The Experience of the Slovak Republic with Macroprudential Policy

Reiner Martin

Executive Director

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

NBP / SGH Conference on Recent Trends in the Real Estate Market, Warsaw

29/11/2023

Outline

- Introduction – Housing Market Developments in the Slovak Republic
- Macroprudential Policy in the Slovak Republic
- Assessing the Impact of (some) Macroprudential Policy Measures
- Lessons on Policy Implementation
- Conclusions and the way forward

Disclaimer: The opinions expressed in this presentation are solely those of the presenter and not necessarily those of Národná banka Slovenska.

Slovakia – some (relevant) fun facts

One of the highest home ownership rates in the EU

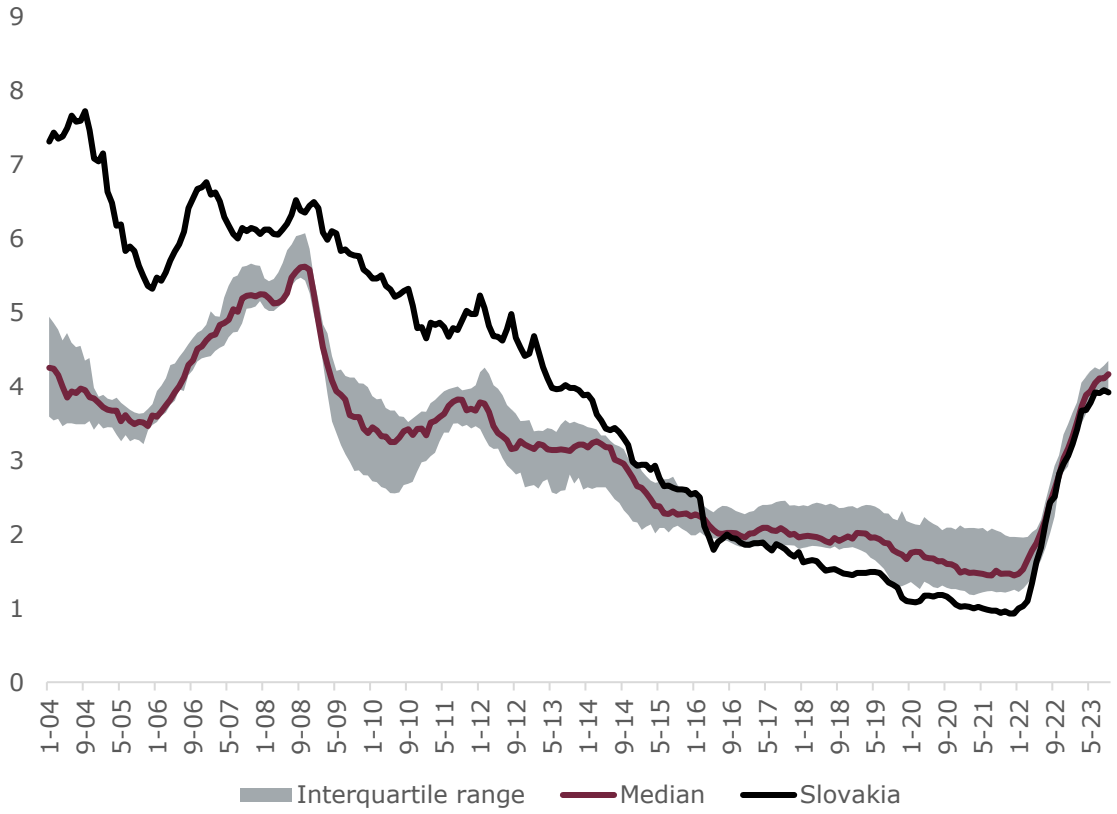
Strong RRE demand and strong house price growth

Very low interest rates (EUR membership, bank competition, mortgage brokers)

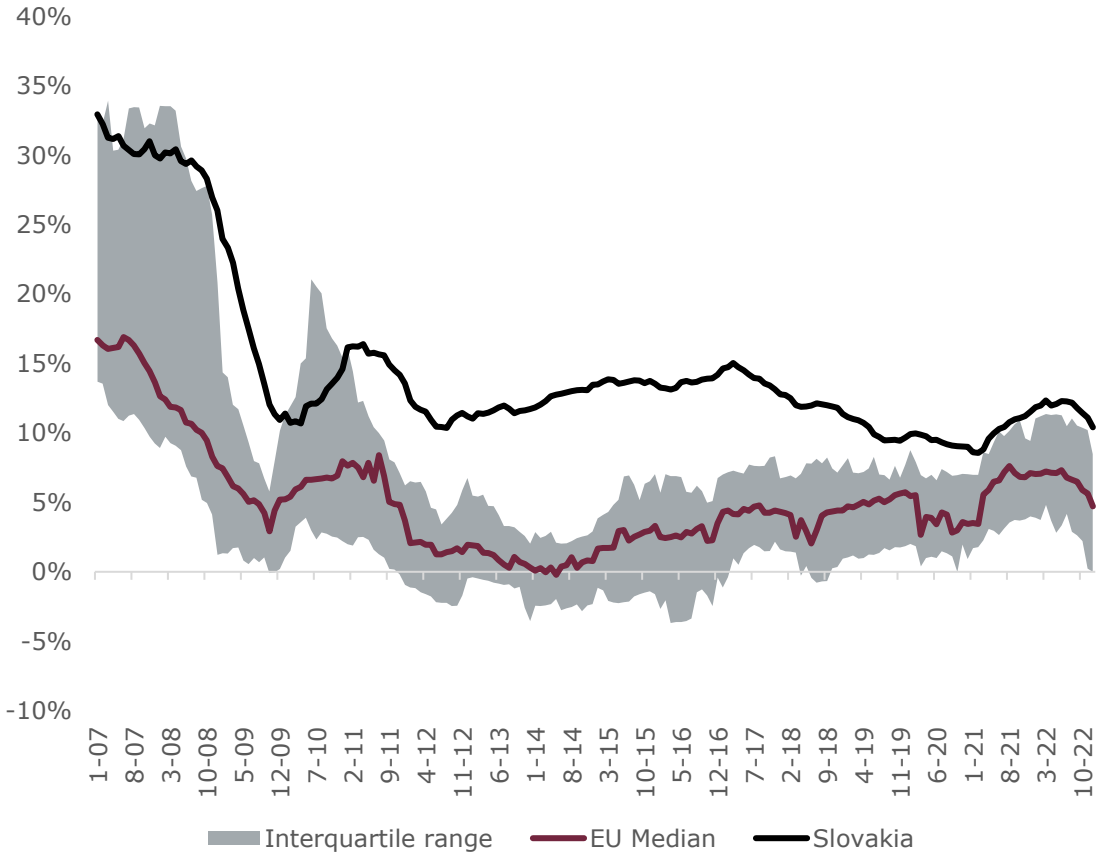
Strong mortgage growth and indebtedness

Interest Rates and Mortgage Market

Mortgage interest rates: SK vs. EU



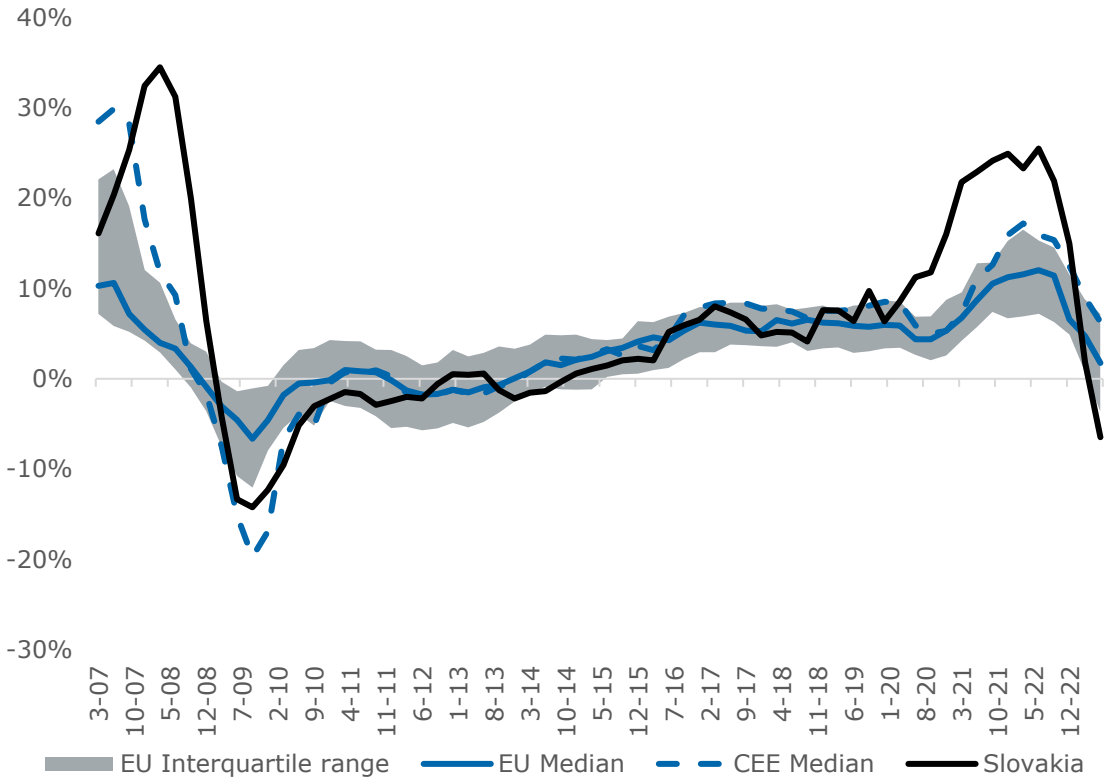
Housing loans: SK vs. EU



Source: ECB.

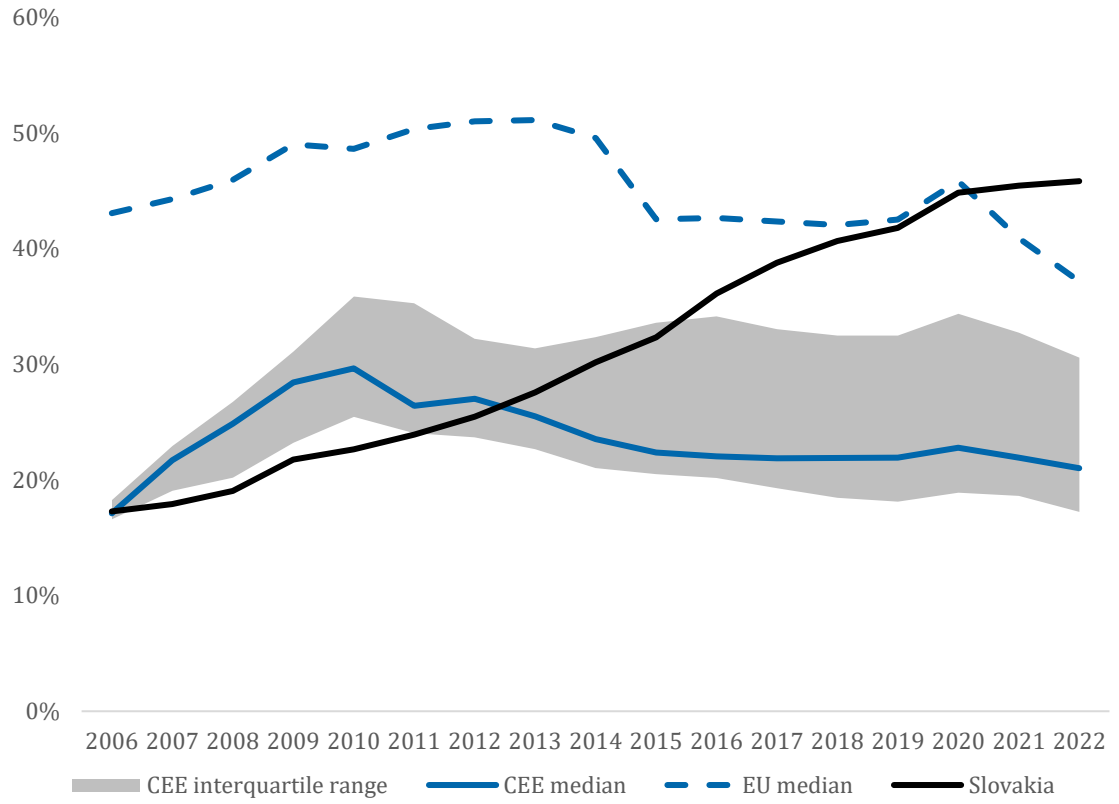
House Price Boom and Increasing Indebtedness

House price growth: SK vs. EU and CEE



Source: BIS, NBS.

Household Debt to GDP ratio



Source: ECB, Eurostat.

Outline

- Introduction – Housing Market Developments in the Slovak Republic
- Macroprudential Policy in the Slovak Republic
- Assessing the Impact of (some) Macroprudential Policy Measures
- Lessons on Policy Implementation
- Conclusions and the way forward

Macroprudential Objectives

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

The strategic objective

Contribute to maintaining the stability of the financial system as a whole. This includes, in particular, strengthening the resilience of the financial system and reducing systemic risk, thereby ensuring the financial system's sustainable contribution to economic growth

The intermediate objectives

- Building resilience of the banking sector
- To mitigate and prevent excessive credit growth and leverage
- To mitigate and prevent excessive maturity mismatch and liquidity
- To mitigate risk related to moral hazard
- Limit risks from direct and indirect concentration of large exposures in the banking sector

Macroprudential policy in the NBS

NÁRODNÁ BANKA SLOVENSKA EUROSYSTÉM

Everything under one roof
All macropru tools in NBS's competence & full coverage of financial sector

Advantages

- ✓ Limiting political pressure
- ✓ Product-based policy
- ✓ Flow of information - micro supervision, consumer protection, resolution and monetary policy

Disadvantages

- ❑ Potentially missing outside views
- ❑ Potential conflict with other policies

Mitigated by:

- Open external communication
- Mandatory discussions with Ministry of Finance
- 2-stage internal discussions

  1st stage: **Macroprudential committee** (informal)

  - Broad membership in Macropru committee (macro, micro, economic dpt, research, consumer protection)

  2nd stage: **Bank Board** (formal decisions)

Macroprudential Toolkit

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

Macroprudential policy measures

Responsible lending requirements (BBMs)

Objective

Sound and sustainable credit growth based on prudent credit standards

To address risks related to increasing household indebtedness

Characteristics

Quantitative limits (LTV, DSTI, maturity, DTI)

Qualitative requirements (income declaration, RRE appraisals standards...)

Strengthening resilience of banks (capital buffers)

Objective

Building resilience to tackle negative shocks on financial system

Prevent excessive dividend distributions in the period of rising vulnerabilities

Characteristics

Countercyclical capital buffers

Buffer for largest banks

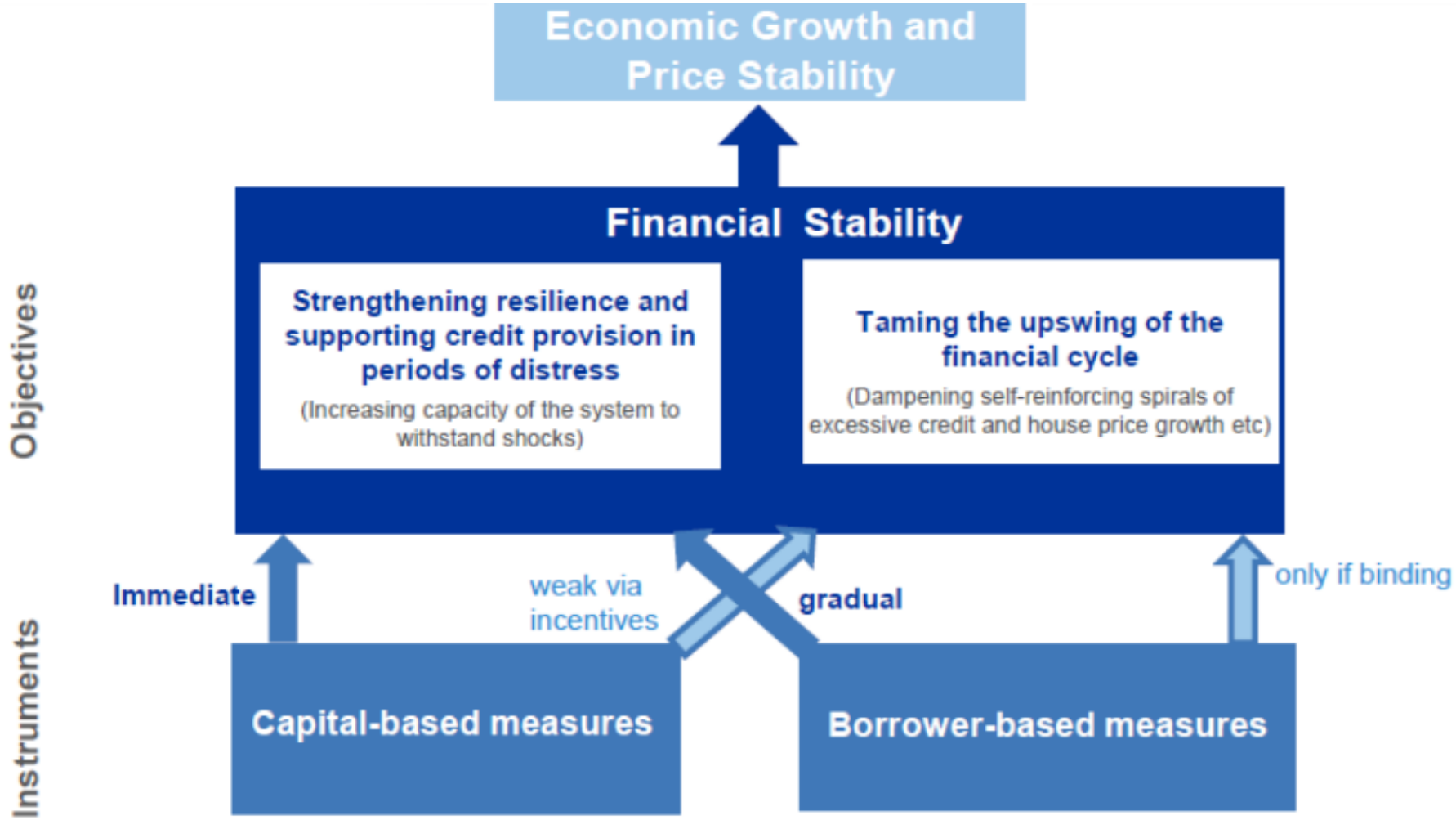
Others (liquidity, other sectors, climate risk...)

Objective

Address new and emerging risks

- Liquidity
- Systemic risk buffer
- Minimum risk weight
- Other sectors
- Climate risk

Macroprudential Toolkit



Active macroprudential measures

	2014 – 2015 Non-binding recommendation	2016 – mid 2018 Binding decree	Mid 2018 - 2019 Binding decree	2020 Binding decree	2022 Binding decree
Lending practices	• **LTV 90+: max. 10%** • **DSTI limit: 100%** • **Sensitivity test (IR jump)** • **Maturity limits** • **Mandatory annuity repayments**	• LTV 90+: max. 10% • **LTV 80+: max. 40%** • **DSTI limit: 80%** • Sensitivity test (IR jump) • Maturity limits • Mandatory annuity repayments	• **LTV limit: 80 %** • **LTV 80%-90%: max. 20%** • DSTI limit: 80% • Sensitivity test (IR jump) • Maturity limits • Mandatory annuity repayments	• LTV limit: 80% • LTV 80%-90%: max. 20% • **DSTI limit: 60%** • **DSTI 60%-70%: max. 5 %** • Sensitivity test (IR jump) • Maturity limits • Mandatory annuity repayments	• LTV limit: 80% • LTV 80%-90%: max. 20% • DSTI limit: 60% • DSTI 60%-70%: max. 5 % • Sensitivity test (IR jump) • Maturity limits • Mandatory annuity repayments
Indebted-ness		• **DTI limit: 8** (net income) • **DTI 8+: max. 10%**	• DTI limit: 8 (net income) • DTI 8+: max. 10%	• **DTI limit: 2-8** (based on age) • DTI 8+: max. 10%	

Capital measures – Resilience

	2015-2016	2017	2018	2019	2020	2021	2022
Systemic risk buffer + O-SII buffer	1 – 2%	1 – 2%	1 – 2%	1 – 2%	1 – 2%	**0.25** – 2%	0.25 – 2%
Countercyclical capital buffer	0%	**0.5%** (since 08/2017)	**1.25%** (since 08/2018)	**1.5%** (since 08/2019)	**2%** (since 08/2020) **1%** (since 08/2020)	1% (since 08/2023)	**1.5%** (since 08/2023)

Outline

- Introduction – Housing Market Developments in the Slovak Republic
- Macroprudential Policy in the Slovak Republic
- Assessing the Impact of (some) Macroprudential Policy Measures
- Lessons on Policy Implementation
- Conclusions and the way forward

Assessing (some) MPP Measures - Overview

NÁRODNÁ BANKA SLOVENSKA EUROSYSTÉM

Policy need to **calibrate** and **evaluate** the measures

Cost-benefit analysis

Cost

Impact on lending

Access to lending by different groups of clients

Benefits

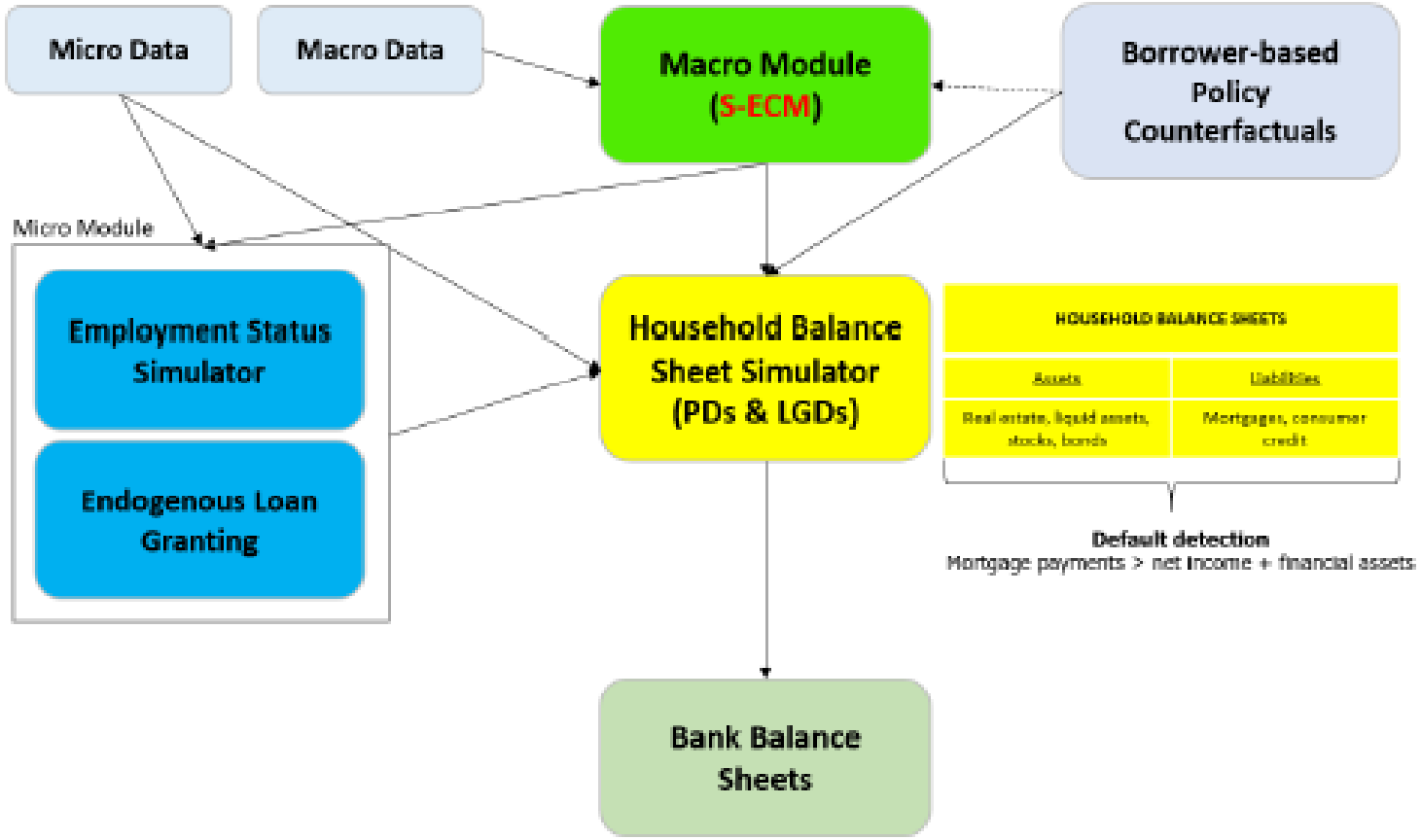
Banks / household resilience

Loans@risk concept

Empirical evidence

PDs by DSTI / DTI / LTV

Assessing BBMs ex ante – A semi-structural quantitative Framework

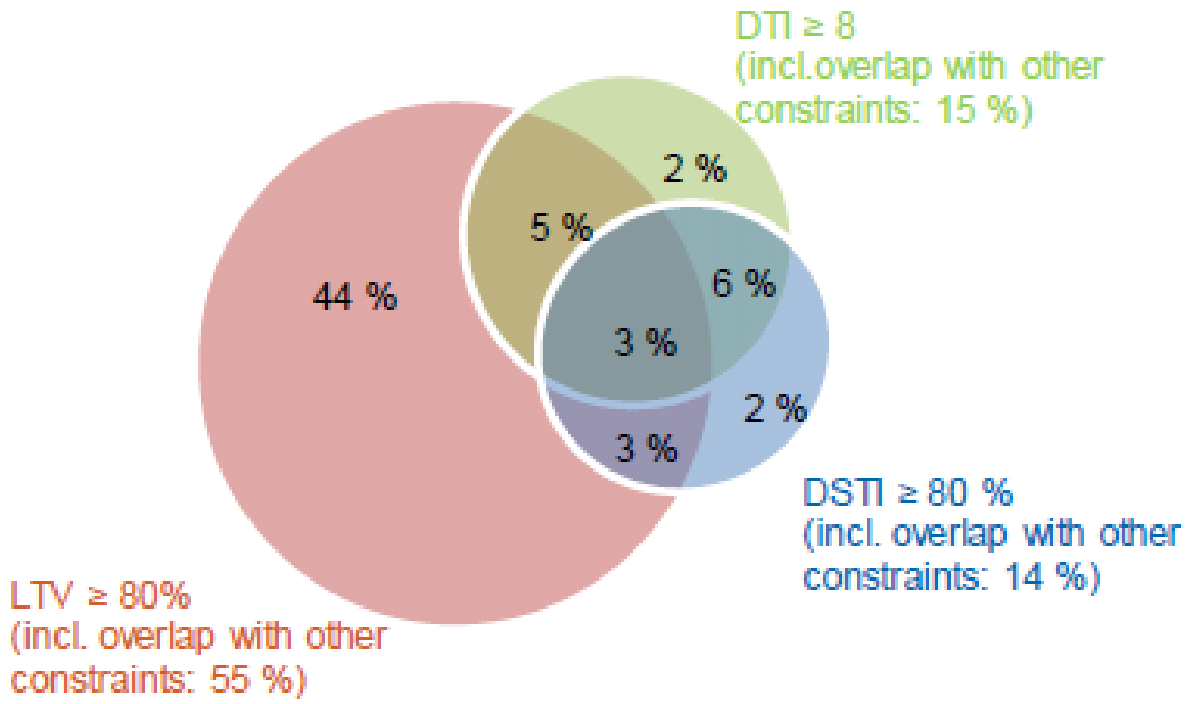


Sources:
Jurča, P., Klacso, J., Tereanu, E., Forletta, M. and Gross M. (2020), "The Effectiveness of Borrower-Based Macroprudential Measures: A Quantitative Analysis for Slovakia", *IMF Working Paper*, No WP/20/134.

Gross, M., and J. Población, 2017. "Assessing the Efficacy of Borrower-Based Macroprudential Policy Using an Integrated Micro-Macro Model for European Households," Economic Modelling, Vol. 61, 510-28.

Assessing BBMs ex ante– Lending above the Policy Caps

Figure 6: Share of Mortgage Lending above the Policy Caps



Sources: HFCS and authors' calculations.
Note: The diagram shows the share of new mortgages granted during 2015–17 exceeding regulatory limits or their combinations.

Assessing BBMs ex ante – Simulated overall Impact

Table 1: Cumulative Impact of Borrower Measures on Resilience and New Lending over the Three-Year Adverse Scenario

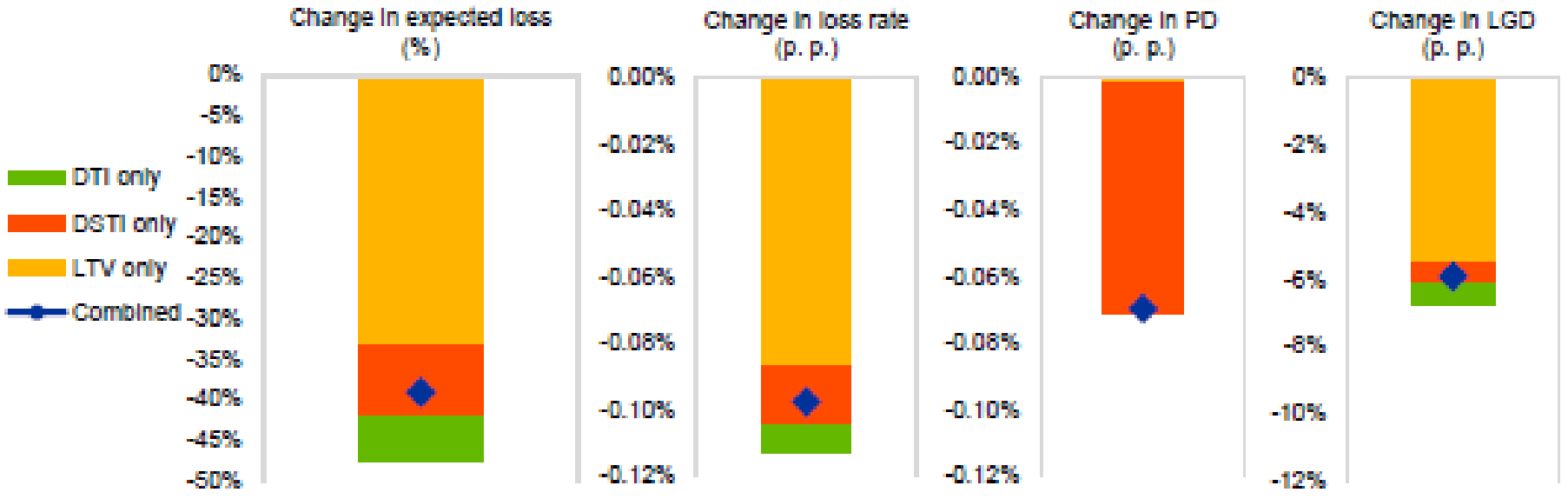
Median scenario	Without measures	With measures	Difference
Exp. loss (€ mil)	62	38	-39%
Loss rate	0.30%	0.20%	-0.1 pp
LGD	19%	13%	-6 pp
PD	1.68%	1.61%	-0.07 pp
NPL ratio	1.56 %	1.52 %	-0.04 pp
New loans (€ bln.)	20.70	18.70	-10%

Source: Authors' calculations.
Note: The values show the median scenario cumulative results over the whole stress period (2020–22) for new loans provided during 2018–22. NPL ratio as of end of adverse horizon.

Assessing BBMs ex ante– Simulated Impact by Measure

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

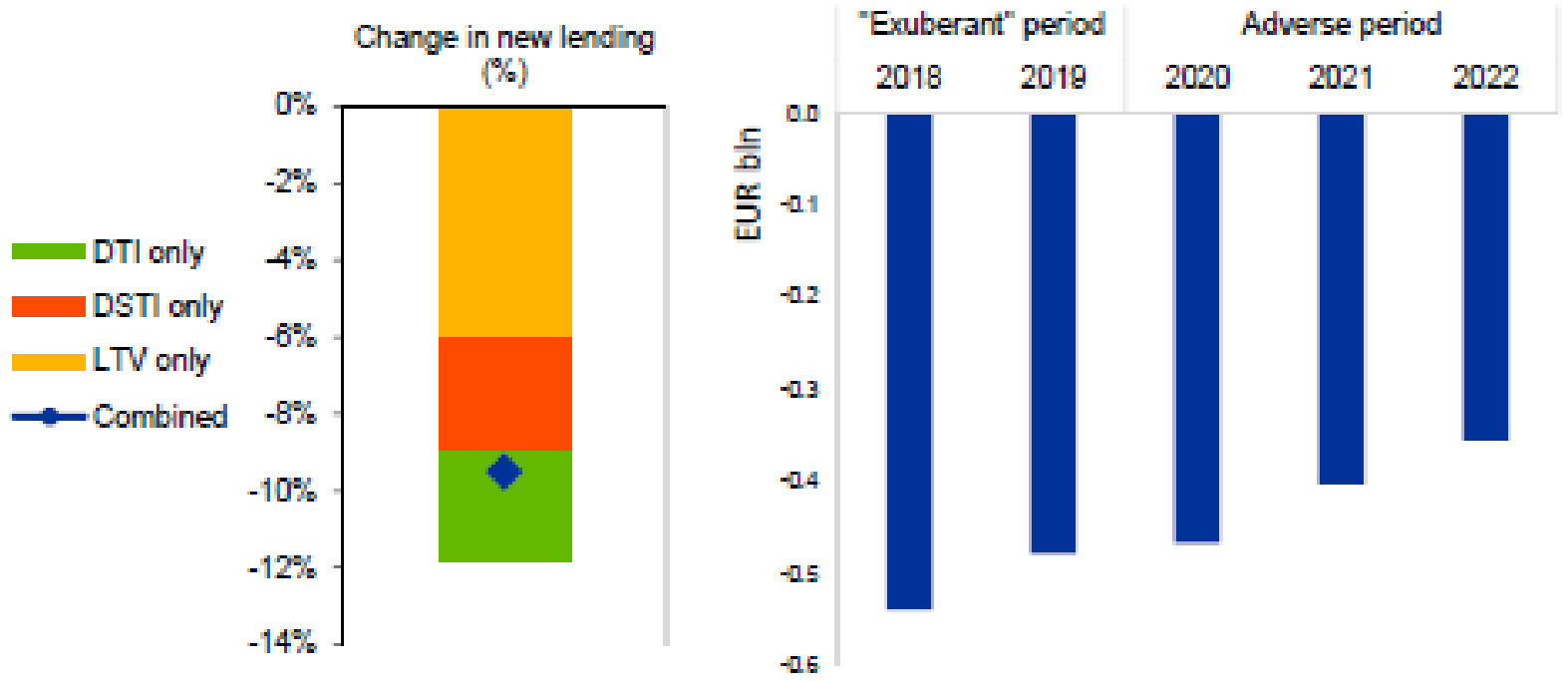
Figure 7: Relative Contributions of Borrower-Based Measures to Increased Resilience under the Adverse Scenario



Source: Authors' calculations.
Note: The decomposed impact does not always equal the joint impact, because some loans are affected by multiple limits, but the combined impact only represents the limit with the most significant impact.

Assessing BBMs ex ante – Simulated Impact on Lending

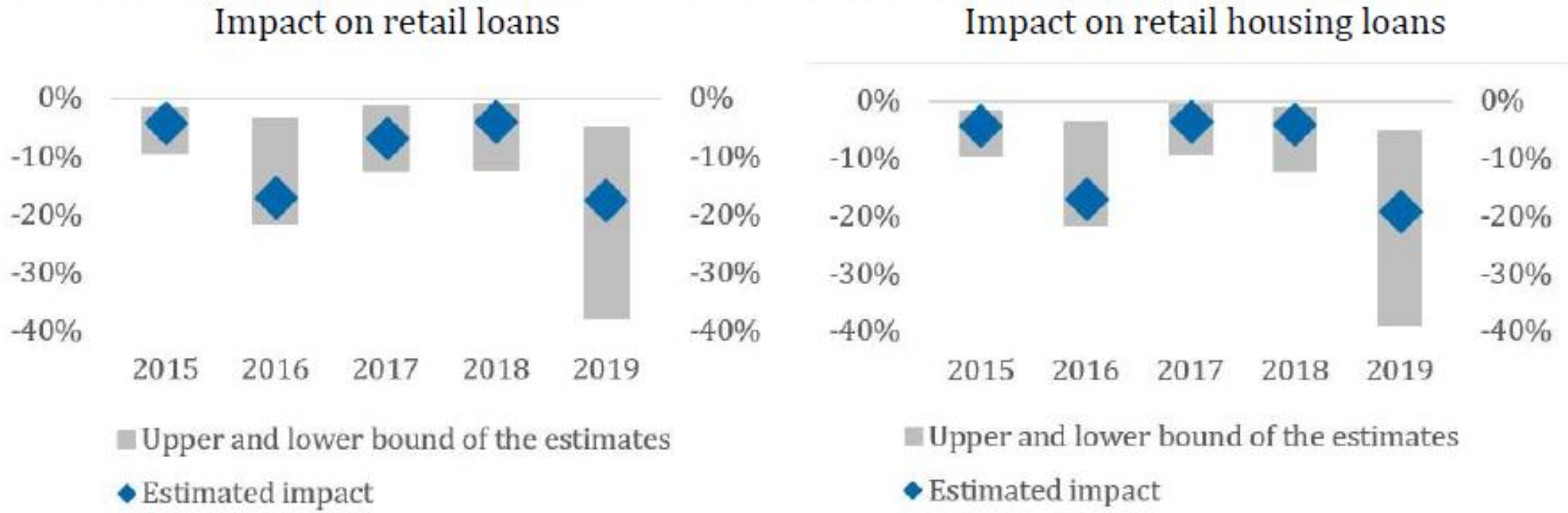
Figure 8: Impact of Borrower-Based Measures on New Lending During the Exuberant and Adverse Periods



Source: Authors' calculations.

Assessing BBMs ex post – Simulated Impact on Lending

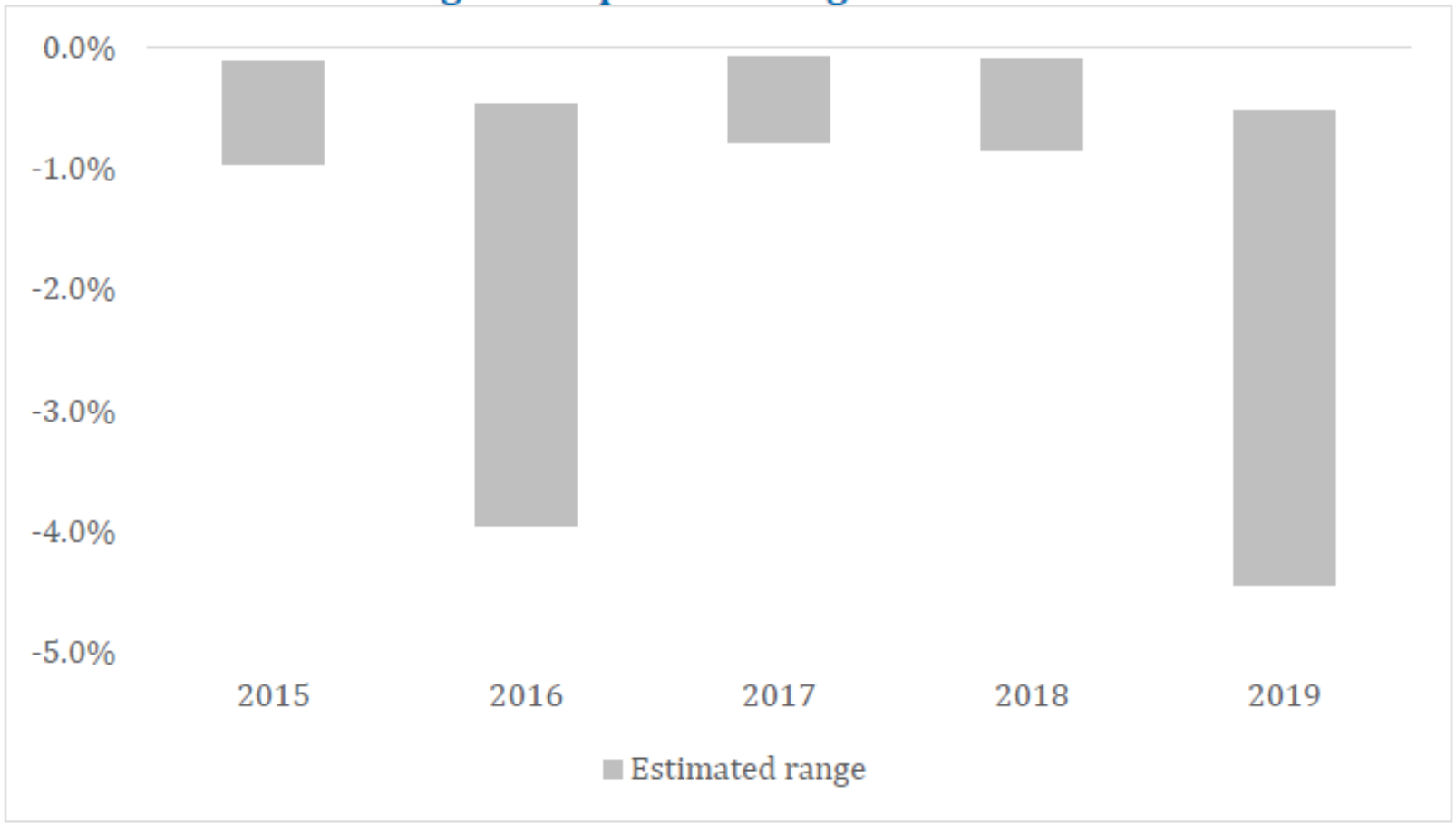
Chart 21 Overall estimated impact of limits on the volume of newly granted loans



Source: Cesnak, Klacso and Vasil (2021)

Assessing BBMs ex post – Simulated Impact on Lending

Chart 26 Estimated long run impact of changes in the volume of loans on real estate prices



Source: Cesnak, Klacso and Vasil (2021)

Assessing BBMs ex post – Simulated Impact on Lending

- DSTI measures affected mainly the riskiest borrowers with at most secondary education and lower income.

- Exemptions from DTI limits are provided mainly to borrowers with a higher volume of loans and higher education.

- LTV limits affected mainly younger borrowers up to 35 years old.

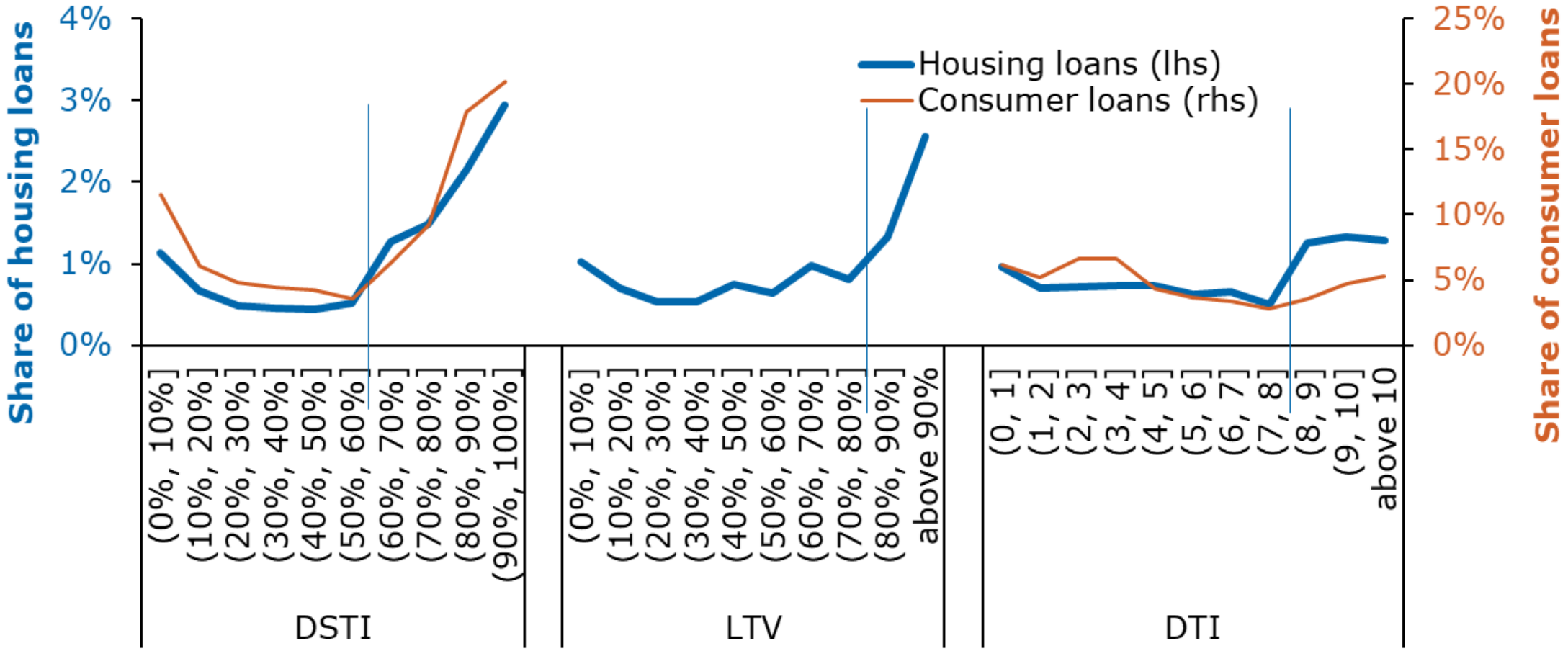
- The impact of respective measures was affected by front-loading, by the gradual tightening of the limits and by other legislative changes.

Source: Cesnak, Klacso and Vasil (2021)

Overall Effectiveness – Problem Loans

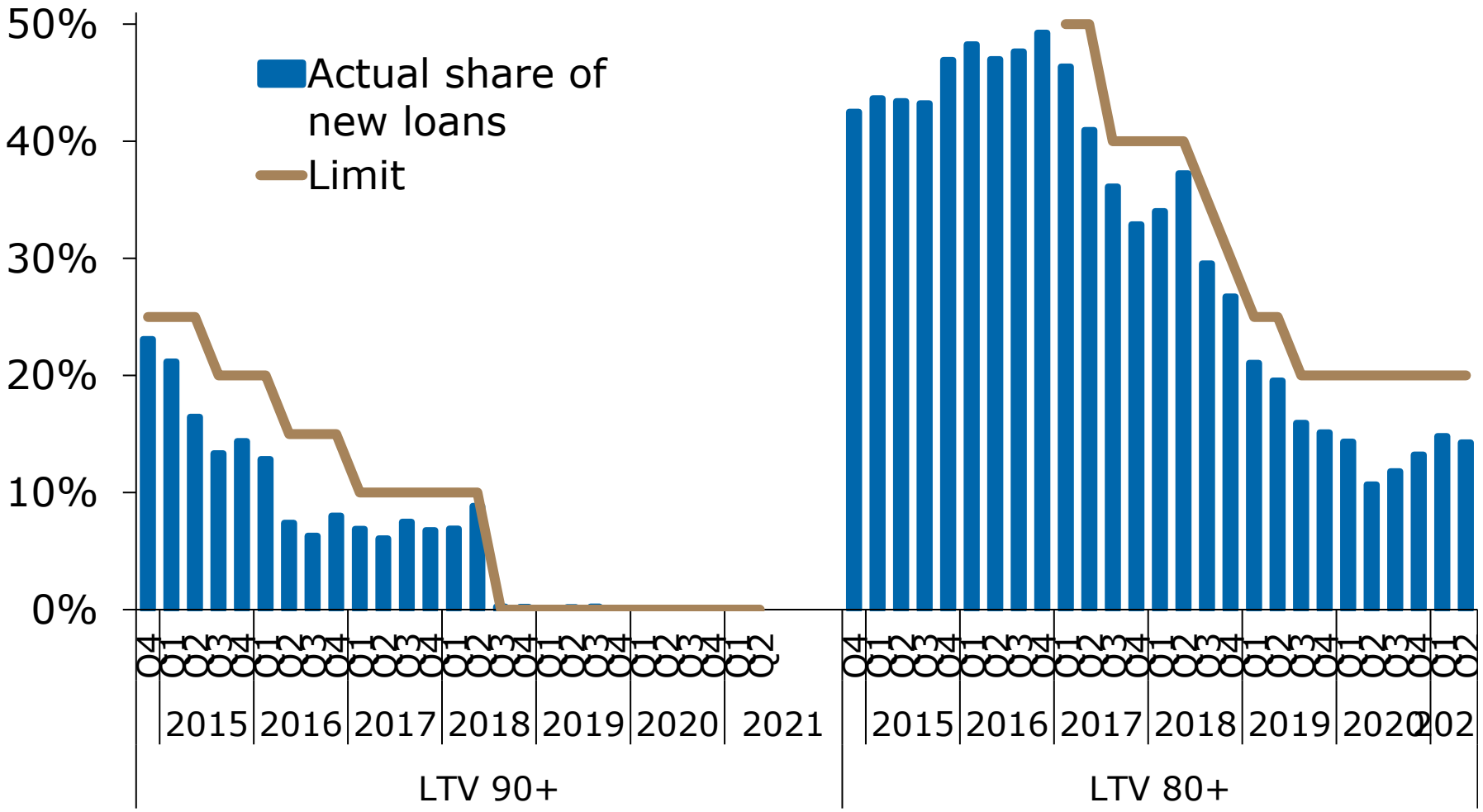
Share of loans in problems

(NPLs or loans with deferral of repayments over 30 days)



Overall Effectiveness – Loan Quality

Share of loans with high LTV decreased considerably



Overall Effectiveness – Stress Testing Loans at Risk

NÁRODNÁ BANKA SLOVENSKA EUROSYSTÉM

Table 3 Assumptions for the simulation of loans at risk

	December 2022 (year-on-year growth or level)	Baseline scenario (cumulative growth over 2023–25, or level as at Dec. 2025)	Adverse scenario (cumulative growth over 2023–25, or level as at Dec. 2025)
Inflation	12.1%	23.7%	20.6%
Housing prices (change)		-10%	-30%
Average nominal wage (change)	7.1%	25.5%	20.8%
Average real wage (change)	-5.0%	2.5%	-0.6%
Unemployment rate (level)	6.1%	5.0%	10.0%
Mortgage rate (level)	3.7%	5.7%	5.7%

Source: NBS.

Notes: The baseline scenario assumptions are based on NBS's spring 2023 medium-term forecast (MTF-2023Q1). Inflation is measured by the Harmonised Index of Consumer Prices. For inflation and wages, a linear change is assumed over the stress test horizon (2023–2025); for unemployment and interest rates, growth is slightly faster. Housing prices are assumed to decline during 2023 and then remain stable during 2024 and 2025. The average real wage is calculated as the average nominal wage deflated by the household consumption deflator.

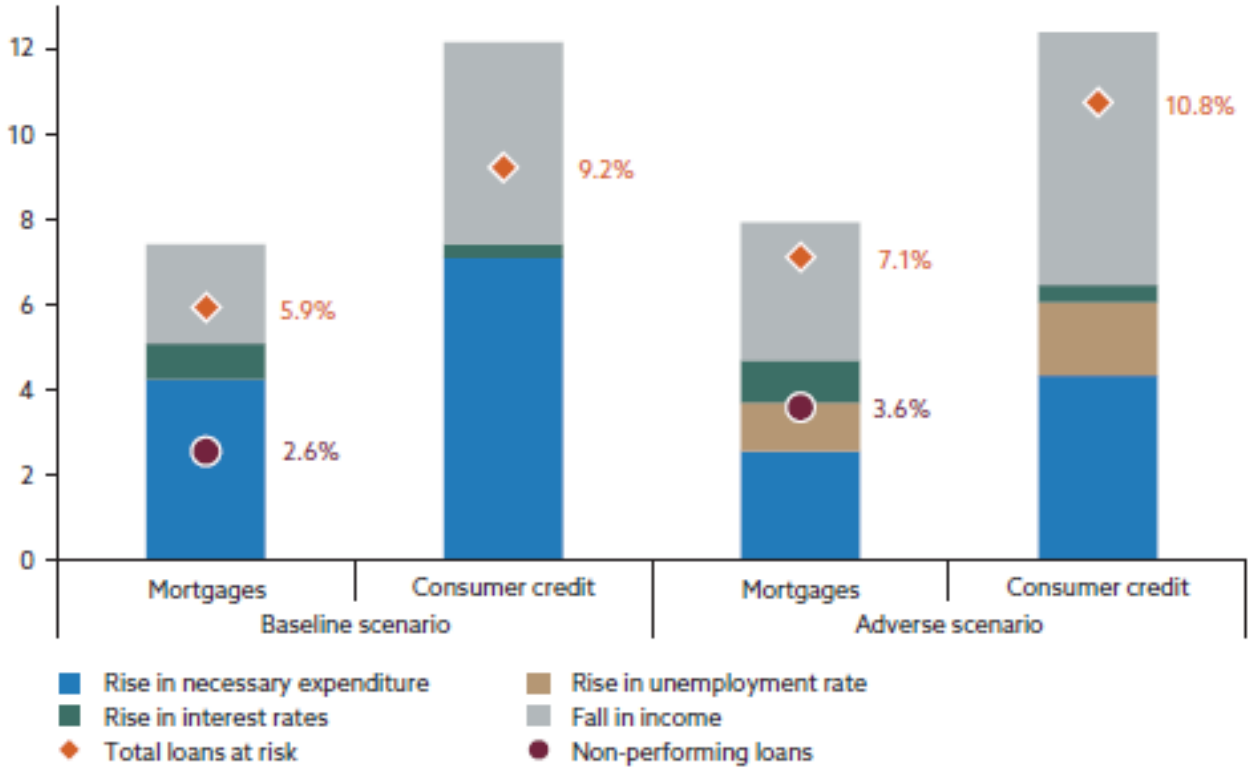
Overall Effectiveness – Stress Testing Loans at Risk

NÁRODNÁ BANKA SLOVENSKA EUROSYSTÉM

Chart 26

Impacts of different shocks on loans at risk

Share of household loans that will become at risk, by type of shock (percentages)



Source: NBS.

Notes: The increase in at-risk loans in the period 2023–2025 is simulated using the scenarios described in Table 3. Households at risk are here defined as households whose loan payment expenditure and necessary living expenses exceed their income and accumulated savings. For consumer loans, the NPL ratio is assumed to be the same as the share of loans at risk.

Outline

- Introduction – Housing Market Developments in the Slovak Republic
- Macroprudential Policy in the Slovak Republic
- Assessing the Impact of (some) Macroprudential Policy Measures
- Lessons on Policy Implementation
- Conclusions and the way forward

Granular data a ‘game changer’

- Detailed understanding of risks
- Monitoring, calibration of tools, cost/benefit analysis, measuring effectiveness...
- Enables the use of ‘screwdrivers’ rather than ‘hammers’

Averages do not tell you the whole story

Some individual agents might be exposed to much higher risk than the average ones

Micro data reveal vulnerable groups -> tailored response

Some agents behave differently and are exposed to different impact even under the same shocks

Detailed data facilitate effective policy response

Design, calibration and cost-benefit analysis is more precise and objective-oriented

The need for communication

Internal communication

Culture of internal communication

- Exchange of views, information
- Higher effectiveness in the bank
- Committees, working groups

Decision- making support

- Analyses, documents for decision makers

External communication

Predictability

- Understanding of the public about macropru policy
- All emerging risks should be identified and described – no schock policy
- Tools should be clearly explained

Reputation

- Built for many years
- Indebt knowledge of the market (market intelligence)
- Experience and international perspective

Readability for general public

- Financial stability hub
- Messages have to be clear even for general public

Communication - external publications

- Objective - all relevant stakeholders (banks, public, media, politicians) should be able to understand our messages

Easy language

Financial Stability Report

- Main trends/risks, stories
- Policy messages

Macroprudential Commentary

- Update on main trends/risks and policy messages

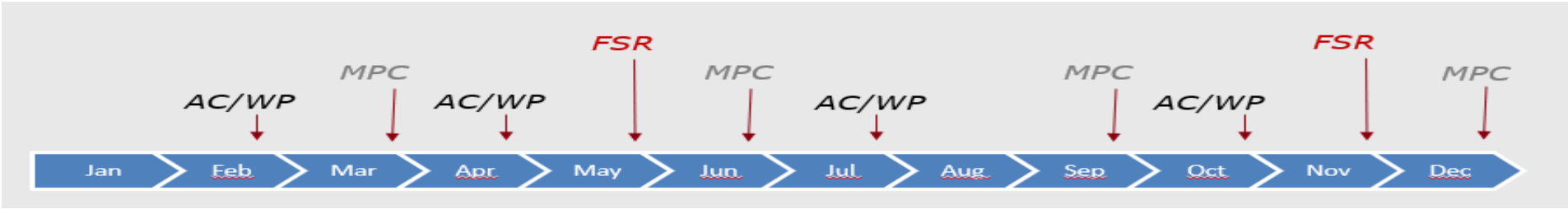
Technical language

Analytical commentaries

- Background analyses, indepth data, methodology

Working papers

- Comprehensive data analyses and models

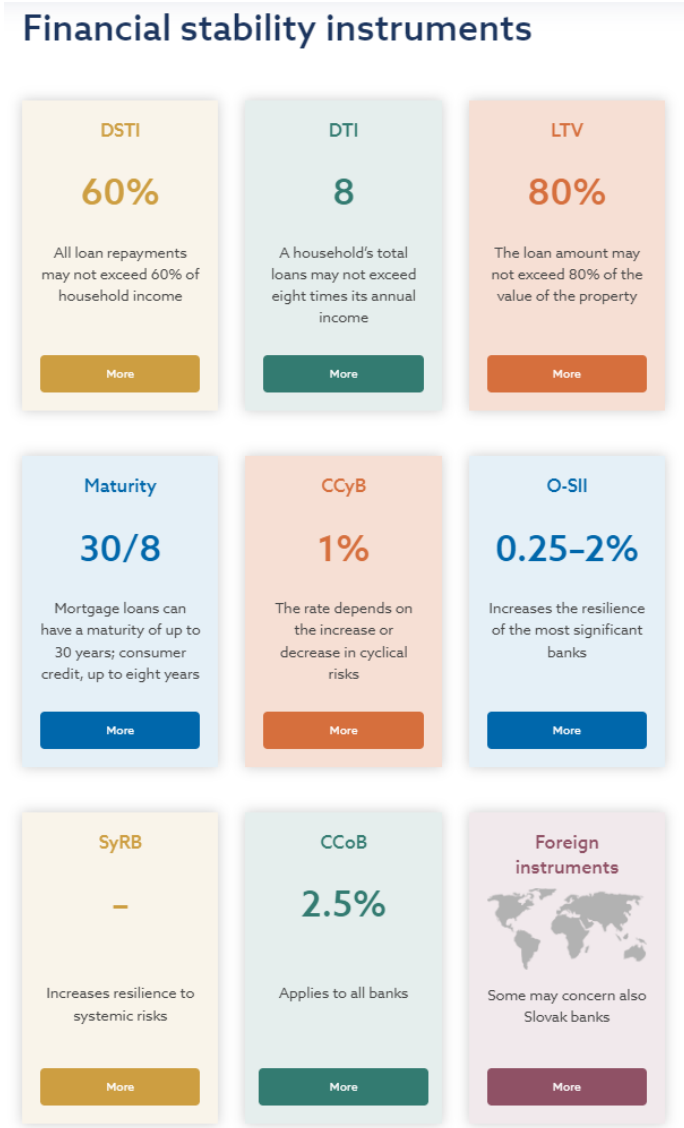


Communication – Financial Stability Hub

- All relevant information in one place
  - Dedicated section on NBS website
  - News, tools, publications, data, legislation and theoretical background
- Tiering approach - One hub for all visitors
  - More details in every tier

Tier 1	Tier 2	Tier 3
Overview	Detailed description	Legislation
For general public	For media and academics	For professionals

- Focus on the visitors
  - Easy-to-understand language, no legal terms (except for Tier 3)
  - Advanced graphical design
  - Flexible to changes
  - https://nbs.sk/en/financial-stability/



Outline

- Introduction – Housing Market Developments in the Slovak Republic
- Macroprudential Policy in the Slovak Republic
- Assessing the Impact of (some) Macroprudential Policy Measures
- Lessons on Policy Implementation
- Conclusions and the way forward

Conclusions and the way forward

- NBS implemented an encompassing set of MPP tools kit
- BBMs help to ensure that retail credit growth is safe, sound and sustainable. More suitable to address particular credit and real estate risks
- CBMs address already accumulated risks in the credit portfolio. Focus is on the global]picture, including overheating economy
- Increase in CCyB largely anticipated by banks – it is more the matter of proper planning, while BBMs significantly affect the market and the clients

Conclusions and the way forward

- MPP implementation entails a number of risks
  - Leakages - risk migration to less regulated sectors
  - Market distortion / volatility – if policy changes or interventions are unexpected
  - Moral hazard - easing of banks' own risk limits, encouraging risk-taking behavior

- Measures should target risks that are clearly identified (targeted on the riskiest groups) – Use 'screwdrivers' rather than 'hammers'

- Flexibility is helpful and can take different dimensions
  - Tighter BBMs for specific groups (e.g. younger clients)
  - Type of products (e.g. longer maturities for loans for building society
  - Purpose of the loan (e.g.less strict conditions for 'green loans')

Conclusions and the way forward

- MPP during cyclical downswings – whether and when to release measures?

- MPP in times when fiscal interventions tend to avoid banks' losses
  - Losses are lower but other questions arise
    - Moral hazard: Banks may learn that there will always be somebody to cover potential losses
    - Increasing sovereign risk as government debt is rising

- Increasing risk of large-scale bank runs (amplified e.g. by growing role of social media and fin-techs). More focus on banks' governance and better understanding of deposit structure

- Other challenges lying ahead
  - Climate and ESG risks
  - Growing role of non-bank institutions
  - Digital currencies

Thank you for your attention

Questions / comments / suggestions:

reiner.martin@nbs.sk

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM