October 2020

DNB Research Newsletter

DeNederlandscheBank
EUROSYSTEEM

Research highlights

1. To trust or not to trust?

Carin van der Cruijsen, Jakob de Haan and Ria Roerink have reviewed the wealth of academic literature on trust in financial institutions and its drivers. Their survey provides insights for financial supervisors, financial institutions and policymakers on how to contribute to a stable financial system. Read more

2. Anchoring of long-term inflation expectations

Gabriele Galati, Richhild Moessner and Maarten van Rooij have examined Dutch consumers' long-term expectations of euro area HICP inflation and found that they are not well-anchored at the ECB's inflation aim of below, but close to 2%. In spite of persistently low current inflation, households expect higher inflation (around 4%) rather than lower inflation or deflation in the future. Read more

3. Monetary policy, productivity, and market concentration

Andrea Colciago and Riccardo Silvestrini provide a framework that allows analysing the impact of monetary policy on labour productivity and the monetary policy transmission under alternative degrees of concentration in the markets for final goods. Read more

4. Regulation, institutions, and mortgage default

Irina Stanga, Jakob de Haan and Razvan Vlahu have recently published a paper in the Journal of Banking and Finance that studies the incidence of mortgage arrears in a large sample of countries. The findings suggest that dealing effectively with mortgage defaults requires a mix of prudential regulation and institutional design improvements. Read more

5. "Machine learning is a very promising research area in central banks"

Interview with Richard Heuver, DNB researcher and data specialist. Richard Heuver is one of DNB's pioneers in big data and machine learning. On September 16th, he defended his PhD thesis *Applications of liquidity risk discovery using financial market infrastructures transaction archives* at Tilburg University. Read more

Publications (since July)

Working Papers

693 - Trust in financial institutions: A survey
Carin van der Cruijsen, Jakob de Haan, and Ria Roerink

692 - The interplay of financial education, financial literacy, financial inclusion and financial, stability: Any lessons for the current Big Tech era?
Nicole Jonker and Anneke Kosse

691 - A structural investigation of Quantitative Easing
Gregor Boehl, Gavin Goy and Felix Strobel

690 - Effects of Fed policy rate forecasts on real yields and inflation expectations at the zero lower bound
Gabriele Galati and Richhild Moessner

Published journal articles

Finite horizons and the monetary/fiscal policy mix
Kostas Mavromatis
International Journal of Central Banking, 2020, 16(4), 327-378.

Housing vintage and price dynamics
Lyndsey Rolheiser, Dorinth van Dijk and Alex van de Minne
Regional Science & Urban Economics, 2020, 84, 103569.

Mortgage arrears, regulation and institutions: Cross-country evidence
Irina Stanga, Razvan Vlahu and Jakob de Haan
Journal of Banking and Finance, 2020, 118, 105889.

The political and institutional determinants of fiscal adjustments and expansions: Evidence for a large set of countries
Federico Giesenow, Juliette de Wit and Jakob de Haan
European Journal of Political Economy, 2020, 64, 101911.

European banks after the global financial crisis: Peak accumulated losses, twin crises and business models
Leo de Haan and Jan Kakes
Journal of Banking Regulation, 2020, 21(3), 197–211.

Finding counterfeited banknotes: the roles of vision and touch
Frank van der Horst, Joshua Snell and Jan Theeuwes
Cognitive Research: Principles and Implications, 2020, 5(40).

Banking stress test effects on returns and risks
Cenkhan Sahin, Jakob de Haan and Ekaterina Neretina
Journal of Banking and Finance, 2020, 117, 105843.

Forthcoming journal articles

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

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

The Single Supervisory Mechanism: competitive implications for the banking sectors in the euro area
Iryna Okolelova and Jacob Bikker
International Journal of Finance & Economics

Sectoral allocation and macroeconomic imbalances in EMU
Niels Gilbert and Sebastiaan Pool
Review of World Economics

The effects of fiscal policy at the effective lower bound
Dennis Bonam, Jakob de Haan and Beau Soederhuizen
Macroeconomic Dynamics

Assessing uncertainty in the natural rate of interest: Info-gap as guide for monetary policy in the euro area
Jan Willem van den End en Yakov Ben-Haim
International Journal of Finance and Economics

The dynamics of liquidity in commercial property markets: Revisiting supply and demand indexes in real estate
Dorinth van Dijk, David Geltner and Alex van de Minne
Journal of Real Estate Finance and Economics

Other publications

Your trustee's age matters
Rob Bauer, Rien Bogman, Matteo Bonetti, Dirk Broeders
VBA Journal, 143, 7-12.

De coronacrisis laat zien dat de geldmarkt niet zonder haar fondsen werkt
Joost Bats, Tom Hudepohl, and Annelie Petersen
Forthcoming in *Economische Statistische Berichten*

Passief beleggen vergroot volatiliteit op financiële markten
Laura Arts, Dirk Broeders, and Herwin Loman
Economische Statistische Berichten, 22 Sep 2020.

Betaaldienstenrichtlijn heeft nog geen revolutie ontketend
Michiel Bijlsma, Carin van der Cruijsen, and Nicole Jonker,
Economische Statistische Berichten, 23 Jul 2020.

Verband werkloosheid en inflatie blijft ook bij dalende inflatie overeind
Anna Samarina, Marco Hoeberichts, Gabriele Galati, Irma Hindrayanto, and Irina Stanga
Economische Statistische Berichten, 14 Jul 2020.

For a complete list of publications see our website: Link

Events

Research seminars

Past

8 Sep 2020: Rigid wages and contracts: time- versus state-dependent wages in the Netherlands
Burak Uras (Tilburg University)

15 Sep 2020: Zombie credit and (dis-)inflation: evidence from Europe
Tim Eisert (Erasmus University)

22 Sep 2020: Raising the inflation target: how much extra room does it really give?
Raphael Schoenle (Brandeis University and Cleveland Fed)

6 Oct 2020: Mitigation policies and emergency care management in Europe's ground zero for COVID-19
Gabriele Ciminelli (Asia School of Business)

Forthcoming

20 Oct 2020: TBA
Stefano Fasani (Queen Mary University)

3 Nov 2020: Vertically disintegrated platforms
Tarik Roukny Ornia (KU Leuven)

10 Nov 2020: TBA
Francesco Lippi (Luiss University)

17 Nov 2020: Monetary policy and intangible investment
Robin Döttling (Erasmus University)

24 Nov 2020: TBA
Samad Sarferaz (KOF ETH Zurich)

Workshops and conferences

Forthcoming

29 October 2020: DNB Annual Research Conference (online): "Monetary non-neutrality: the real effects of monetary policy in the short- and long-run"

16-20 November 2020: Nederlandse Economenweek 2020

Other news

Netspar grant for Mauro Mastrogiacomo and Stefan Hochgurtel, 500,000 EUR for 3 years (Sep 2020 – Aug 2023). Project "The effect of macroprudential policies on pensions and retirement preparation".

Netspar grant for Mauro Mastrogiacomo and Francesco Caloia, 20,000 EUR for 1 year (Oct 2019 – Mar 2020). Project "Private pension annuities out of savings or housing wealth? A comparative study of Italy and the Netherlands".

PhD defense of Richard Heuver, 16 Sep 2020, Tilburg University. Thesis: "Applications of liquidity risk discovery using financial market infrastructures transaction archives"

Research highlights, details

1. To trust or not to trust?

Trust is key

Trust in financial institutions is widely considered important for a proper functioning of individual financial institutions, the economy and for stability of the financial system as a whole. Scandals and incidents within financial institutions could harm trust. Recent headlines on INGs involvement with Russian money laundering or the fraud at German payment institution Wirecard are typical examples which could hamper trust if not solved adequately. Low trust may damage the financial services industry. If the industry is not trusted, consumers will choose to engage less, which, in turn,

will damage both the financial service sector and the economy, by reducing the availability of capital for productive purposes. In the worst case low trust may even lead to bank runs.

Many drivers

A wide range of factors drive trust in financial institutions. First, trust in financial institutions depends on the economic situation: it behaves procyclically and is negatively affected by financial crises. Second, the behaviour of the financial institutions matters: prudent conduct, the provision of good services and financial health have a positive effect on trust. Third, although consumer characteristics also relate to trust, many of these relationships are context-dependent. For example, they depend on the specific trust measure and financial institution considered. Fourth, there is a positive association between trust in the own financial institution (narrow-scope trust) on the one hand and trust in financial institutions in general (broad-scope trust) and generalized trust (trust in other people) on the other. Last, policy measures and supervisory actions can help prevent loss of trust.

Way forward

The survey provides insights for financial supervisors, policymakers and financial institutions on how to contribute to a stable financial system. For example, regulators and supervisors can influence financial institutions' behaviour with their business conduct regulations or restrictive measures such as a cap on bankers' bonuses or regulation and requirements on data security or other forms of privacy protection. At the same time, it is important to be aware that there are also limits to influencing trust. For example, it is hard to affect the economic situation.

Read more? See DNB Working Paper 693 Trust in financial institutions: A survey.

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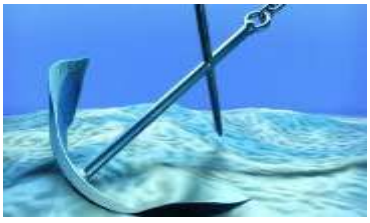
2. Anchoring of long-term inflation expectations

Inflation expectations and their anchoring

In recent years, euro area HICP has persistently fallen short of the ECB inflation aim and market-based long-term inflation expectations have declined – particularly since early 2019. A key question for the ECB has therefore been whether long-term inflation expectations have de-anchored. Evidence on the anchoring of firms' and consumers' long-term inflation expectations is still scarce. We contribute to filling this gap by investigating whether consumers' long-term expectations of euro area HICP inflation are well-anchored at the ECB's inflation aim.



Are households' expectations well-anchored?

Data from the DNB Household Survey show that long-term expectations of Dutch households are not well-anchored at the ECB's inflation aim. The de-anchoring of these expectations is mainly due to expected higher inflation, rather than to expected lower inflation (or deflation). Long-term inflation expectations tend to be some 2 p.p. above the ECB's inflation aim. In addition, Dutch households tend to be more concerned about risks of higher rather than lower inflation in the long run. Socio-demographic factors matter: long-term inflation

expectations are higher if respondents are less well educated, have lower incomes, and are older.

Way forward
These results are in contrast to recent concerns by ECB monetary policymakers about a possible de-anchoring of long-term inflation expectations on the downside, rather than on the upside. Investigating the drivers of Dutch households' long-term expectations, and documenting how these expectations are changing in reaction to the Covid-19 pandemic, are important avenues for future research.

Read more? See DNB Working Paper 688 The anchoring of long-term inflation expectations of consumers: insights from a new survey.
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3. Monetary policy, productivity, and market concentration

Market concentration is on the rise
In the last few decades, there was a change in the US competitive landscape. The vast majority of US industries experienced a growth in profit rates, sales concentration, and price-cost margins. These upward trends have come along with persistent drops in firm entry rates, the number of publicly traded firms and the labor share of income. This structural shift in the goods markets may have influenced the pricing and provision of goods and services in the economy and hence the Phillips curve. Thus, it may have implications for the monetary policy transmission.

Market concentration, competition, and monetary policy transmission
An expansionary monetary policy shock, by reducing borrowing costs, initially attracts low productivity firms into the market. As a result, aggregate labor productivity initially decreases. In a competitive and dynamic market, this effect is reverted in the medium run. Competition cleanses the market from low productivity firms, and productivity rises before returning to its initial level. In markets characterized by high concentration there is little entry and exit of firms. This impairs the transmission mechanism of monetary policy just described and makes policy less effective.

Way forward
This work represents an attempt to rationalize an explicit link between monetary policy and aggregate productivity. The theory provides hypotheses that are currently being tested using firm-level Dutch data. Soon the authors will provide the results of their analysis.

Read more? See DNB Working Paper 685 Monetary policy, productivity and market concentration
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4. Regulation, institutions, and mortgage default

Mortgage default and financial stability
The Global Financial Crisis highlighted the devastating effects that the residential mortgage market fragilities might have on the financial system. The initial shock of an increase in mortgage arrears (due to a decline in house prices) in the US and European countries was the

trigger for a liquidity crisis that ultimately turned into a full-blown financial crisis. A better understanding of determinants of mortgage default and factors explaining cross-country differences in mortgage delinquency is important for at least two reasons. First, mortgage defaults dilute fundamentals of financial institutions and amplify disruptions in financial markets. Second, mortgage defaults reduce households' creditworthiness, thereby making it more difficult to access future financing. This may increase consumption volatility, both at the household and aggregate level, with repercussions for the real economy.

What drives mortgage default?

There are several determinants of default. Theoretical literature suggests two main explanations for mortgage default: ability-to-pay and strategic behaviour. According to the ability-to-pay theory, individuals default involuntarily when they cannot meet current payments. For example, because of a drop in income (due to unemployment) or higher mortgage payments (due to higher interest rates). The strategic default theory holds that households choose to default voluntarily after a rational analysis of all future costs and benefits of maintaining the mortgage. Thus, a borrower may default if her gains exceed the expected sanctions' perceived costs, including access to future finance and its price. These costs not only depend on lenders' willingness to inflict sanctions, but on the entire set of institutional arrangements governing the credit market, such as the rule of law, creditor rights, and bankruptcy laws. In addition to macroeconomic and institutional factors, regulation (particularly macro-prudential policies targeting the household sector) is likely related to mortgage defaults. For example, restrictive policies that discourage household leverage enable borrowers to absorb shocks and avoid default on mortgage payments. Finally, mortgage market characteristics also affect the likelihood of default. For example, borrowers are more likely to face difficulties in making their mortgage-related payments when interest rates are more volatile (the impact being larger for variable-rate mortgages) and/or when periodic instalments are higher (as for loans with short maturities).

Way forward

Our results suggest that dealing effectively with mortgage defaults requires a mix of policies. Such a mix should consist of both prudential regulation (with LTV caps being an important instrument in the macro-prudential toolkit) and improvements in the institutional design (in particular improvements of judicial efficiency and bankruptcy regulation).

Read more? See Mortgage arrears, regulation, and institutions: Cross-country evidence, *Journal of Banking and Finance*, Vol. 118.

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5. "Machine learning is a very promising research area in central banks"

What are the main findings of your study?

The overall conclusion is that the use of granular payment data significantly increases our understanding of banks' liquidity position. I

investigated tools using TARGET2, the Eurosystem's main payment system which covers the main payments by banks in the euro area. In my thesis, I analyze interbank lending on the money market, contagion of liquidity stress and develop an indicator to detect liquidity stress at the individual bank level.

How did you get involved in this topic?

I worked in the Payment Systems Division of DNB, where we were struggling with the challenge to better understand patterns in interbank transactions. This was not long after the global financial crisis, and the ECB was also very interested in getting more grip on interbank networks. This started as a policy project together with colleagues from Banca d'Italia, but then evolved into an academic paper that is the basis for my first chapter.

How do you see the future of big data applications in central banks? Does it provide an alternative for traditional empirical approaches?

The new techniques are very promising and several central banks are now using them. I don't think they will replace existing approaches, but rather provide supplementary information. Machine learning can reveal important patterns in the data, but it is not always easy to interpret the outcomes. Insights from theory and more conventional techniques remain important to understand the full picture. An important advantage of data from financial market infrastructures is that they are almost immediately available and deliver very detailed information that is self-obtained.

Any other lessons from your research?

An important lesson is the importance of cooperation between different central bank areas. I did most of my research when working in the Payments & Market Infrastructures division, but also benefited a lot from input from colleagues in supervision, financial stability and monetary policy. At DNB it is relatively easy to start joint projects that involve several departments.

What is your next project?

We are now investigating whether we can predict the provision of Emergency Liquidity Assistance to banks using data from TARGET2, collateral deposited by banks and monetary transactions.

You can download Richard's PhD thesis here.

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