Report on DNB Research programme 2017

The DNB Research programme 2017 had five themes:
1. Monetary strategy, business cycles, and price stability;
2. Financial stability and macro-prudential supervision;
3. Micro-prudential supervision and conduct of financial institutions; and
4. Financial literacy and behaviour of households and companies.
5. Modelling and forecasting.

All projects are available at: https://www.dnb.nl/en/binaries/DNB%20Research%20programme%202017_tcm47-359001.pdf?2018021808.

Appendix 1 provides an overview of the status of the projects included in the 2017 DNB research programme.

Table 1 summarizes the progress made on individual projects. In 2017 8 (out of 75) projects were stopped for various reasons, mostly due to lack of sufficient results or the fact that some researchers have left DNB. The latter applies especially to projects in the third theme of the DNB research programme. In 2018 31 projects of the research programme 2017 will be continued.

Table 1. Overview of the status of the projects in 2017 DNB research programme

<table>
<thead>
<tr>
<th>Theme:</th>
<th>Total number of projects:</th>
<th>Published as WP or under review:</th>
<th>Will soon be published:</th>
<th>Will be continued in 2018:</th>
<th>Stopped:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>20</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>14</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>24</td>
<td>8</td>
<td>5</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>15</td>
<td>7</td>
<td>1</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>5.</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Total</td>
<td>75</td>
<td>23</td>
<td>13</td>
<td>31</td>
<td>8</td>
</tr>
</tbody>
</table>

For forecasting purposes, extensive use has been made of DELFI – our macro model of the Dutch economy (see http://www.dnb.nl/en/publications/dnb-publications/economische-ramingen/index.jsp). In 2017 DELFI has been fully re-estimated, taking into account updated National Accounts data and new historical data for the Dutch economy published by Statistics Netherlands. Special attention has been given to the consumption equation, which inter alia has been tested extensively for parameter instability. A taskforce that has worked on extending DELFI with a special focus on the interaction of the real and the financial sector has completed most of the work on extending DELFI with a model for
the banking sector. DELFI has also been used extensively in 2017 for other policy purposes than forecasting:

- DELFI has been used to work out scenarios for mortgage credit for the Supervision Division.
- The model has been utilized to gauge the impact of the low-interest rate on the Dutch economy.
- DELFI has been employed to assess the impact of the housing market on the cyclical recovery of the Dutch economy since 2013.
- The model has been used to quantitatively investigate the possible impact on the Dutch macro economy of the new Basel accord.
- In a research-oriented project, DELFI has been linked to Cassandra, DNB’s top-down stress test model of the Dutch banking sector, in order to study second-round effects in stress test scenarios.

In 2017 only 27 DNB working papers have been published, compared to 49 in 2016 and 39 in 2015. Even though the number of published working papers is declining, it is not clear yet whether this is something to be worried about in view of the numbers for published and accepted publications. Working papers can be downloaded at:


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:


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:


<table>
<thead>
<tr>
<th>Year</th>
<th>A journals</th>
<th>B journals</th>
<th>C journals</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>3</td>
<td>15</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2010</td>
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<tr>
<td>2011</td>
<td>4</td>
<td>16</td>
<td>9</td>
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<td>2012</td>
<td>3 (2)</td>
<td>19 (12)</td>
<td>9 (8)</td>
<td>11 (8)</td>
</tr>
<tr>
<td>2013</td>
<td>6 (4)</td>
<td>27 (19)</td>
<td>10 (5)</td>
<td>16 (11)</td>
</tr>
<tr>
<td>2014</td>
<td>5 (4)</td>
<td>17 (14)</td>
<td>8 (5)</td>
<td>7 (6)</td>
</tr>
<tr>
<td>2015</td>
<td>3 (3)</td>
<td>18 (17)</td>
<td>9 (8)</td>
<td>6 (5)</td>
</tr>
<tr>
<td>2016</td>
<td>5 (4)</td>
<td>20 (14)</td>
<td>7 (7)</td>
<td>9 (3)</td>
</tr>
<tr>
<td>2017</td>
<td>3 (3)</td>
<td>22 (15)</td>
<td>3 (2)</td>
<td>4 (3)</td>
</tr>
</tbody>
</table>

1 Includes one publication in journal that has A-status on TI list.
In parentheses the number of publications by staff of Economic Policy and Research is shown. 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 increase in the number of contributions in books reflects that in 2018 Springer will publish a book about structural reforms, edited by Jakob de Haan and Jante Parlevliet, which includes several contributions by DNB staff.

Table 3. Books and contributions in books by DNB staff in 2010-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Books (monographs and edited volumes) by publishers on DNB list</th>
<th>Other books</th>
<th>Contributions in books by publishers on DNB list</th>
<th>Other contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
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<td>7</td>
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<td>2012</td>
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<td>--</td>
<td>4 (4)</td>
<td>6 (2)</td>
</tr>
<tr>
<td>2013</td>
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<td>--</td>
<td>3 (3)</td>
<td>1 (1)</td>
</tr>
<tr>
<td>2014</td>
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<td>1 (1)</td>
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</tr>
<tr>
<td>2015</td>
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<td>1 (0)</td>
<td>4 (4)</td>
<td>7 (0)</td>
</tr>
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<td>2016</td>
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<tr>
<td>2017</td>
<td>1 (0)</td>
<td>--</td>
<td>1 (1)</td>
<td>3 (1)</td>
</tr>
<tr>
<td>Forthcoming</td>
<td>2 (1)</td>
<td>1 (0)</td>
<td>7 (6)</td>
<td>2 (2)</td>
</tr>
</tbody>
</table>

In parentheses the number of publications by staff of Economic Policy and Research is shown.

In 2017 the following Occasional Studies have been published:

- Nr 1: *The housing market in major Dutch cities* by Melanie Hekwolter of Hekhuis, Rob Nijskens en Willem Heeringa.
- Nr 2: *Capitalising on the euro* by Niels Gilbert, Jeroen Hessel en Jasper de Jong.
- Nr 3: *A top-down stress testing framework for the Dutch banking sector* by Tijmen Daniëls, Patty Duijm, Franka Liedorp and Dimitris Mokas.
- Nr 4: *Developing macroprudential policy for alternative investment funds* by Koen van der Veer, Anouk Levels, Claudia Lambert, Luis Molestina Vivar, Christian Weistroffer, Raymond Chaudron and René de Sousa van Stralen.

In 2017 the DNB Visiting Scholar Programme was able to attract two 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 2017.

Table 4. Visiting scholars 2017

2 Measured at the end of January 2018 (includes papers already published in 2018).
In 2017 the following conferences and workshops have been organised or hosted:

- 20-21 April: Avoiding and Resolving Banking Crises, jointly organized with the European Banking Center (Tilburg University) and CEPR
- 7-8 June 2017: Financial market infrastructure conference II
- 20-21 June 2017: DNB/Riksbank Macroprudential Conference
- 28-29 November: CEP/DNB “Central Banking and Green Finance” workshop.

Details about these conferences are available at:

In 2017 there were 31 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.

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. The working papers with the numbers 552-576 were assessed as follows: 10 received a score of 3, 14 were scored 4 and 1 got a score of 5. Second, in 2017 several project teams of policymakers and researchers worked on important topics, such as income distribution, energy transition, and monetary policy (inflation dynamics, low interest environment, and the future of asset purchase programs). Third, the “Regiegroep Onderzoek”, consisting of several directors of policy divisions, discussed the so-called research agenda, which outlines the main issues for research in the near future. This will form the basis for the annual research programmes for the next years. In 2018, the regiegroep will also assess the policy relevance of working papers in the following areas: financial stability, micro-prudential regulation and payment systems.
Appendix 1. Research projects 2017

1. Monetary strategy, business cycles and price stability

1. Inflation expectations across the euro area (started in 2016)
Eric Bartelsman (Free University Amsterdam, Tinbergen Institute), Dennis Bonam, Manu de Veirman
Status: stopped.

2. Virtual currencies: dynamics and monetary aspects
Wilko Bolt, Maarten van Oordt (Bank of Canada)
Status: will be continued in 2018.

3. Fiscal policy and sovereign risk premia under monetary union
Dennis Bonam
Status: will be continued in 2018.

4. The effects of fiscal policy at the zero lower bound
Dennis Bonam, Jakob de Haan, Beau Soederhuizen (Nyenrode Business University)
Status: published as DNB WP 565.

5. Heterogeneous expectations and macroeconomic imbalances in a monetary union
Dennis Bonam, Gavin Goy (University of Amsterdam)
Status: published as DNB WP 556.

6. Deleveraging, pessimistic beliefs and quantitative easing
Dennis Bonam, Gavin Goy (University of Amsterdam)
Status: will be continued in 2018.

7. Fiscal multipliers at the extensive margin (started in 2015)
Andrea Colciago, Vivien Lewis (University of Leuven), Lorenza Rossi (University of Pavia)
Status: will be continued in 2018.

8. Who creates jobs over the business cycle? Part 2
Andrea Colciago, Antonella Trigari
Status: will soon be published.

9. Heterogeneity and asymmetric macroeconomic effects of changes in loan-to-value-limits (started in 2016)
Jasper de Jong, Emmanuel de Veirman
Status: will be continued in 2018.

10. Public capital in the 21st century: As productive as ever?
Jasper de Jong, Marien Ferdinandusse (ECB), Josip Funda (HNB)
Status: published as DNB WP 542.

11. The effect of fiscal announcements on interest spreads: Evidence from the Netherlands
Jasper de Jong
Status: will soon be published.

12. Unconventional monetary policy and market expectations: some evidence for the euro area
Leo de Haan, Jan Willem van den End
Status: will be continued in 2018.

13. Lending shocks and macroeconomic stability (started in 2015)
Emmanuel de Veirman
Status: will be continued in 2018.

14. Estimating and interpreting financial cycles
Gabriele Galati, Irma Hindrayanto, Siem Jan Koopman (Free University Amsterdam)
Status: will be continued in 2018.

15. Formation of inflation expectations – new insights from heterogeneity in a high-frequency survey
(started in 2014)
Gabriele Galati, Richhild Moessner (BIS)
Status: stopped.

16. Euro area contagion and the role of the OMT
Niels Gilbert
Status: will be continued in 2018.

17. Sectoral allocation and macroeconomic imbalances in EMU (started in 2016)
Niels Gilbert, Sebastiaan Pool
Status: published as DNB WP 536.

18. Wage dynamics after the crisis (started in 2015)
Marco Hoeberichts
Status: will soon be published.

19. Household inflation expectations in a context of low inflation (started in 2015)
David-Jan Jansen, Matthias Neuenkirch (University of Trier)
Status: published as DNB WP 549.

20. Is fiscal policy in the euro area non-Ricardian?
Nikki Panjer (University of Groningen), Leo de Haan, Jan Jacobs (University of Groningen)
Status: published as DNB WP 562.

2. Financial stability and macro-prudential supervision

1. Impact of bank and capital market financing on growth and stability: a literature review
Jaap Bikker, Emiel van Bezooijen (Utrecht University)
Status: published as DNB WP 568.

2. The impact of the ECB asset purchases on the European bond market structure: Granular evidence on ownership concentration
Martijn Boermans
Status: will soon be published.

3. European CoCo issuances: What choices do banks face?
Martijn Boermans, Tomislav Ladika (University of Amsterdam), Natalya Martinova (University of Amsterdam), Sweder van Wijnbergen
Status: published as DNB WP 543.

4. The liquidity of financial instruments (started in 2015)
Eward Brouwer, Clemens Bonner, and Iman van Lelyveld
Status: will soon be published.

5. Procyclicality in insurance companies’ asset allocation
Stijn Claessens (Federal Reserve Board), Robert Vermeulen
Status: will be continued in 2018.

Anouk Levels, Svetlana Borovkova
Status: will be continued in 2018.

7. Do shocks to financial intermediary capital move financial markets?
Mark Mink, Iman van Lelyveld, Rodney Ramcharan (USC, Price School of Public Policy)
Status: will be continued in 2018.

8. Bank relationships after foreign takeover
Steven Poelhekke, Razvan Vlahu, Vadym Volosovych (Erasmus University Rotterdam)
Status: will be continued in 2018.

9. Shadow banking and macroeconomic stability (started in 2015)
Sebastiaan Pool
Status: will soon be published.

10. The impact of carbon pricing on securities values: an industry level approach
Henk Jan Reinders, Jaap Bikker
Status: will be continued in 2018.

11. Towards a sustainable energy transition in the wake of climate change
Olaf Sleijpen, Martijn Regelink, Timo Marquardt, Alexander Wisse (University of Maastricht), Elias Sobotka (University of Maastricht), Nasser Al-Mohannadi (TAMU), Patrick Linke (TAMU), Dhabia Al-Mohannadi (TAMU), Mike Bowman (TAMU).
Status: will be continued in 2018.

12. Sharing house price risk
Dorinth van Dijk, Martijn Droës (University of Amsterdam), Marc Francke (University of Amsterdam)
Status: will be continued in 2018.

13. Creating constant quality liquidity indices in thin markets
Dorinth van Dijk
Status: will soon be published.

14. Credit, price and wage dynamics in the housing market
Dorint van Dijk, Alex van de Minne (MIT), Marc Francke (University of Amsterdam)
Status: stopped.

3. Micro-prudential supervision and conduct of financial institutions
1. Crowded trades, shared portfolios and price instability (started in 2016)
Marc van Kralingen (Lorentz Leiden), Diego Garlaschelli (Lorentz Leiden), Iman van Lelyveld
Status: will soon be published.

2. Risk indicators in financial market infrastructures: TARGET2
Ron Berndsen, Ronald Heijmans
Status: published as DNB WP 557.

3. Risk indicators in financial market infrastructures: CCPs
Ron Berndsen, Alinda Heemskerk, Ronald Heijmans
Status: will be continued in 2018.

4. Performance of sustainable banks in Europe
Jaap Bikker, Bert Scholtens (University of Groningen), Laura Spierdijk (University of Groningen)
Status: stopped.
5. Carbon footprints and pension funds’ portfolio investment trade-off
Martijn Boermans, Rients Galema (Utrecht University)
Status: published as DNB WP 554.

6. Early warning and forecasting performance of HAMs in housing markets (started in 2015)
Wilko Bolt, Cees Diks (CeNDEF, University of Amsterdam), Cars Hommes (CeNDEF, University of Amsterdam), Marco van der Leij (CeNDEF, University of Amsterdam)
Status: stopped.

7. Liquidity regulation and monetary policy operations in normal times (started in 2016)
Clemens Bonner, Iman van Lelyveld
Status: stopped.

8. CDS market structure and risk flows: a Dutch case (started in 2016)
Anouk Levels, René de Sousa van Stralen, Sînziana Kroon Petrescu, and Iman van Lelyveld
Status: will soon be published.

9. Pension funds and variations in the illiquidity premium (started in 2016)
Dirk Broeders, Kristy Jansen (Netspar, Tilburg University), Theo Nijman (Netspar, Tilburg University), Bas Werker (Netspar, Tilburg University)
Status: published as DNB WP 555.

10. A return analysis of pension fund investment portfolios (started in 2016)
Dirk Broeders, Arco van Oord, David Rijsbergen
Status: published as DNB WP 561.

11. Banks’ net interest income in a low interest rate environment
Raymond Chaudron, Leo de Haan, Marco Hoeberichts
Status: will be continued in 2018.

12. The impact of sovereign ratings and the ECB’s purchases of public debt on cross-border holdings of euro area sovereign debt
Leo de Haan, Robert Vermeulen
Status: will be continued in 2018.

13. The resilience of young firms during the financial crisis (started in 2016)
Ralph de Haas (European Bank for Reconstruction and Development), Neeltje van Horen (Bank of England), Vincent Sterk (University College London), Jasper de Winter
Status: will be continued in 2018.

14. Monetary spillovers across borders: international lending of Dutch banks, insurers and pension funds
Patty Duijm, Clemens Bonner, Leo de Haan, Jakob de Haan, Jon Frost
Status: will be continued in 2018.

15. Identifying risks in Central Counterparties
Alinda Heemskerk, Ronald Heijmans, Tatu Laine (Bank of Finland), Kasperi Korpinnen (Bank of Finland)
Status: will soon be published.

16. Adding a network dimension to Liquidity Coverage Ratios
Richard Heuver, Ron Berndsen
Status: will be continued in 2018.

17. Regulation, supranational bank supervision, and the corporate structure of foreign affiliates
Natalya Martynova, Razvan Vlahu (started in 2016)
Status: will be continued in 2018.

18. The determinants of the lifecycle investment profile of interest rate risk (started in 2016)
Roel Mehlkopf, Servaas van Bilsen (University of Amsterdam), Ilja Boelaars (University of Chicago),
Lans Bovenberg (Tilburg University, Netspar)
Status: published.

19. The Dutch discount: fact or fiction?
Roel Mehlkopf, Arco van Oord
Status: will be continued in 2018.

20. Counterparty credit risk in the European CDS market
Sînziana Petrescu, Iman van Lelyveld
Status: will soon be published.

21. Identifying cyclical patterns in risk indicators based on financial market infrastructure data.
Monique Timmermans, Ronald Heijmans, Hennie Daniels (Tilburg University)
Status: published as DNB WP 558.

22. Detection of anomalies in liquidity flows in real time gross settlement systems
Ron Triepels (Tilburg University), Ronald Heijmans, Henie Daniels (Tilburg University)
Status: published.

23. Life-cycle investment strategies in IDC pension schemes
Annick van Ool, Dirk Broeders, Rob Bauer (University of Maastricht)
Status: stopped.

24. Entropy-based implied volatilities and its information content
Xiao Xiao (Erasmus University Rotterdam), Chen Zhou
Status: published as DNB WP 581.

4. Financial literacy and behaviour of households and companies
1. E-commerce: Use, growth and pricing
Wilko Bolt, Bas Butler
Status: will be continued in 2018.

2. Consumption effects of positive and negative transitory shocks to income
Dimitris Christelis (CSEF), Dimitris Georgarakos (Bundesbank), Tullio Jappelli (University of Naples),
Maarten van Rooij
Status: published as DNB WP 551.

3. Mode effects on self-reported household financial data (started in 2015)
Wändi Bruine de Bruin (Leeds University Business School), Wilbert van der Klaauw (Federal Reserve
Bank of New York), Maarten van Rooij, Federica Teppa, Klaas de Vos (CentERdata)
Status: will soon be published.

4. To stay or go? Consumer bank switching behaviour after government interventions (started in 2016)
Maaike Diepstraten (Tilburg University), Carin van der Cruijsen
Status: published as DNB WP 550.
5. **Retailers only accepting cash or cards**
Nicole Engel, Nicole Jonker, Esther vd Kommer
Status: will be continued in 2018.

6. **Intraday payment choices: mainstream vs. payments innovations** (started in 2014)
Lola Hernandez, Nicole Jonker
Status: will be continued in 2018.

7. **Acceptance means of payments by e-retailers**
Nicole Jonker, Monique Timmermans
Status: will be continued in 2018.

8. **Financial literacy and pension expectations** (started in 2016)
Remko Struij, Maarten van Rooij, Rob Alessie (University of Groningen)
Status: will be continued in 2018.

9. **The role of information on the formation and revision of subjective survival expectations** (started in 2016)
Federica Teppa, Susan Thorp (University of Sidney), Hazel Bateman (UNSW)
Status: will be continued in 2018.

10. **Payments data: do consumers want to keep them in a safe or turn them into gold?** (started in 2016)
Carin van der Cruijssen
Status: published as DNB WP 563.

11. **Regional payment patterns and social norms**
Carin van der Cruijssen, Joris Knoben (Radboud University)
Status: will be continued in 2018.

12. **Using debit card payments data for nowcasting Dutch household consumption** (started in 2015)
Roy Verbaan, Wilko Bolt, Carin van der Cruijssen
Status: published as DNB WP 571.

13. **Economic and institutional determinants of mortgage default** (started in 2015)
Razvan Vlahu, Irina Stanga (University of Groningen), Jakob de Haan
Status: published as DNB WP 580.

14. **The power of percentage: Quantitative framing of pension income** (new)
Federica Teppa, Henriette Prast (University of Tilburg)
Status: published as DNB WP 578.

15. **Heterogeneity in house price dynamics** (new)
Federica Teppa, Gabriele Galati
Status: published as DNB WP 564.

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5. **Modelling and forecasting**

1. **Forecasting with large panel data sets** (started in 2015)
Andreas Pick
Status: will be continued in 2018.
2. Economic sentiment and the influx of refugees
Ad Stokman, Maikel Volkerink
Status: stopped.
Appendix 2 DNB Working Papers in 2017

No. 542 Jasper de Jong, Marien Ferdinandusse and Josip Funda, Public capital in the 21st century: As productive as ever?

No. 543 Martijn Boermans and Sweder van Wijnbergen, Contingent convertible bonds: Who invests in European CoCos?

No. 544 Yakov Ben-Haim, Maria Demertzis and Jan Willem Van den End, Fundamental uncertainty and unconventional monetary policy: an info-gap approach

No. 545 Thorsten Beck and Steven Poelhekke, Follow the money: Does the financial sector intermediate natural resource windfalls?

No. 546 Lola Hernandez, Robbert-Jan 't Hoen and Juanita Raat, Survey shortcuts? Evidence from a payment diary survey

No. 547 Gosse Alserda, Jaap Bikker and Fieke van der Lecq, X-efficiency and economies of scale in pension fund administration and investment

No. 548 Ryan van Lamoen, Simona Mattheussens, and Martijn Dröes, Quantitative easing and exuberance in government bond markets: Evidence from the ECB’s expanded asset purchase program

No. 549 David-Jan Jansen and Matthias Neuenkirch, News consumption, political preferences, and accurate views on inflation

No. 550 Maaike Diepstraten and Carin van der Cruijsen, To stay or go? Consumer bank switching behaviour after government interventions

No. 551 Dimitris Christelis, Dimitris Georgarakos, Tullio Jappelli, Luigi Pistaferri and Maarten van Rooij, Asymmetric consumption effects of transitory income shocks

No. 552 Dirk Gerritsen, Jacob Bikker and Mike Brandsen, Bank switching and deposit rates: Evidence for crisis and non-crisis years

No. 553 Svetlana Borovkova, Evgeny Garmaev, Philip Lammers and Jordi Rustige, SenSR: A sentiment-based systemic risk indicator

No. 554 Martijn Boermans and Rients Galema, Pension funds’ carbon footprint and investment trade-offs

No. 555 Dirk Broeders, Kristy Jansen and Bas Werker, Pension fund's illiquid assets allocation under liquidity and capital constraints

No. 556 Dennis Bonam and Gavin Goy, Home biased expectations and macroeconomic imbalances in a monetary union

No. 557 Ron Berndsen and Ronald Heijmans, Risk indicators for financial market infrastructure: from high frequency transaction data to a traffic light signal

No. 558 Monique Timmermans, Ronald Heijmans and Hennie Daniels, Cyclical patterns in risk indicators based on financial market infrastructure transaction data

No. 559 Dirk Bezemer, Anna Samarina and Lu Zhang, The shift in bank credit allocation: new data and new findings

No. 560 Jacob Bikker and Tobias Vervliet, Bank profitablity and risk-taking under low interest rates

No. 561 Dirk Broeders, Arco van Oord and David Rijsbergen, Does it pay to pay performance fees? Empirical evidence from Dutch pension funds

No. 562 Nikki Panjer, Leo de Haan and Jan Jacobs, Is fiscal policy in the euro area Ricardian?

No. 563 Carin van der Cruijsen, Payments data: do consumers want to keep them in a safe or turn them into gold?

No. 564 Gabriele Galati and Federica Teppa, Heterogeneity in house price dynamics

No. 565 Dennis Bonam, Jakob de Haan and Beau Soederhuizen, The effects of fiscal policy at the effective lower bound

No. 566 William Allen, Gabriele Galati, Richchild Moessner and William Nelson, Central bank swap lines and CIP deviations

No. 567 Jan Willem van den End, Applying complexity theory to interest rates: Evidence of critical transitions in the euro area

No. 568 Emiel van Bezooijen and Jacob Bikker, Financial structure and macroeconomic volatility: a panel data analysis

No. 569 Ian Koetsier and Jacob Bikker, Herding behaviour of Dutch pension funds in sovereign bond investments
### Appendix 3. Overview of seminars in 2017

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Topic</th>
<th>Speaker/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24 January</td>
<td>The Innovation Dilemma: Uncertainty and Economic Policy</td>
<td>Yakov Ben-Haim, Israel Institute of Technology</td>
</tr>
<tr>
<td>2</td>
<td>31 January</td>
<td>The Leverage Ratio and Liquidity in the Gilt and Repo Markets</td>
<td>Andreea Bicu, Bank of England</td>
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<td>Monetary Policy Implications of State-Dependent Prices and Wages</td>
<td>Anton Nakov, ECB</td>
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<td>Exchange Rates and Macro News in Emerging Markets</td>
<td>Guglielmo Maria Caporale, Brunel University</td>
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<td>5</td>
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<td>Demand, Markups and Business Cycles</td>
<td>Federico Etro, University of Venice</td>
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<td>Structural Asymmetries and Financial Imbalances in the Eurozone</td>
<td>Ivan Jaccard, ECB</td>
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<td>Equity Versus Bail-in Debt in Banking: an Agency Perspective</td>
<td>Javier Suarez, CEMFI</td>
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<td>Forward Guidance, Quantitative Easing, or Both?</td>
<td>Ferre De Graeve, KU Leuven</td>
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<td>Business Cycles, Investment Shocks, and the &quot;Barro-King Curse&quot;</td>
<td>Guido Ascarì, Oxford University</td>
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<td>Natural Rates across the Atlantic</td>
<td>Andrea Gerali, BIS</td>
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<td>Banking Globalization, Local Lending, and Labor Market Effects: Micro-Level Evidence from Brazil</td>
<td>Matias Ossandon Busch, Halle Institute for Economic Research</td>
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<td>OTC Derivatives Reform and Central Clearing</td>
<td>Paul Glasserman, Columbia Business Shool</td>
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<td>Alexander Hijzen, OECD</td>
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<td>Exchange Rate Pass-through: What Has Changed Since the Crisis?</td>
<td>Richhild Moessner, BIS</td>
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<td>Geert Mesters, Pompeu Fabra University</td>
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<td>Frédéric Malherbe, London Business School</td>
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<td>The Impact of Monetary Policy on Inequality in the UK</td>
<td>Harron Mumtaz, Queen Mary University London</td>
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<td>The Bank of Canada’s Exposure to Default Risk in Canada’s Large Value Transfer System</td>
<td>James Chapman, Bank of Canada</td>
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<td>Economic Policy Uncertainty and Bank Liquidity Creation</td>
<td>Allen Berger, University of South Carolina</td>
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<td>Optimal Fiscal Policy with Consumption Taxation</td>
<td>Giorgio Motta, Lancaster University</td>
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<td>Breaking Through the Zero Lower Bound</td>
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<td>The Cyclicality of Add-on Pricing</td>
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<td>Stock Market Participation: The Role of Human Capital</td>
<td>Felicia Ionescu, Board of Governors of the Federal Reserve System</td>
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<td>The Dark Side of Low Interest Rates</td>
<td>Keith Kuester, University of Bonn</td>
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<td>Serdar Kabaca, Bank of Canada</td>
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<td>Rob Sperna Weiland, Universiteit van Amsterdam</td>
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<td>Investment in Productivity and the Long-Run Effect of Financial Crises on Output</td>
<td>Maarten de Ridder, University of Cambridge</td>
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