March 2021

DNB Research Newsletter

DeNederlandscheBank
EUROSYSTEEM

Research highlights

1. Pandemic payment patterns

The COVID-19 pandemic has changed daily lives of people around the globe; it has made not only our lives more contactless but also the way we pay. DNB-research shows that the use of the debit card increased strongly among Dutch consumers at the cost of the use of cash. Due to COVID-19 and measures taken by the government, banks and retailers, it has become more attractive to pay contactless. Read more

2. Misleading footprints: Lower emission reductions when accounting for inflation and exchange rate fluctuations

It is important to consider inflation and exchange rate fluctuations when determining the climate impact of financial institutions' investments. This is the main finding of the Occasional Study by Artjom Janssen, Justin Dijk, and Patty Duijm. Adjusting for these fluctuations, the reduction of the relative CO2 emissions of the investment portfolio of Dutch insurers and pension funds turns out to be a third lower for the period 2012-2019. Read more

3. Fearless woman: Financial literacy and stock market participation

Women score lower than men in financial literacy surveys. This is largely because they do not always have the same level of confidence in their own financial knowledge, according to new research. So women underestimate their financial knowledge. Read more

4. Effects of LTV announcements in EU economies

Dimitris Mokas and Massimo Giuliodori explore the effects of announcements about loan-to-value (LTV) ratio policies on the credit and housing markets over the period 2000-2019. Their findings suggest that policymakers should be conscious of the timing between announcement and implementation of macroprudential policies in order to achieve the desired effects. Read more

5. "Regulation is a key driver of investment behavior"

Kristy Jansen has recently defended her PhD thesis `Essays on Institutional Investors, Portfolio Choice, and Asset Prices'. One of her chapters has been published in *Journal of Financial and Quantitative Analysis*. Read more

6. The Dutch experience with controversial labour market reforms

Jante Parlevliet has defended her PhD thesis 'Essays on Contested reform in the European Monetary Union: Lessons from the Netherlands' on January 29th. Read more

Publications (since December 2020)

Working Papers

708 - Fearless woman: Financial literacy and stock market participation
Tabea Bucher-Koenen, Rob Alessie, Annamaria Lusardi, and Maarten van Rooij

707 - The impact of providing information about the ECB's instruments on inflation expectations and trust
Nils Brouwer and Jakob de Haan

706 - Spillover effects of sovereign bond purchases in the euro area
Yvo Mudde, Anna Samarina, and Robert Vermeulen

705 - Market forces in healthcare insurance: the impact of healthcare reform on regulated competition
Jacob Bikker and Jack Bekooij

704 - Effects of LTV announcements in EU economies
Dimitris Mokas and Massimo Giuliodori

703 - The 'new normal' during normal times – liquidity regulation and conventional monetary policy
Sînziana Kroon, Clemens Bonner, Iman van Lelyveld, and Jan Wrampelmeyer

702 - Should developed economies manage international capital flows?
Dennis Bonam, Gavin Goy, and Emmanuel de Veirman

701 - Pandemic payment patterns
Nicole Jonker, Carin van der Cruijsen, Michiel Bijlsma, and Wilko Bolt

Occasional Studies

19-1 - Misleading Footprints: Inflation and exchange rate effects in relative carbon disclosure metrics
Artjom Janssen, Justin Dijk, and Patty Duijm

18-3 - Changing international landscape and the Dutch economy: trends, drivers and consequences
Minke van der Heijden, Yannick Hemmerlé, Bahar Öztürk, Ilona van Schaik, and Camiel Schuijren

Published journal articles

Crowded trades, market clustering, and price instability
Marc van Kralingen, Diego Garlaschelli, Karolina Scholtus and Iman van Lelyveld
Entropy, 2021, 23, 336

Time-varying wage Phillips curves in the euro area with a new measure for labor market slack
Dennis Bonam, Jakob de Haan and Duncan van Limbergen
Economic Modelling, 2021, 96, 157-171

Pension funds' herding
Dirk Broeders, Damiaan Chen, Peter Minderhoud and Willem Schudel
International Journal of Central Banking, 2021, 17(1), 285-330

Ctrl+C Ctrl+pay: Do people mirror electronic payment behavior of their peers?
Carin van der Cruijsen and Joris Knoben
Journal of Financial Services Research, 2021, 59(1), 69-96

The impact of central bank liquidity support on banks' sovereign exposures
Leo de Haan, Sarah Holton and Jan Willem van den End
Applied Economics, 2021, 53(15), 1788–1806.

The interaction between macroprudential policy and monetary policy: Overview
Matthieu Bussière, Jin Cao, Jakob de Haan, Robert Hills, Simon Lloyd, Baptiste Meunier, Justine Pedrono, Dennis Reinhardt, Sonalika Sinha, Rhiannon Sowerbutts and Konstantin Styrin
Review of International Economics, 2021, 29(1), 1-19.

Generalized stability of monetary unions under regime switching in monetary and fiscal policies
Dennis Bonam and Bart Hobijn
Journal of Money, Credit and Banking, 2021, 53(1), 73-94.

A survey of institutional investors' investment and management decisions on illiquid assets
Kristy Jansen and Patrick Tuijp
Journal of Portfolio Management, 2021, 47(3), 135-153.

European banks straddling borders: risky or rewarding
Patty Duijm and Dirk Schoenmaker
Finance Research Letters, 2021, 38, 101525.

Connecting the dots: Market reactions to forecasts of policy rates and forward guidance provided by the Fed
Michelle Bongard, Richhild Moessner, William Nelson and Gabriele Galati
International Journal of Finance and Economics, 2021, 26(1), 684-706.

Pension funds' illiquid assets allocation under liquidity and capital requirements
Dirk Broeders, Kristy Jansen and Bas Werker
Journal of Pension Economics and Finance, 2021, 20(1), 102-124.

The interaction between private sector and public sector labor markets: Evidence from Romania
Valeriu Nalban and Andra Smadu
Economic Modelling, 2021, 94, 804-821.

Mortgage lending, monetary policy, and prudential measures in small euro-area economies: Evidence from Ireland and the Netherlands
Mary Everett, Jakob de Haan, David-Jan Jansen, Peter McQuade and Anna Samarina
Review of International Economics, 2021, 29(1), 117-143.

Effects of Fed policy rate forecasts on real yields and inflation expectations at the zero lower bound
Gabriele Galati and Richhild Moessner
Economics Letters, 2021, 198, 109654.

Forthcoming journal articles

Herd behaviour of pension funds in sovereign bond investments
Ian Koetsier and Jacob Bikker
Journal of Pension Economics and Finance

Climate change uncertainty and central bank risk management
Dirk Broeders and Marleen Schlooz
Journal of Risk Management in Financial Institutions

Financial stability and the Fed: Evidence from congressional hearings
Arina Wischnewsky, David-Jan Jansen and Matthias Neuenkirch
Economic Inquiry

Security design and credit rating risk in the CLO market
Dennis Vink, Mike Nawas and Vivian van Breemen
Journal of International Financial Markets, Institutions and Money

Financial knowledge and trust in financial institutions
Carin van der Cruijsen, Jakob de Haan and Ria Roerink
Journal of Consumer Affairs

The shadow costs of illiquidity
Kristy Jansen and Bas Werker
Journal of Financial and Quantitative Analysis

Populist and nativist attitudes: does in-group/out-group thinking spill over across domains?
Matthijs Rooduijn, Bart Bonikowski and Jante Parlevliet
European Union Politics

Published books/articles in books

Improving monetary policy institutions in the Caribbean
Jakob de Haan. In: D. W. Beuermann and M. J. Schwartz (eds.), Economic Institutions for a Resilient Caribbean, 2021, Inter-American Development Bank, Washington DC, pp. 385-426.

Other publications

Zijn schaalvoordelen bij beleggingen van pensioenfondsen verdwenen?
Jacob Bikker and J.J. Meringa
Economisch Statistische Berichten, forthcoming

The market-implied effects of the Biden stimulus and the Fed's new policy framework
Gavin Goy, Meilina Hoogland and Annelie Petersen
VoxEU Column, 15 March 2021

Regulering betaalinfrastructuur vergt nadere analyse
Michiel Bijlsma, Wilko Bolt and Nicole Jonker
Economische Statistische Berichten, 7 January 2021

Financial market sensitivity to announcements by the ECB
Jan Willem van den End and Anna Samarina
VoxEU Column, 2 January 2021

Should developed economies manage international capital flows? An empirical and welfare analysis
Dennis Bonam, Gavin Goy and Emmanuel de Veirman
SUERF Policy Brief, No 49, February 2021

For a complete list of publications see our website.

Events

Research seminars

Past

26 Jan 2021: Towards technology-news-driven business cycles
Spyridon Sichlimiris (Sveriges Riksbank)

16 Feb 2021: Reparations and persistent racial wealth gaps
Job Boerma (University of Maddison)

23 Feb 2021: Mortgage regulation and financial vulnerability at the household level
Ragnar Juelsrud (Norges Bank)

2 Mar 2021: The slope of the Phillips curve: evidence from U.S. states
Jón Steinsson (UC Berkeley)

16 Mar 2021: Inflation and investors' behaviour: evidence from the German hyperinflation
Fabio Braggion (Tilburg University)

23 Mar 2021: The causal effect of financial innovation on payment choice and cash demand - evidence from the staggered introduction of contactless debit cards
Helmut Stix (Oesterreichische Nationalbank)

Forthcoming

30 Mar 2021: Mind the Basel gap
Mathijs Lof (Aalto University)

6 Apr 2021: Returns to scale, productivity measurement, and trends in U.S. manufacturing misallocation
Dimitrije Ruzic (INSEAD)

13 Apr 2021: TBA
Peter Karadi (European Central Bank)

20 Apr 2021: TBA
Maarten van Oordt (Bank of Canada)

Workshops and conferences

Past

12 March 2021: Making Sense of Finance.

On 12 March 2021 DNB hosted an online conference which aimed to reflect on the public value of the financial sector. Topics such as the history and nature of trust in the financial sector, the challenges of innovation and internationalization, transparency and accountability, and the need to safeguard financial heritage were discussed. There were keynotes by William Goetzmann (Professor of Finance, Yale School of Management) and Joanne Kellermann (Chair Pension Fund Zorg en Welzijn). Olaf Sleijpen (DNB) opened the event.

Other news

PhD defense of Kristy Jansen, 15 Jan 2021, Tilburg University. Thesis: "Essays on institutional investors, portfolio choice, and asset prices"

PhD defense of Jante Parlevliet, 29 Jan 2021, University of Amsterdam. Thesis: "Contested reform in the European Monetary Union: lessons from the Netherlands"

Maurice Bun has been appointed as a new Head of Research at DNB, as of 1 Apr 2021.

Prof. Sweder van Wijnbergen was awarded the Pierson Penning reward on 16 Dec 2020. The medal was presented by Klaas Knot, chairman of the board of the Pierson Fund and president of De Nederlandsche Bank. The Pierson Penning is awarded once every 3 years to highly deserving Dutch economists who have distinguished themselves through the quality and depth of their publications.

Research highlights, details

1. Pandemic payment patterns

Drop in cash usage

The share of point-of-sale (POS) transactions paid in cash declined strongly during the pandemic. This emerges from a study of daily payment diary data collected among consumers by DNB and the Dutch Payments Association. In the course of April 2020 – right after the start of the pandemic – the share of POS transactions paid in cash declined to 13%, whereas it was 31% at the beginning of 2020. The shift in payment behaviour was strongest among consumers aged 65 or over and in traditionally cash intensive branches such as street vending. Part of the shift in payment behaviour is long-lived; by mid October 2020, 1 out of 5 POS payments was paid with coins and banknotes.

Increased popularity of contactless payments

A substantial part of the shift in payment behaviour is expected to persist because underlying payment preferences have also shifted. During the pandemic the share of people who prefer to pay contactless has increased strongly, from 46% at the start of the first lockdown to 61% by mid October 2020. Especially paying contactless by debit card is popular. The preference shift was strongest among people aged 65 or over. The share of people who prefer to use their debit card with a PIN code decreased strongly, whereas the share of people that prefer cash decreased somewhat.

Read more? See DNB Working Paper 701 Pandemic Payment Patterns by Nicole Jonker, Carin van der Cruijsen, Michiel Bijlsma, Wilko Bolt.
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2. Misleading footprints: Lower emission reductions when accounting for inflation and exchange rate fluctuations

Paris Climate Agreement

The relative CO2 emissions are often used to determine whether the financial sector's investments are in line with the objectives of the Paris Climate Agreement. Moreover, it serves as a proxy to gauge to what extent institutions face climate-related transition

risks, i.e., risks stemming from an economy in transition to tackle climate change.

Cooperation
The results underscore the importance for DNB to continue its cooperation with international partners to achieve robust and internationally comparable metrics.

Read more? See the DNB Occasional Study Misleading Footprints by Artjom Janssen, Justin Dijk and Patty Duijm.
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3. Fearless woman: financial literacy and stock market participation

Gender gap in financial literacy matters
Women display lower levels of financial knowledge than men, which is a persistent finding in international studies on different financial and economic topics. This is a worrisome finding as differences in knowledge have proved to play a significant role in financial decision-making, e.g. financial literacy increases the probability to invest in stocks, to plan for retirement and to accumulate savings.

Women know more than they know
The new research shows that while women display lower financial knowledge than men, about one third of this gender gap can be explained by differences in confidence. When asked a set of financial literacy questions, women report much more often than men that they do not know the answer, even if they have a comparable level of knowledge. This study is the first of its kind to decompose traditional financial literacy measures into a knowledge and a confidence component. In addition, we show that differences in both knowledge and in confidence contribute significantly to the explanation of lower stock market participation of women.

Way forward
An important implication from the findings is that educators and policy makers designing programs to improve financial decision-making better not only focus on increasing financial knowledge but also on financial behavior including having confidence in line with actual levels of knowledge. This will especially help underconfident women to take care of their financial lives which contributes to a more inclusive society and improves financial resilience of citizens.

Read more? See DNB Working Paper 708 Fearless woman: Financial literacy and stock market participation by Tabea Bucher-Koenen, Annamaria Lusardi, Rob Alessie and Maarten van Rooij.
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4. Effects of LTV announcements in EU economies

Why focus on announcements of policies?
Macroprudential policies are often implemented with delays or with staggered implementation schedules after their announcement. For example, the LTV limit announced in the Netherlands in December 2012 was implemented stepwise between January 2013 and January 2018. Consequently, following the policy's announcement, economic

agents had plenty of time to adjust their behaviour ahead of the imposition of the actual LTV restrictions. The timing lags between the announcement of policies and their implementation can create foresight and invalidate causal inference when ignored.

Timing of policies

This paper shows that the implementation schedule of macroprudential policies, specifically the time lags between announcement and implementation, matters for identifying their effects. So far the literature on macroprudential policies has relied mainly on cross-country panel regressions of implemented policy actions. Even though various methods address concerns regarding the endogeneity of policy measures, the anticipation effects received less attention. To tackle this, the authors collect monthly data for announcements of policies related to LTV restrictions for mortgage loans and study their impact on mortgage and housing markets. To further understand the policies' effects, the authors go beyond implications for credit quantities and analyse their impact on lending rates and household behaviour via consumption. Using hand-collected information on policies' design, the authors explore how qualitative aspects of LTV policies can alter the results. Specifically, they consider the legal character of measures and the use of possible embedded exemptions which aim to assist specific groups of credit-constrained borrowers.

Lessons learned

The results show that LTV policies' announcements can negatively impact household credit, house prices, and household durable goods consumption. New mortgage lending rates increase following the announcement of an LTV ratio restriction. The contractionary effects are driven mainly through binding actions and actions with non-discretionary components. These results suggest that policymakers should carefully consider the timing between the announcement and implementation of macroprudential policies and the exact design of the LTV package to achieve the desired effects.

Read more? See DNB Working Paper 704 Effect of LTV announcements in EU economies by Dimitris Mokas and Massimo Giuliodori.

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5. "Regulation is a key driver of investment behaviour"

What are the conclusions of your research?

I study investment decisions of institutional investors who are becoming increasingly influential in the financial system. One of the findings is that regulation is a key driver of investment behavior, which subsequently impacts financial markets. For example, I show that the introduction of the Ultimate Forward Rate (UFR) - a regulatory measure for insurers and pension funds - reduced incentives to hedge interest rate risk. Another conclusion is that Dutch pension funds' investment choices are very heterogeneous.

This is relevant, as it can lead to very different outcomes for their beneficiaries who cannot freely choose their pension fund.

Is your work relevant for DNB policies?
It is interesting to see that policy measures in one area have implications for other policy fields. I already mentioned the introduction of the UFR for institutional investors, who changed their hedging behavior by selling a significant share of their long-term fixed-income assets. This caused an increase in interest rates while at the same time the ECB tried to reduce interest rates by lowering its key policy rates.

One of the chapters in your thesis has just been published in the Journal of Financial and Quantitative Analysis. What is the main message of this study?
In this chapter, we zoom in on the allocation of illiquid assets, such as private equity, infrastructure, and real estate. We build a theoretical model where the investor can choose to invest in liquid or illiquid assets. We then derive the shadow costs of holding illiquid assets: how much additional return does an investor demand to bear the illiquidity of an asset? We show that illiquidity is costly for short-term investors and for investors who face substantial liquidity shocks, for instance due to margin calls on derivative positions.

Are you working on new research projects?
In my current project, I try to get a better insight in the distribution of risk exposures, such as interest rate risk, across Dutch institutions. I work on this together with two DNB colleagues, Bernard van den Boom and Robert Hofman. We use the EMIR dataset, which covers derivative positions of all Dutch institutions.

You can download Kristy's PhD thesis here.
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6. The Dutch experience with controversial labour market reforms

What is the main theme of your research?
The thesis is about controversial labor market reforms. The first part of the thesis looks at the increase of the retirement age. I look at the Dutch experience, but I believe the lessons learnt are interesting for other European countries as well. I also look, in collaboration with a political scientist, at the rise of populism, a phenomenon considered by many economists as a major hurdle for reforms. The second part of the thesis is about collective wage bargaining systems in the Netherlands and Portugal, which have also been subject to fundamental reform.

How did you get involved in this topic?
My scientific interest in the subject was triggered by the euro debt crisis, which led to discussions and negotiations about structural reforms in the peripheral European countries, reforms that were often very much contested. The economic crisis that followed the euro crisis

also set the stage for reforms in the Netherlands in the field of fiscal policy and the increase of the retirement age.

What are the conclusions?
First, for controversial structural reforms, it is paramount that domestic policy makers build up public acceptance. I show that it may take over a decade before the public at large is ready for a big reform. Second, compensatory policy to make up for losses of particular groups can greatly enhance the success of reform efforts. Reforms are hence best accompanied by fiscal space. Third, it is dangerous to label opposition to reforms as 'populist'. Populist parties that oppose reforms may be opportunistic, but they may also express legitimate concerns of voters that elites too easily dismiss, for instance because policymakers have more benign labor market positions or a very different orientation towards work. Fourth, in the aftermath of the debt crisis the 'trojka' advised to make wage bargaining in the peripheral European countries more flexible, by moving sector bargaining more to the level of the firm. This has as a drawback, that the bargaining power of labor may deteriorate and hence wage inequality increases. Yet, the Netherlands has held on to sectoral bargaining and its wage setting has proven to be quite flexible as some components of the wage bill can be adjusted if necessary.

Is your work relevant for DNB policies?
My thesis offers some lessons to improve DNB's role as an economic policy advisor. As an independent economic advisor, DNB can contribute to building public acceptance for reforms by providing information. Furthermore, my thesis also underscores the need for fiscal space when countries undertake big and potentially painful reforms.

You can download Jante's PhD thesis here.
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