The National Bank of Slovakia Residential Real Estate Dashboard

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Národná banka Slovenska
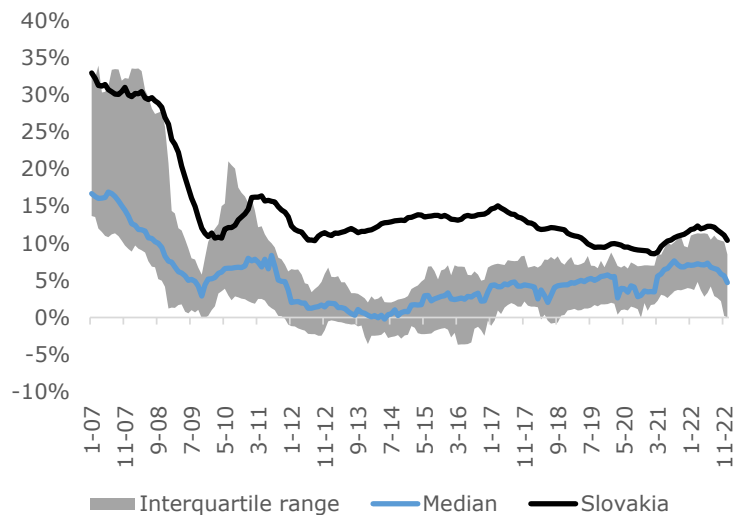
NBP and SGH Warsaw School of Economics Workshop
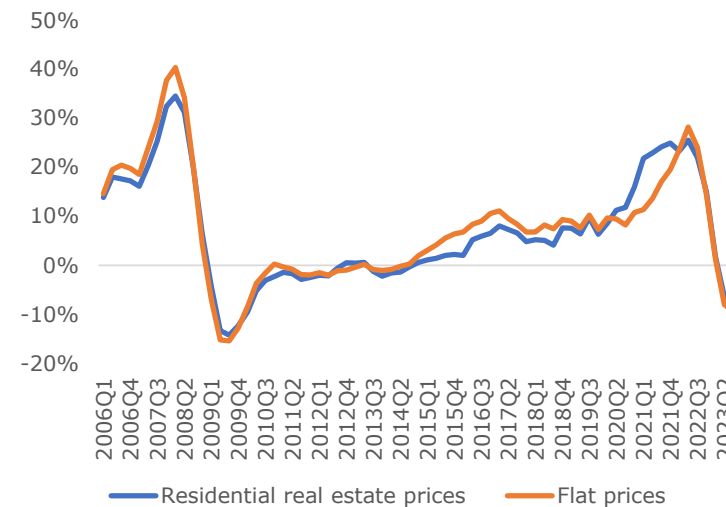
30 November 2023

Motivation

- Home ownership almost 90% according to the 4th wave of HFCS

- Housing loans make up to 36% of banks' assets

- RRE is important both from economic and financial stability perspective

Housing loan growth: SK vs EU

Source: ECB.

Real estate price growth

Source: NBS.

Motivation (2)

- RRE is one of the key markets in Slovakia => different RRE indices have been developed

- These indices are used in different NBS publications

- Regular
  - Economic and Monetary Developments
  - Financial Stability Report

- Irregular
  - Policy briefs
  - Analytical notes
  - Working papers

- Sometimes, the outcome of these indices can deviate from each other

- RRE Dashboard including all the relevant indices can help the communication both with expert counterparties and the public

- The project involved 3 business areas: Monetary policy, Financial Stability and Research

Currently, we aim to include the following indices into the dashboard:

Indices informing about possible over- or undervaluation of RRE

- **1 composite** index
- **3 housing affordability** indices
- **1 macroeconomic** index based on a "fundamental price" approach

A model shading some light on the driving forces behind price development

- **1 structural** model aimed at house price decomposition

List of indices (2)

- The aim of the Composite index is to relate house price dynamics to other, closely connected fundamental indicators in a simplified way
- 5 partial indicators
  - real house price
  - price-to-rent ratio
  - price-to-income ratio
  - housing loans-to-GDI ratio
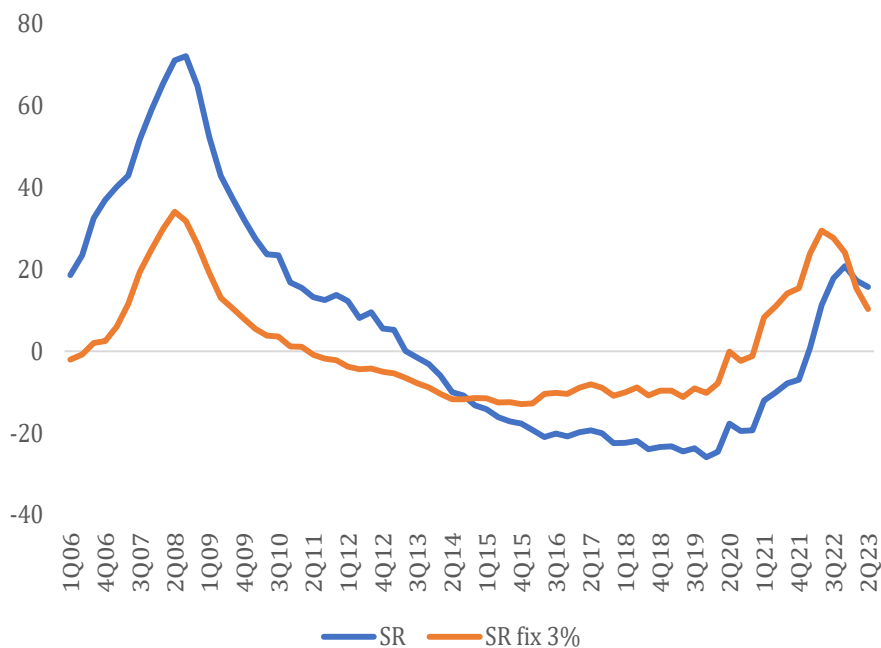 - residential construction-to-GDP ratio
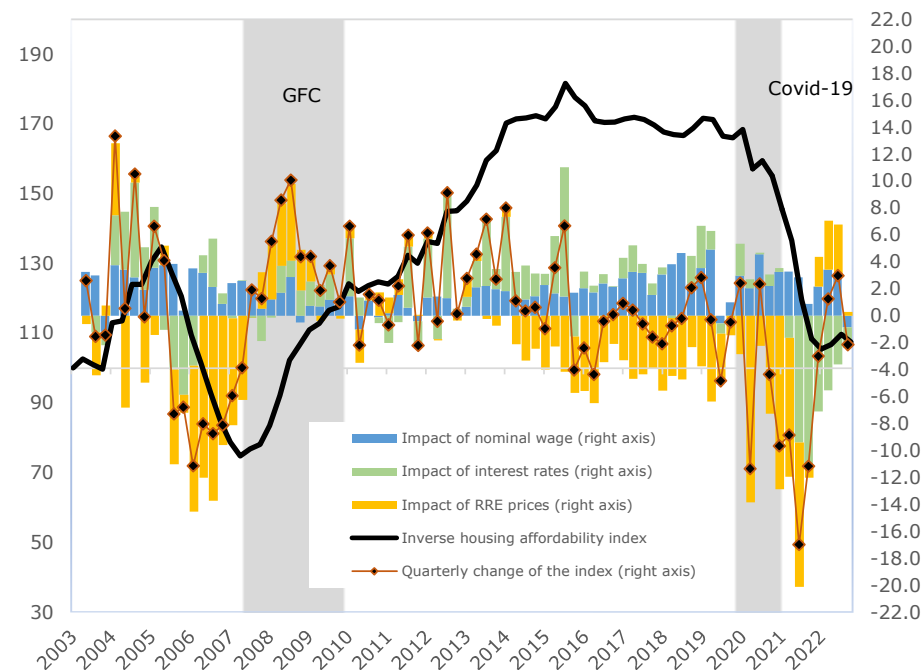
Composite index
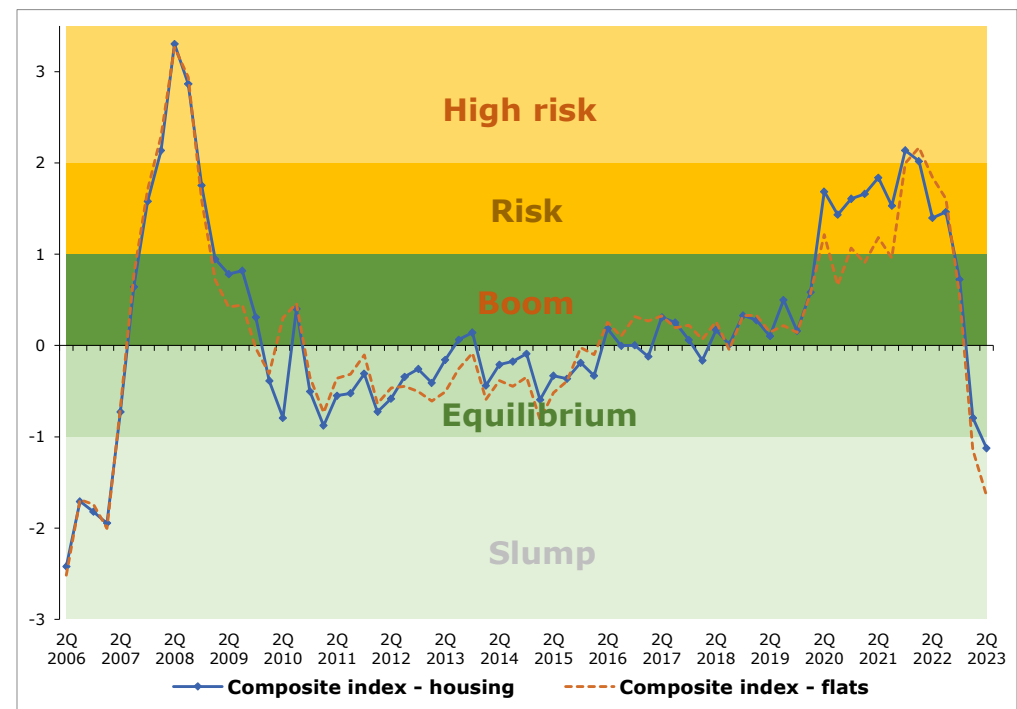
Source: NBS.

- Housing affordability indices indicate, how manageable is to own a property with the help of a housing loan

Housing affordability index
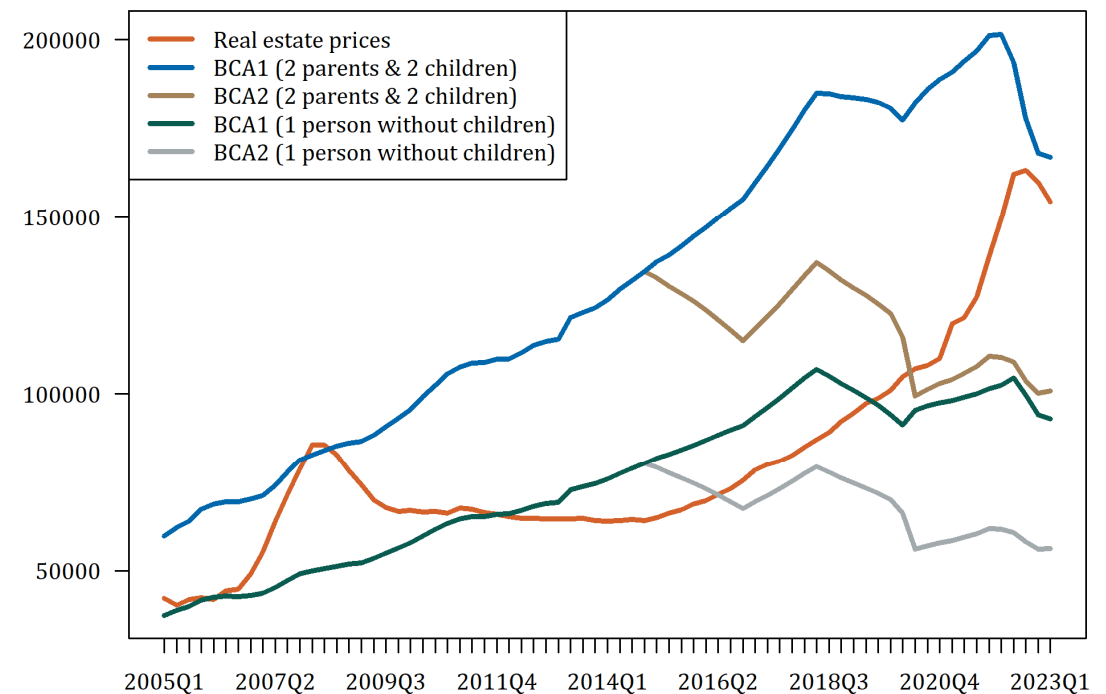

Source: NBS.

Inverse housing affordability index

GFC

Covid-19

Impact of nominal wage (right axis)
Impact of interest rates (right axis)
Impact of RRE prices (right axis)
Inverse housing affordability index
Quarterly change of the index (right axis)

Source: NBS.

List of indices (4)

- The borrowing capacity approach assesses house prices based on maximum attainable volume of loan(s) for a given household
  - The impact of BBMs is included in the calculations
  - Real estate prices do not impact the outcome of this approach
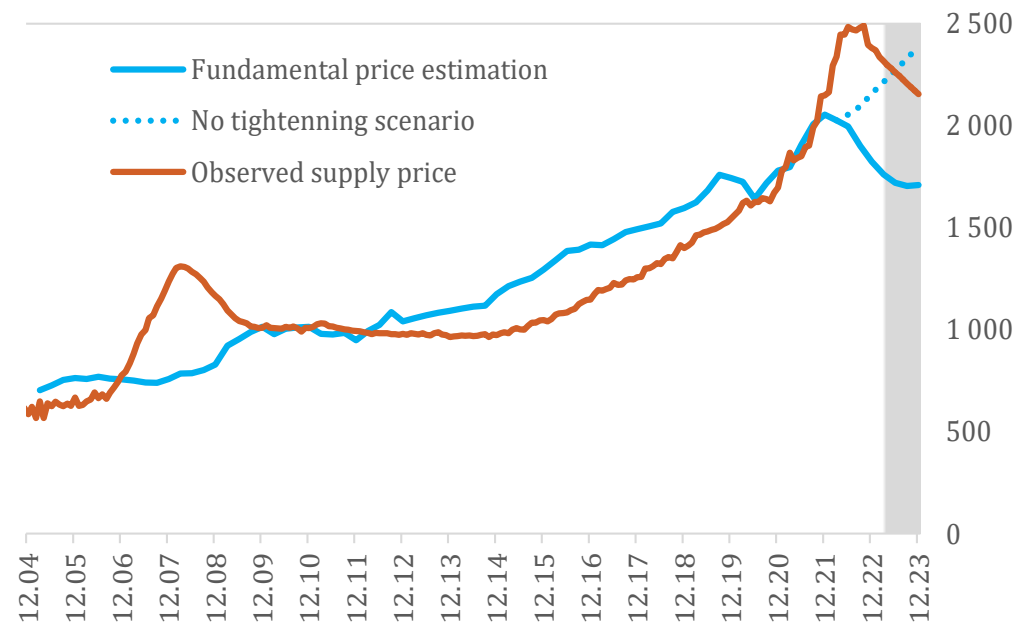
Borrowing capacity approach (EUR)

Source: NBS.

- Demand side model

- Potential demand calculated based on

  - Number and age of workforce

  - Average income

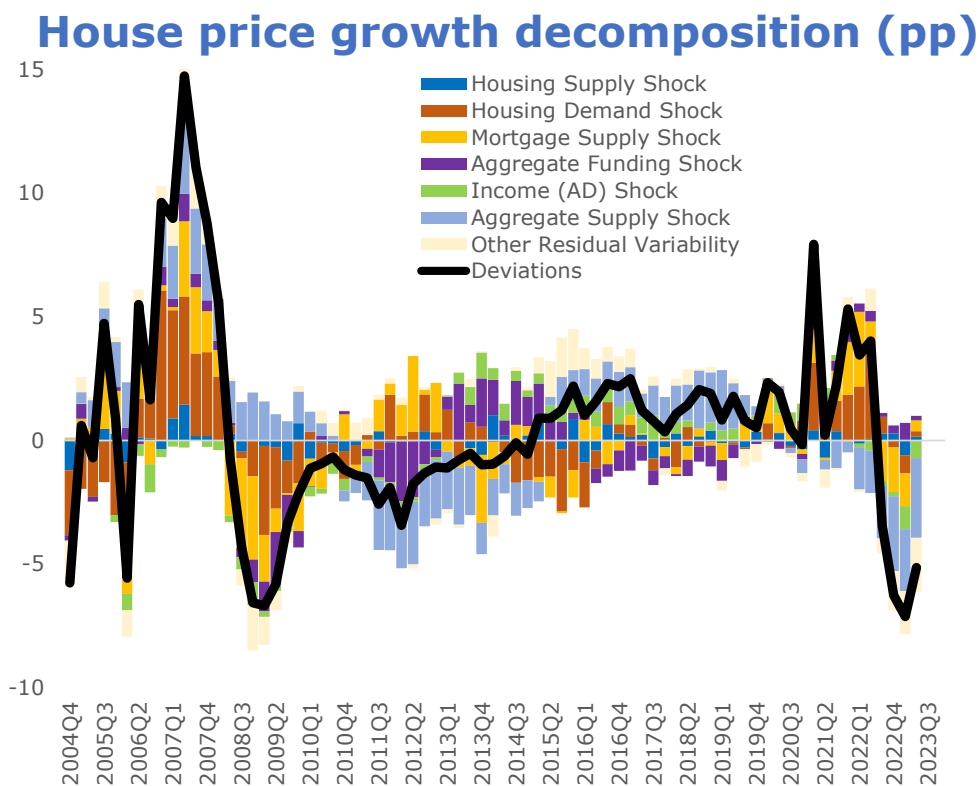 - Existing debt burden

  - Average interest rate

Fundamental RRE price (EUR)

— Fundamental price estimation
····· No tightenning scenario
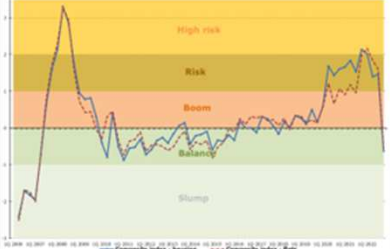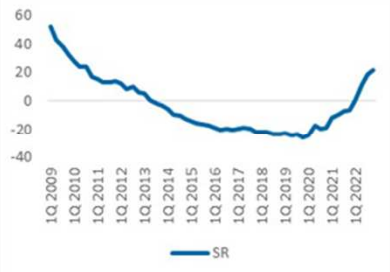— Observed supply price

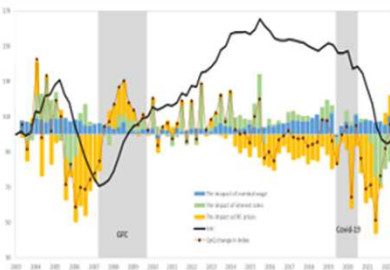Source: NBS.

List of indices (6)

- Decomposition of real house price growth

- 6 structural shocks are identified

- Currently, the focus is on

  - Monetary policy shock (Aggregate funding)

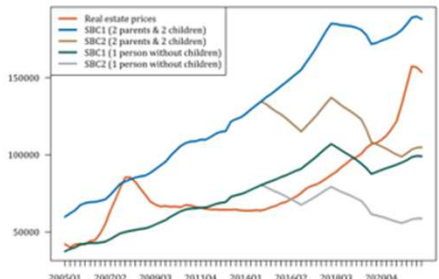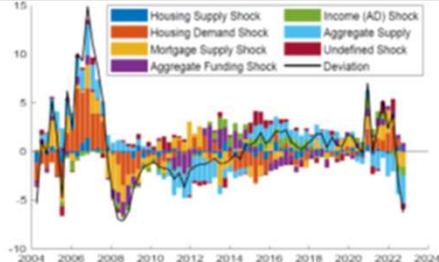 - Income shock

  - Aggregate supply shock (Inflation)

House price growth decomposition (pp)

Source: NBS.

Level 1

Level 1

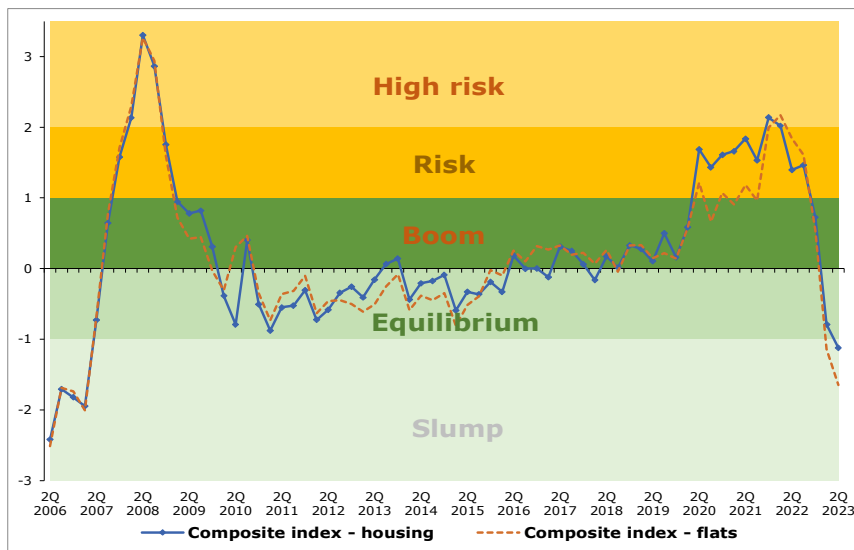|				
	Borrowing capacity index	2023Q1		3-4 words, short comment
Fundamental RRE price		2023Q1		3-4 words, short comment
House price growth decomposition		2023Q1		3-4 words, short comment

Dashboard – design (3)

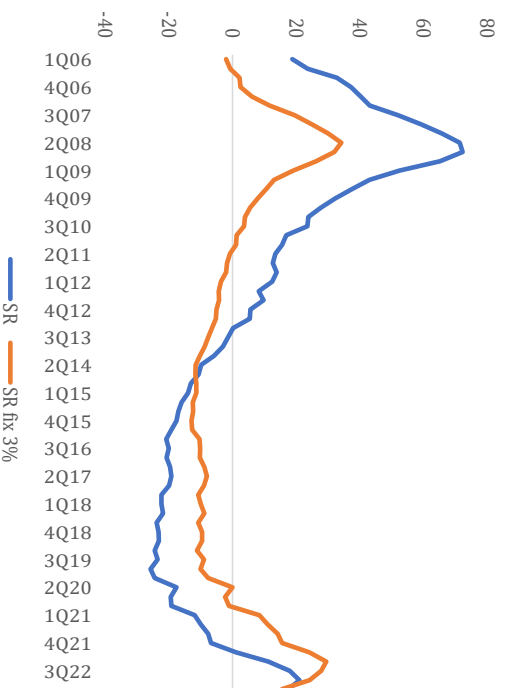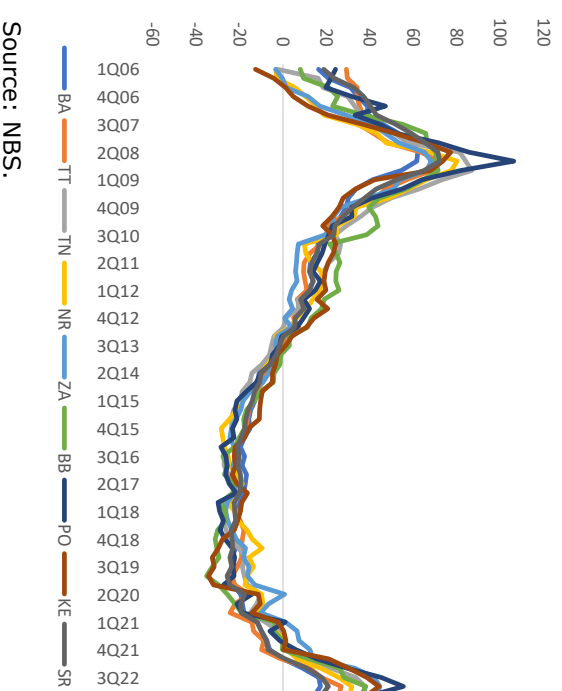## Level 2: example 1

Main index

Source: NBS.

Subindices
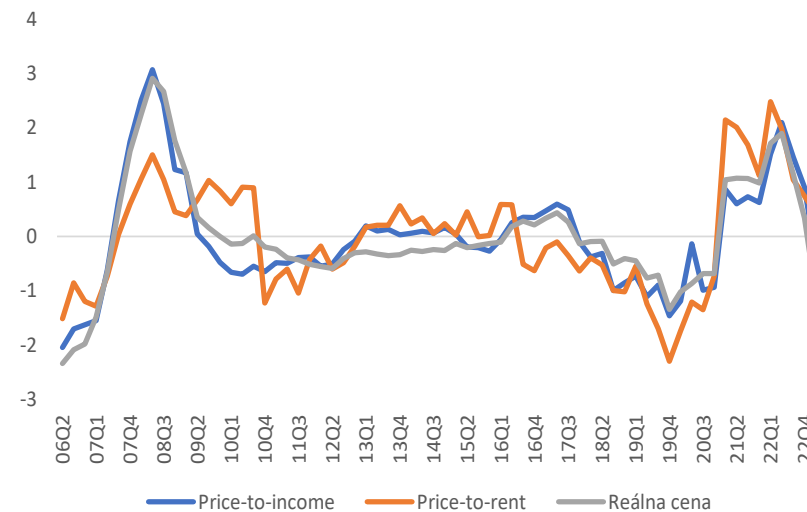
Source: NBS.

Dashboard – design (4)

Level 2: example 2

Main index

Source: NBS.

Regional breakdown

Source: NBS.

NÁRODNÁ
BANKA
SLOVENSKA
EUROSYSTÉM

Dashboard – accompanying documentation

- Methodological note
  - Motivation for dashboard
  - Data used
  - Methodology
  - Interpretation

- After each update
  - Short comment on the development of each index
  - Short summary on the development

Summary

- RRE is of a crucial importance, both from economic and financial stability perspective
- Several indicators are used to assess the development, with possibly different signals
- Dashboards are a useful tool to summarize our knowledge
- Can help the communication with the public but also with external experts
- Indices need to be clearly described
- The whole dashboard is regularly updated, subject to future changes

Thank you very much for your attention!

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