Sedlacek, Oxford University
14	04 April	Are professional forecasters Bayesian?	Sebastiano Manzan, Baruch College (CUNY)
15	16 April	Repo rates and the collateral spread puzzle	Kjell Nyborg, University of Zurich
16	30 April	The government spending multiplier at the zero lower bound: International evidence from historical data	Roland Winkler, University of Antwerp
17	07 May	Inflation expectations and firm decisions: New causal evidence	Tiziano Ropele, Bank of Italy

18	14 May	The effects of tax changes: Structural estimates from a life-cycle model	Raffaele Rossi, University of Manchester
19	21 May	Ambiguity, monetary policy and trend inflation	Riccardo Masolo, Bank of England
20	28 May	Inflation expectations and choices of households: Evidence from linked survey and administrative data	Nathanael Vellekoop, Goethe University Frankfurt
21	04 June	Information frictions and financial flows: Evidence from the 19th century	Benjamin Wache, VU University
22	11 June	Estimating the impact of the financial cycle on fiscal policy	Beau Soederhuizen, CPB
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