



NÁRODNÁ BANKA SLOVENSKA
EUROSYSTEM



Is there a real estate bubble in Slovakia?

Bratislava Workshop on “Persistent Unemployment
in Local Labour Markets and Local Development”

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- 1 Housing in Slovakia – general remarks**
- 2 Slovak real estate prices**
- 3 Appendix – Slovak real estate data**



1 Housing in Slovakia – general remarks

2 Slovak real estate prices

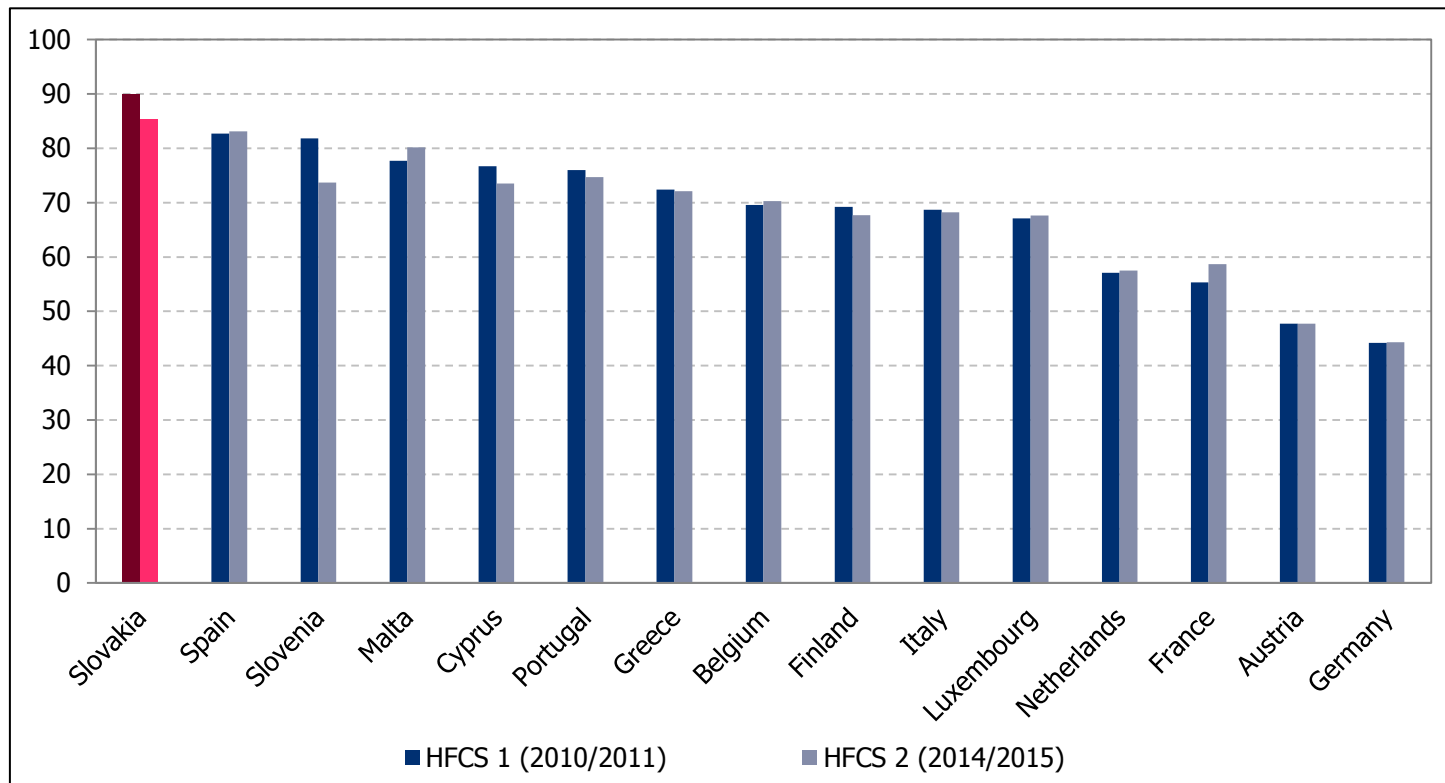
3 Appendix - real estate data

Home-ownership in SK at extreme high



- Different patterns in home-ownership across EU countries
- In Slovakia, almost 9/10 households own their Household main residence (HMR)
- What are the consequences of an excessive home-ownership?

Home-ownership rate (%)



Source: HFCS, ESCB.



- **Housing and portfolio choice**

- Housing tends to reduce the demand for risky assets – **high property ownership could limit capital market development**
- Due to investment in housing, younger and poorer households have **limited financial wealth** to invest in stocks, which reduces the benefits of equity market participation (Cocco, 2005)
- The stock share of liquid wealth would rise by 1 percentage point – 6% of the mean stock share – if a household were to spend 10% less on its house, holding fixed wealth (Chetty et al., 2017)



- **Housing, mobility and the labor market**
 - **Oswald Hypothesis:** *“a statistically significant positive relationship exists between changes in home-ownership and the rate of unemployment”*
 - This result has been confirmed for the OECD countries (e.g. Nickell and Layard, 1999) as well as the US (e.g. Head and Lloyd-Ellis, 2012)
 - The decision of homeowners to accept job offers from other cities depends on how quickly they can sell their houses (i.e. house's liquidity) → **homeowners accept job offers from other cities at lower rate compared to renters**
 - Relevant for Slovakia – workers in Slovakia are less mobile?



- **Housing and social consequences – some examples (Dietz and Haurin, 2003)**
 - **Homeownership and child outcomes** – housing creates a positive atmosphere for the development and maturity of children/adolescents; also positive impact on educational outcomes (test scores and graduation rates of children)
 - **Homeownership and health** – owning a house is positively associated with physical, mental and emotional health, as well as life satisfaction and happiness
 - **Homeownership, social outcomes and political involvement** - homeowners tend to vote more often compared to renters
 - **Homeownership and crime** – housing status for a household or individual reduces their likelihood of suffering a loss from criminal activity

Housing and inequality



Table: Comparison of inequalities across countries

Total wealth		Financial wealth	
Country's rank	Gini index	Country's rank	Gini index
1. Slovakia	0.492	1. Malta	0.653
2. Malta	0.586	2. Netherlands	0.676
3. Poland	0.587	3. Poland	0.677
4. Belgium	0.589	4. Austria	0.684
5. Greece	0.599	5. Slovakia	0.689
6. Spain	0.599	6. Belgium	0.718
7. Italy	0.603	7. Germany	0.728
8. Slovenia	0.628	8. Cyprus	0.736
9. Hungary	0.643	9. Italy	0.758
10. Luxembourg	0.646	10. Portugal	0.759
11. Finland	0.648	11. Luxembourg	0.765
12. France	0.676	12. Hungary	0.769
13. Portugal	0.678	Euro-area	0.782
Euro-area	0.685	13. Finland	0.785
14. Estonia	0.691	14. France	0.790
15. Netherlands	0.698	15. Greece	0.794
16. Cyprus	0.717	16. Estonia	0.800
17. Austria	0.731	17. Ireland	0.812
18. Ireland	0.752	18. Spain	0.818
19. Germany	0.762	19. Slovenia	0.821
20. Latvia	0.785	20. Latvia	0.897

Source: HFCS, ESCB.

- **Housing belongs to the most equalizing assets**
- Lindner (2015) decomposed wealth inequality for euro-area households into components → HMR has the largest relative contribution to improving (decreasing) inequality

So extreme home-ownership could



- decrease mobility (increase unemployment) and decrease liquidity of household wealth (decrease the size of financial assets)

- ... but has other positive social outcomes (child care, health, crime, social cohesion, equality)



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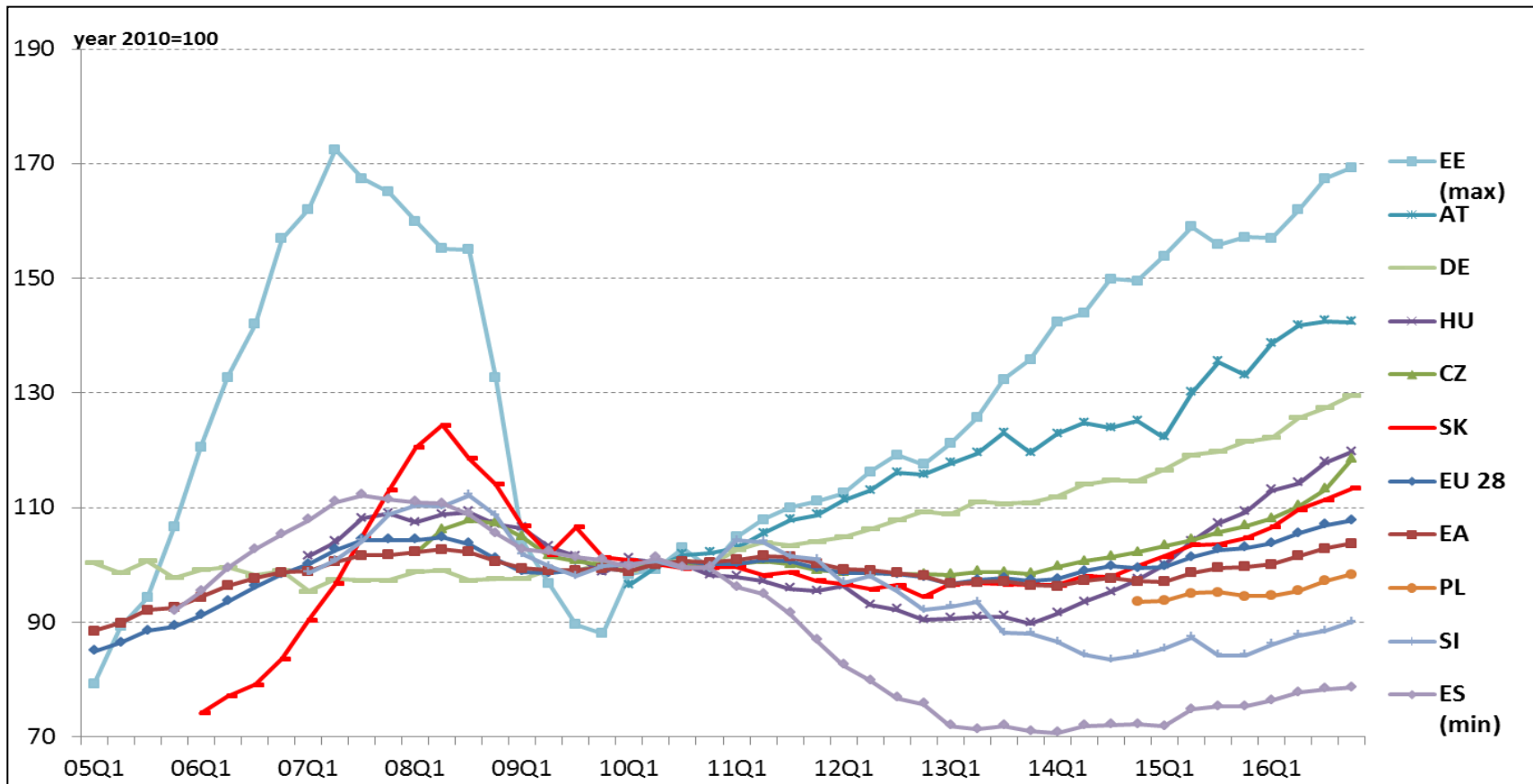


International perspective

House prices development



- Large heterogeneity of housing prices development across EU countries
- The development of housing prices in Austria and Germany reaches its historical maximum only recently

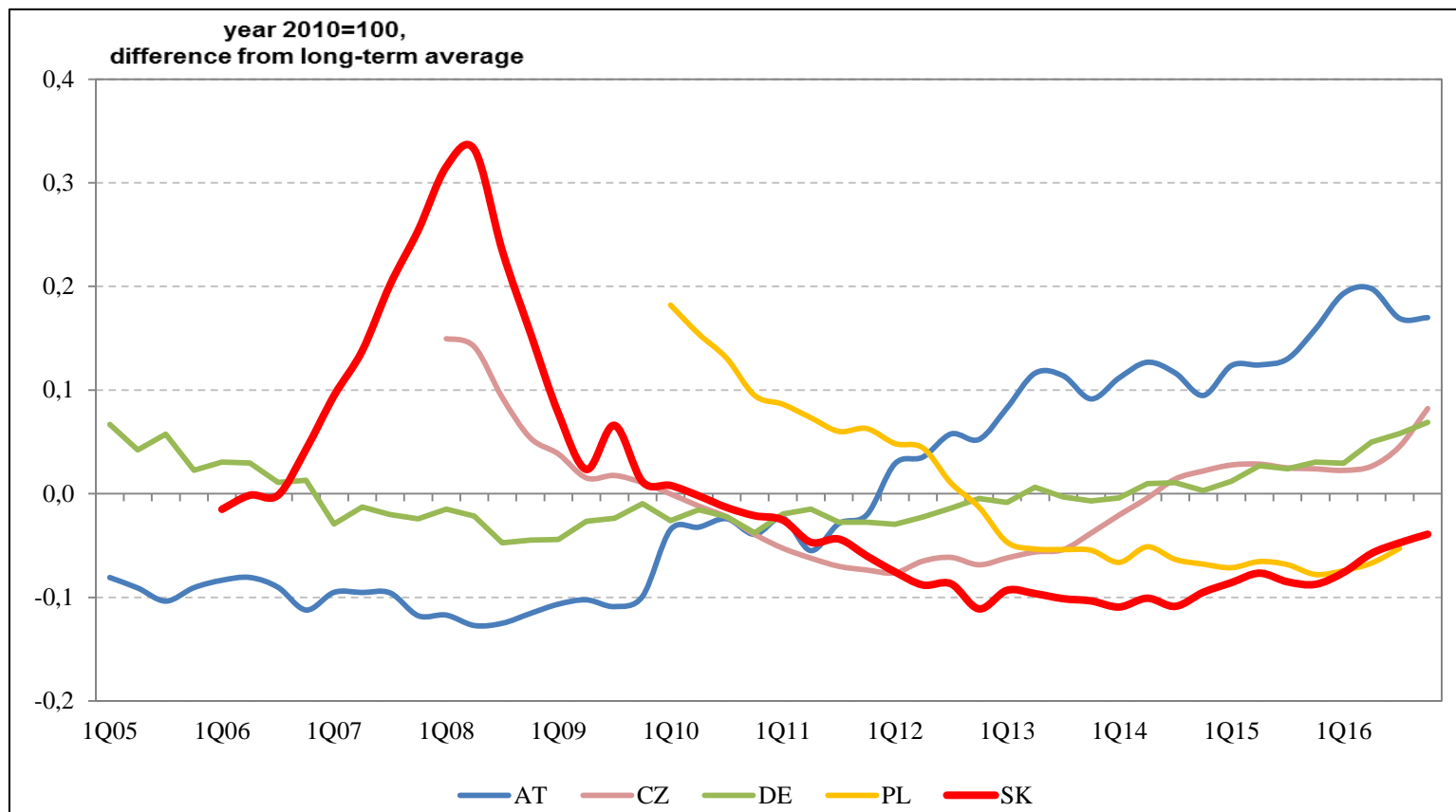


Source: Eurostat.

Price to Income Ratio



- The housing price to income ratio measures the current housing price growth compared to the benchmark - disposable income
- In the neighbor countries (AT, HU, CZ), the post-crisis growth rate was slow and SK + PL are still below the average of 2010 (PL short time series)

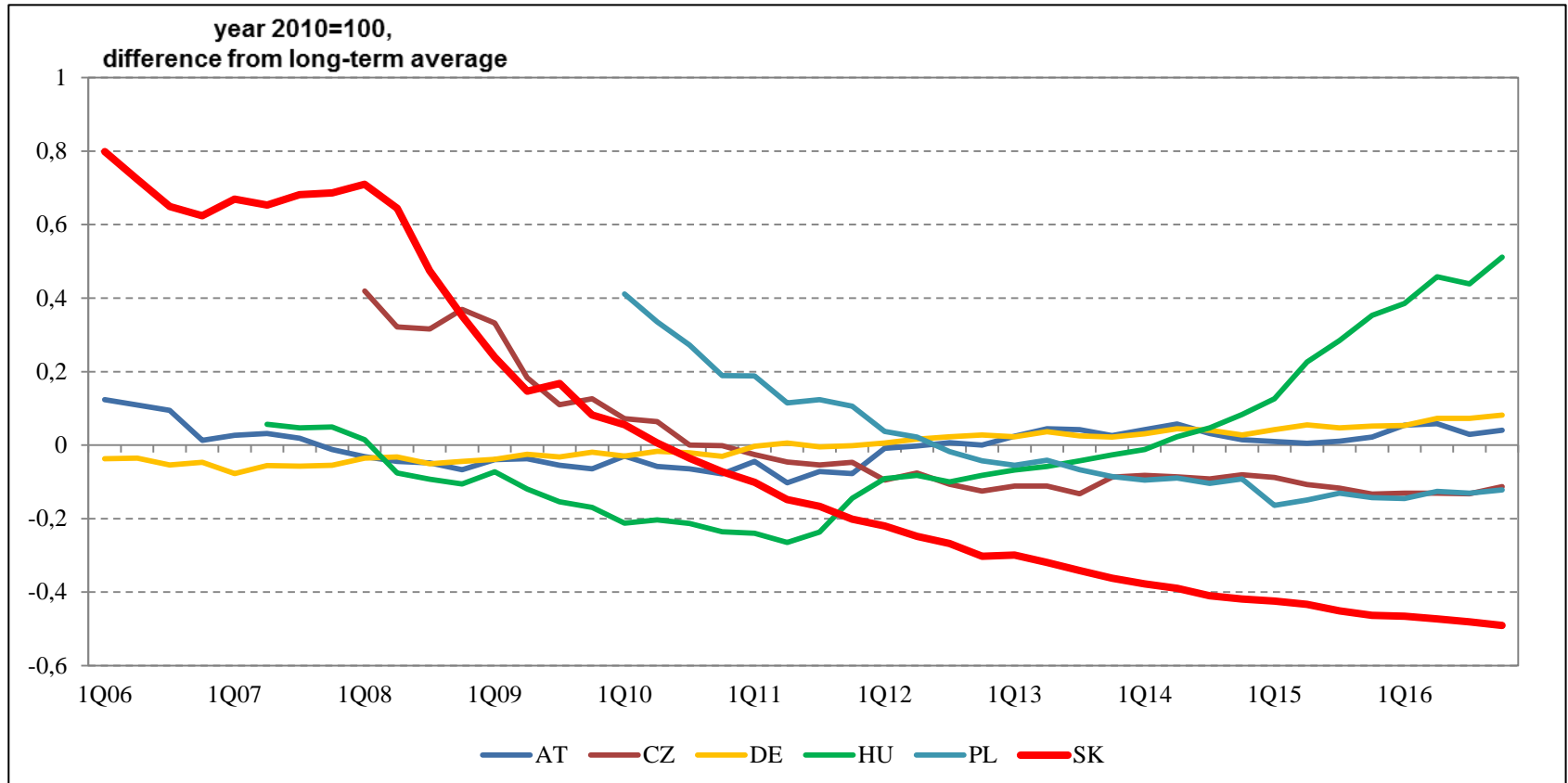


Source: Eurostat, NBS.

Price to Loans Ratio



- So far, the increase in loans did not generate much housing price increases in recent years in Slovakia compared to neighboring countries



Source: Eurostat, NBS.



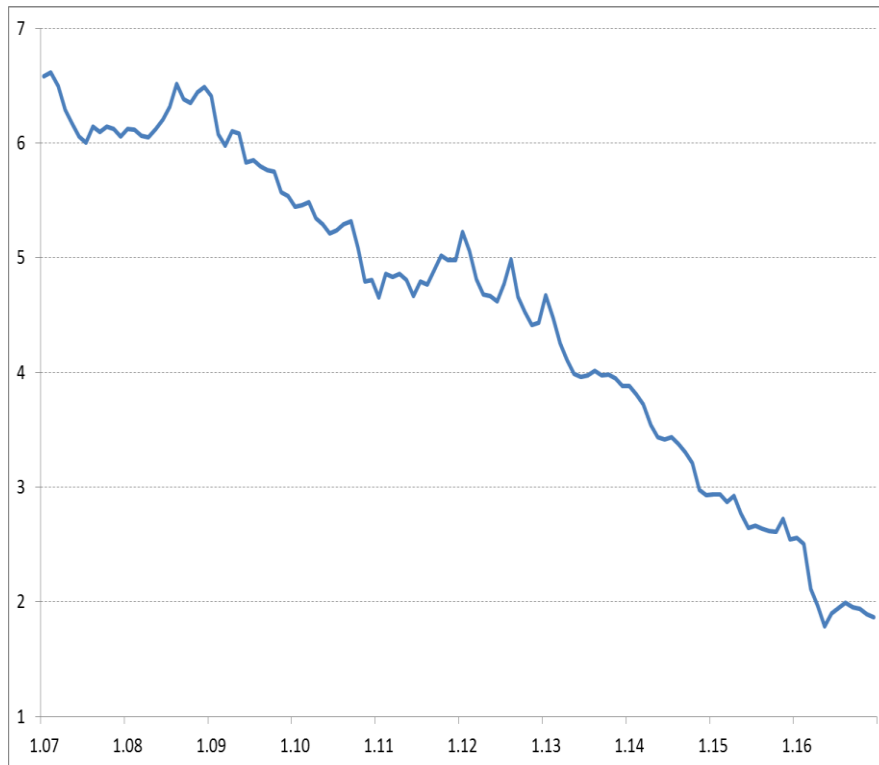
Domestic developments

More loans at much better prices



The conditions for financing the purchase of housing through loans are constantly improving, but some of the improvements are permanent (the euro, "Beblavy" regulation: less barriers to competition).

Development of the average interest rate on housing loans (%)



Source: NBS.

Year-on-year development of housing loans (%)



Source: NBS.

Housing prices development

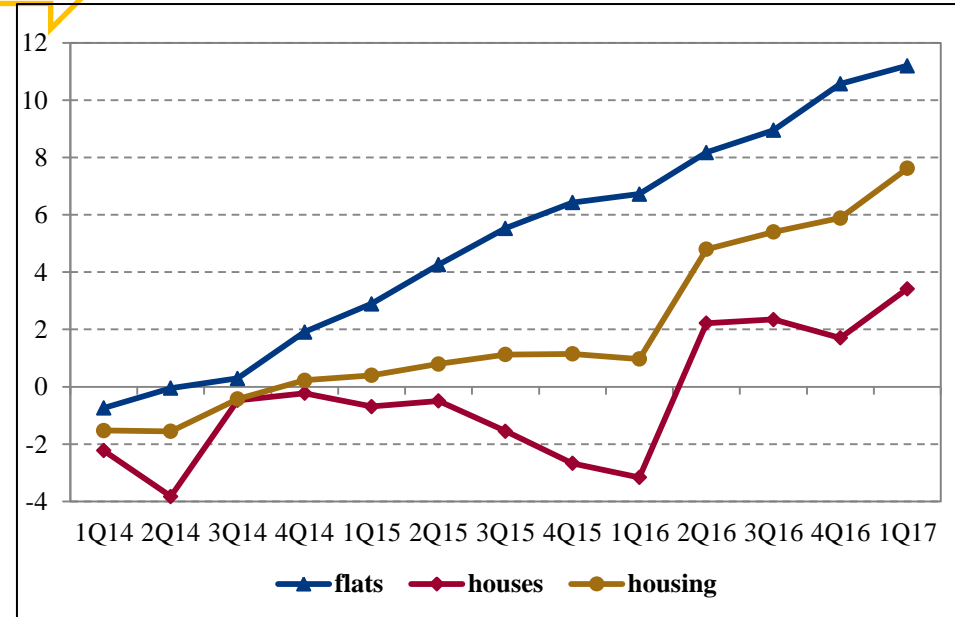
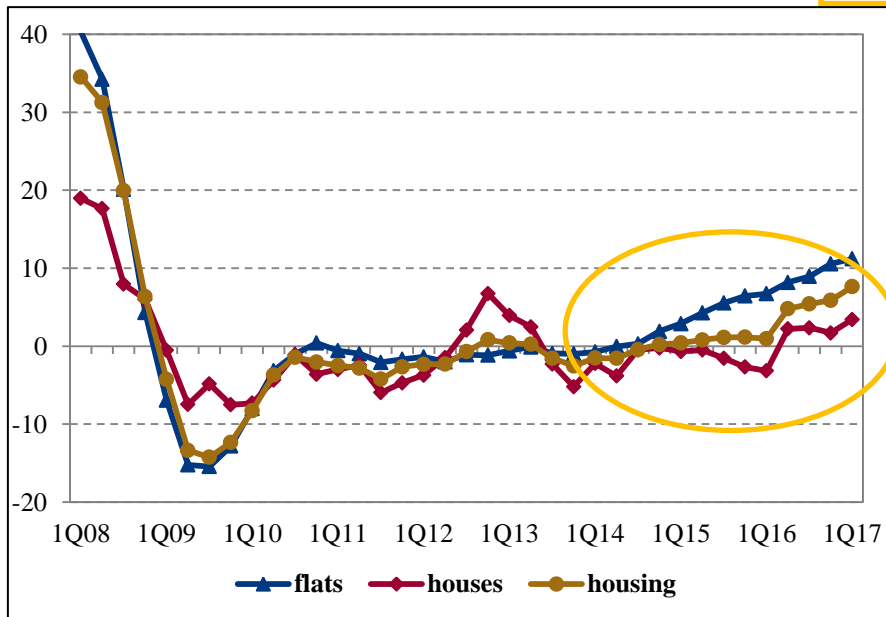


- Slovak housing market has recovered since 2014, and the average price of housing has gradually increased afterwards – improving labour market amidst low interest rate environment – 7.6% increase YoY in 1Q17
- The average price of apartments has increased recently faster than the average price of houses (satellite cities less convenient to commute?)
- In the coming quarters we expect further growth mainly of the price of apartments

Annual price changes (%)

zoomed

Annual price changes (%)



Source: NARKS, NBS.

Tobin's Q



– points to increase of activity on housing market

- The housing prices are growing more remarkably than construction costs in recent quarters
- An increase of residential investments can be expected



Source: SO SR, NBS.

Notes:

- The theory of Tobin's Q says that investments in a specific asset grow whenever the market value of assets exceeds their reproductive/procurement cost
- Tobin's Q expresses the relationship and consistency between residential investment, real estate and construction costs

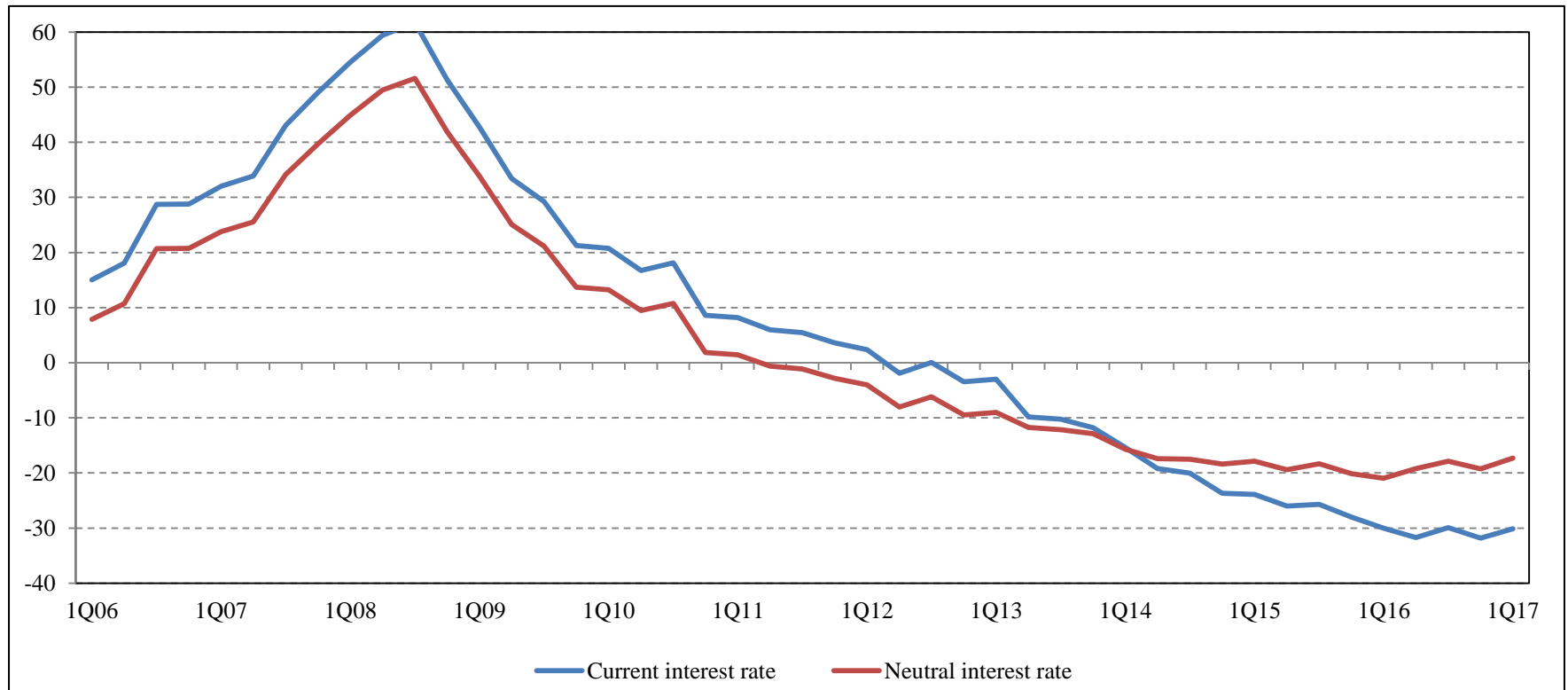
Housing affordability – prices in historical perspective



„Overvaluation / undervaluation “

(compared to the long-term average of the Housing Affordability Index)

In spite of increasing of housing prices the residential property are historically still **very** cheap to income, even at a neutral (*) interest rate.



Source: NBS.

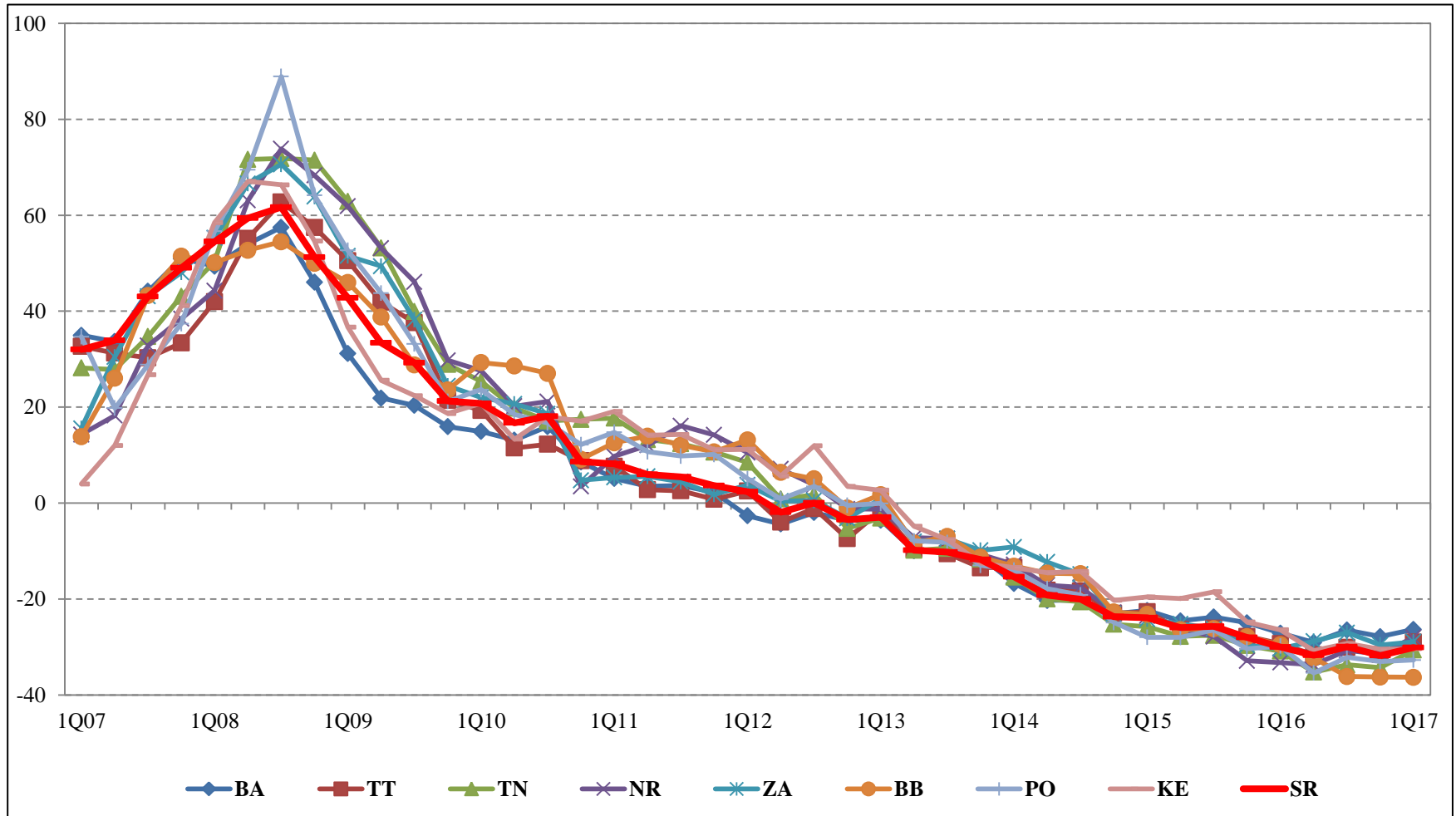
(*) The neutral hypo-rate (calculated as the average margin in EA 1.6% + potential 1% + inflation 1.9%) = 4.5%. The neutral rate applied for the last period when the market rate was lower (not for the whole period since some of the decrease has been structural, eurozone membership, more compet.).

Regional relative overvaluation / undervaluation



„Overvaluation / undervaluation“ by region

(compared to the regional long-term average of the Housing Affordability Index)

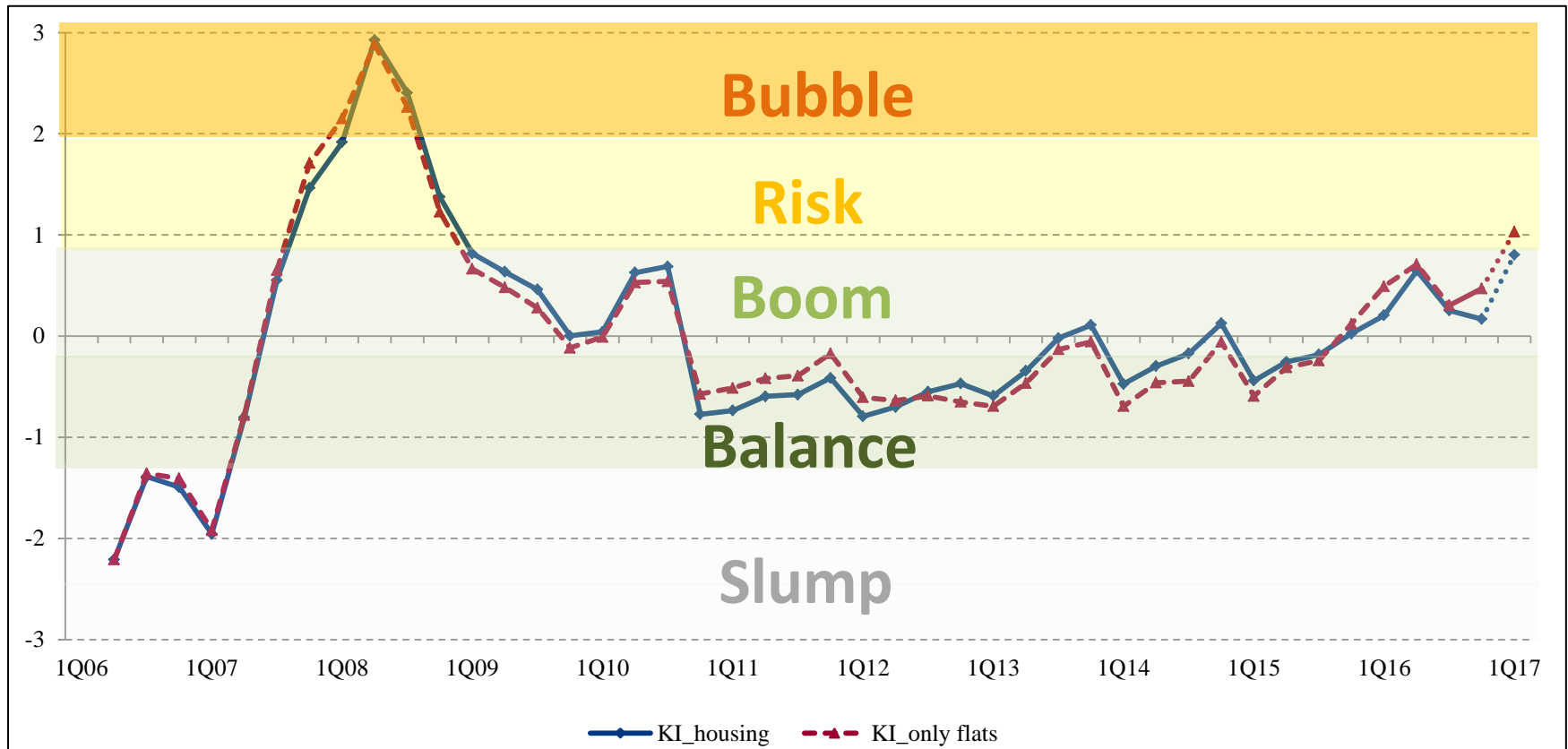


Source: NBS.

Composite index – we are just booming not bubbling



- Index reflects the relationship between purchase and rental prices, the relationship between house prices and household income, the relationship between house prices and inflation, the relationship between mortgage debt and income, the relationship between construction of residential buildings and GDP (based on Swiss CB model)
- This model approach does not identify real estate bubble today in Slovakia



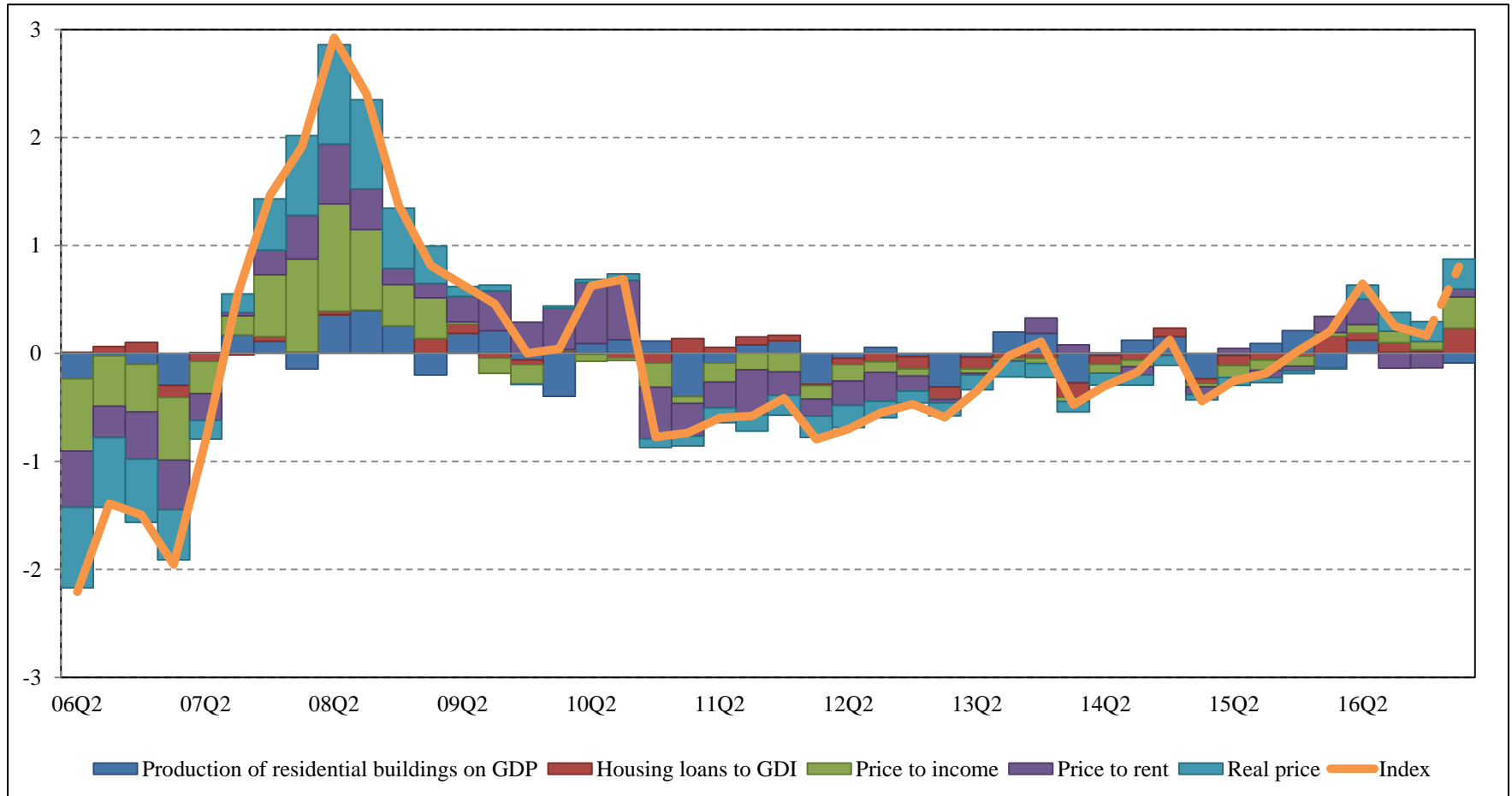
Source: NARKS, NBS.

Note: Composite index is calculated as the average of trend-adjusted and standardized partial indicators weighted using a principal component analysis.

Decomposition of the „bubble index“



- Real price and Price/income are the factors that contribute the most to the House bubble index, but still much weaker than in late 2007 – 2008 period
- Not high enough for bubble label



Source: NBS.



- The current growth of housing prices in Slovakia is slightly above the European average
- The growth of the average housing prices in last two years was driven mainly by dynamic increasing of apartment prices
- Increased housing market activities and higher house prices are due to a strong real wage growth (3-4% YoY), booming employment (2% YoY) and much cheaper prices of loans (regulation and thus increased competition)
- Housing prices show relatively strong annual growth in recent quarters, but according to our model approach, we do not identify a real estate bubble yet
- Dynamic growth of apartment prices, however, requires increased attention



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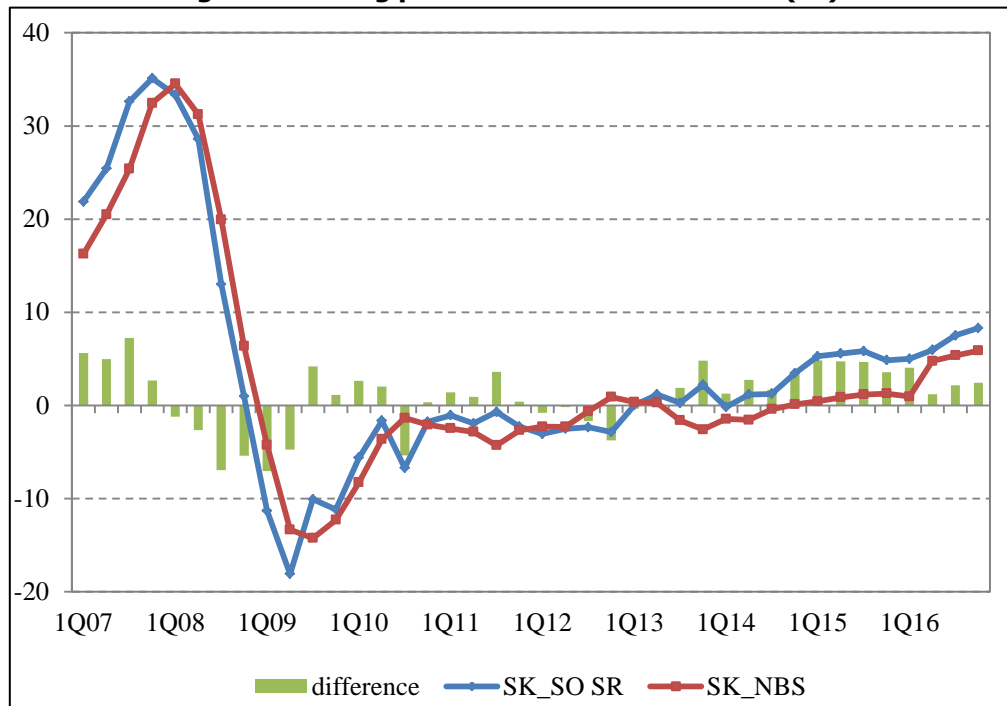
- **Databases of real estate agencies and real estate portals – currently used by NBS and StatsOffice**
- **Real Estate Cadaster**
 - **According to several experts, it could be the most appropriate source of data on housing real estate prices.** But the current legislation does not create conditions for making housing real estate records through real estate cadaster.
- **Credit institutions**
 - Slovak Banking Association pilot project for the creation of a database of housing prices from credit institution data was not completed
- **Court experts in the field of construction** – currently there is no housing prices database from experts reviews

Developing of housing prices by NBS and StatsOffice (Eurostat)



- Different indices of housing price developments by NBS and Eurostat (SO SR) are due to the use of different methodology

Annual changes of housing prices end their differences (%)



Source: Eurostat, NBS.

- **NBS** approach is based on the **offer prices**, **StatsO** on **realization prices**, but real. prices coverage is significantly lower
- The StatsO uses a **weighting scale** based on past expenditures (T-2 years), the NBS on the current number of offers in Q
- Data of the **StatsO** compared to the NBS data give a **higher weight to BA region and weaker cover of the other Slovak regions**
- **NBS** publishes housing prices with **T + 30** days delay, **StatsO** with delay **T + 90**
- The **StatsO** calculates **only the housing price index**, the **NBS** also calculates the **level** of average prices (in €/m²) **by region** and according to the **number of rooms** in dwellings and house types

Comparison of the data sources on housing prices by Eurostat



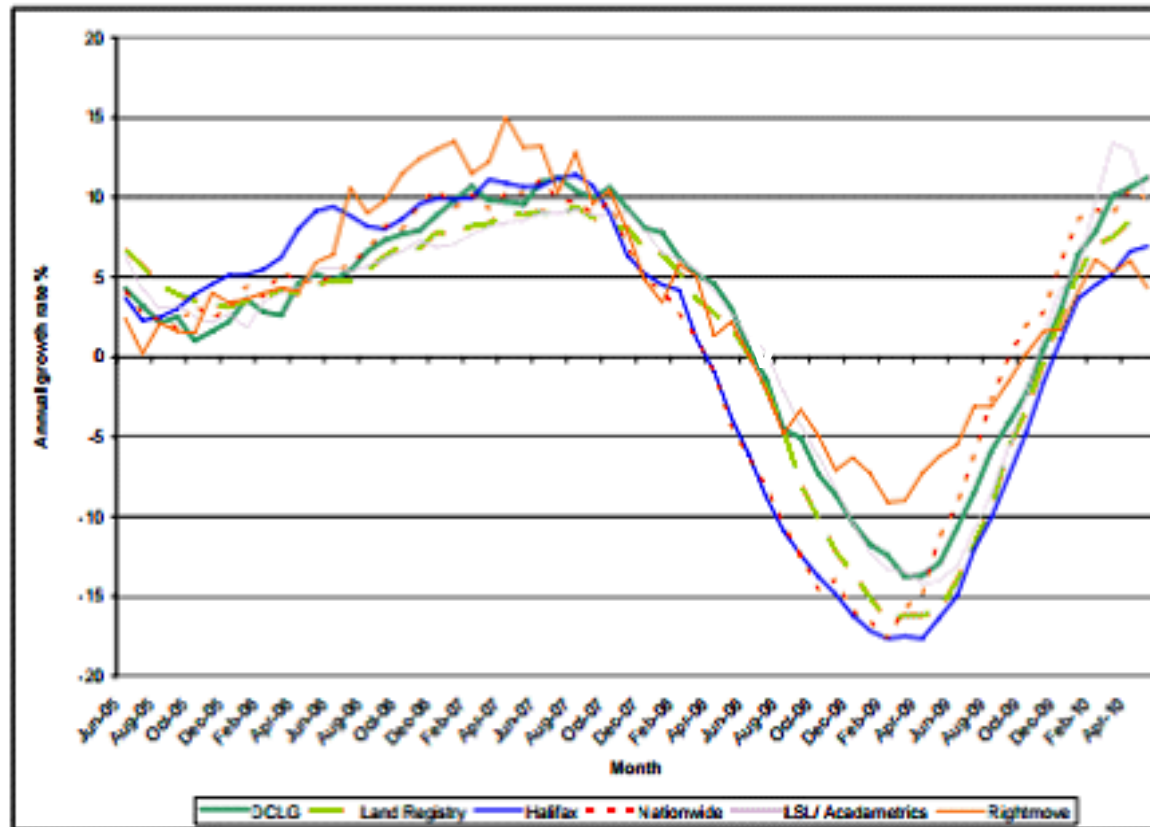
Source	Country
Land Registry	BE, EE, LV, MT, NL, AT, PT, FI, SE, UK,
Tax and fiscal administrative data source	DK, HU, AT, SI, FI, HR, IT, SE,
Real estate offices	CZ, SK, FI, NO,
General Council of Notaries	ES, FR, LU, RO,
Survey data source	BG, CZ,
Main mortgage lenders	IE, UK,
Local Expert Committees for Property Valuation	DE,
French Ministry for Ecology and Sustainable development	FR,
Department of Lands and Surveys, Ministry of Interior	CY,
Database of Transactions of Real estate registry objects owned	LT,
Register of Real Estate Prices and Values	PL,

Source: Eurostat.

Example more data sources on housing prices from the UK



Figure 5.1: Annual growth rates in house price indices, June 2005 to May 2010, percentages



Source: National Statistician's Review of House Price Statistics 2010.