BIS consumer and property price statistics: cross-country comparability and historical perspective

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Outline:

1.1 Research support: Objectives of constructing long series

-What is the rationale for compiling long series?

To support analysing economic/financial cycles

-Why at the BIS?

"Given the BIS's role in supporting global monetary and financial stability":

-How?

With data collected from 60 member Central Banks

The BIS

Supporting global monetary and financial stability

1.1 Research support: Long macro-economic series of the BIS (price and non-price)

- Already published: http://www.bis.org/statistics/pp.htm

  - Credit to the non financial sectors: private and public

  - Property prices

  - Consumer prices

  - Effective exchange rates

- Under construction

  - Nominal exchange rates

  - GDP

  - Central Bank policy rates

  - Industrial production

1.1 Research support: Construction of long macro-economic series (price and non-price)

1. Collecting data for consecutive periods from national sources: Targeted starting date: 1945 (for most indicators)
2. Identifying differences between consecutive series:
   - coverage
   - compiler
   - frequency
   - methodological standards (e.g. ESA 1995-ESA 2010)
3. Constructing break-adjusted long series expressed in the same currency or with the same index reference period
4. Consulting central banks on constructed series
5. Publication

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1.2 G20 Data Gaps Initiative (DGI): Background

Prior to the great Financial Crisis (2007-2009)

1. Limited availability of financial data
2. Difficulty to conduct research on financial stability

Solution

1. Cooperation of international organisations to collect and publish comparable financial data
2. Time span of the G20 DGI: 2009-2021, and likely beyond
3. Last status report: https://www.imf.org/external/np/g20/pdf/2016/090216.pdf

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1.2 G20 Data Gaps Initiative: BIS mandates in price statistics

Table 1. Overview of DGI-2 Recommendations

II.1:	Mandate of the DGI

Monitoring risks in the financial sector

II.2:	Financial Soundness Indicators (FSI)
II.3:	FSI Concentration and Distribution Measures (CDM)
II.4:	Data for Global Systemically Important Financial Institutions (G-SIFIs)
II.5	Shadow Banking
II.6	Derivatives NEW
II.7	Securities Statistics

Vulnerabilities, Interconnections, and Spillovers

II.8:	Sectoral accounts
II.9:	Household Distributional Information
II.10:	International Investment Position (IIP)
II.11:	International Banking Statistics (IBS)
II.12:	Coordinated Portfolio Investment Survey (CPIS)
II.13:	Coordinated Direct Investment Survey (CDIS) NEW
II.14:	Cross border exposures of non-bank corporations
II.15:	Government Finance Statistics (GFS)
II.16:	Public Sector Debt Statistics Database (PSDS)
II.17:	Residential Property Prices (RPPI)
II.18:	Commercial Property Prices (CPPI)

Key role of property markets in the Great Financial Crisis

Communication of Official Statistics

II.19:	International Data Cooperation and Communication
II.20:	Promotion of Data Sharing NEW

1.2 G20 Data Gaps Initiative: BIS mandates in price statistics (cont.)

Recommendation II.17: Residential Property Prices

The G-20 economies to publish residential property price indices consistent with the Handbook on Residential Property Price Indices (RPPI) and supply these data to the relevant international organizations, including the BIS, Eurostat, and OECD. The IAG in collaboration with the Inter-Secretariat Working Group on Price Statistics (IWGPS) to work on a set of common headline residential property price indices; encouraging the production of long time series; developing a list of other housing- related indicators; and disseminating the headline residential property price data via the PGI website.

Recommendation II.18: Commercial Property Prices

The IAG in collaboration with the Inter-Secretariat Working Group on Price Statistics to enhance the methodological guidance on the compilation of Commercial Property Price Indices (CPPI) and encourage dissemination of data on commercial property prices via the BIS website.

2. Long Consumer Price Series

1. Characteristics

- 60 countries including all EU countries and euro area
- Average length of monthly series: 55 years.
- Some annual series go back to the 19th century

2. Calculation

- For the latest periods correspond to CPI published by National Statistical Offices
- For earlier periods back-calculated with the best proxy: CPI with limited geographical coverage, or (only exceptionally) retail/wholesale price indicators

2. Long Consumer Price Series (cont.)

3. Used for:

- Calculation of real effective exchange rates, real residential property price series

- Research on macroeconomics and financial stability

4. Where to find the data?

- http://www.bis.org/statistics/cp.htm

- Statistics Explorer (with graphs):

- Statistics Warehouse

- BIS Statistical Bulletin

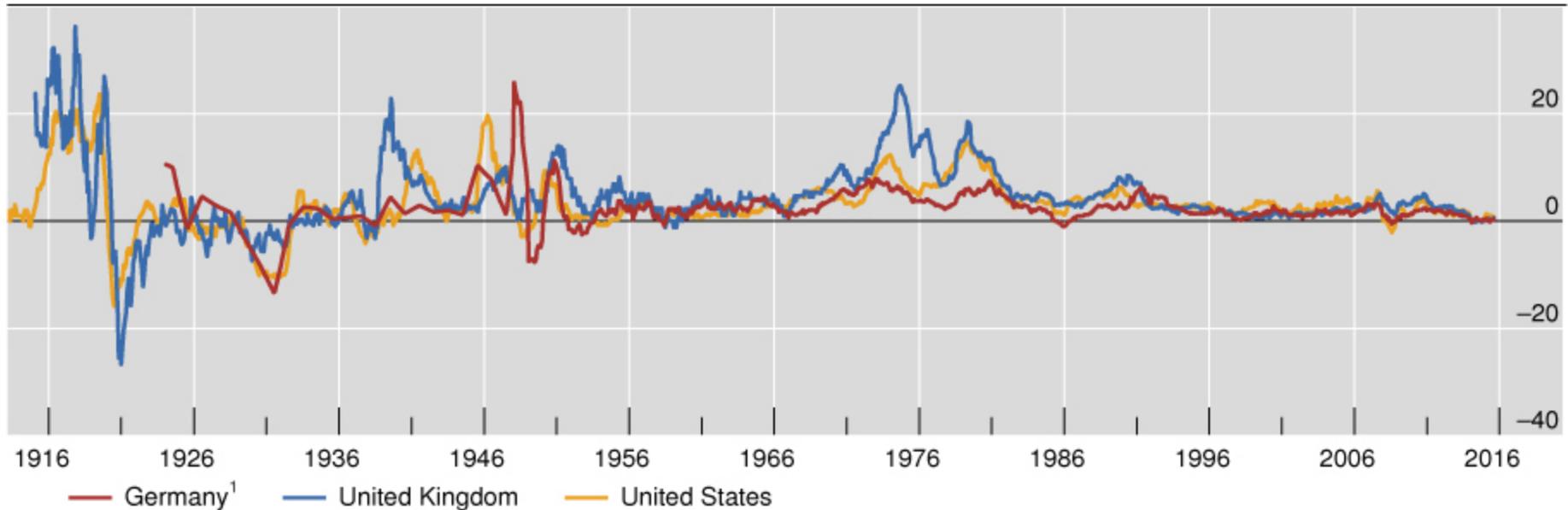The publication is updated monthly, see Release calendar

2. Long Consumer Price Series

One hundred years of inflation

Year-on-year growth rates in consumer price indices, in per cent

Graph 3

— Germany[1]　— United Kingdom　— United States

[1]　Based on annual data prior to 1950.

Sources: Deutsche Bundesbank; Bank of England; German Federal Statistical Office; UK Office for National Statistics; US Bureau of Labor Statistics; BIS calculations.

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3.1 RPPI: History of data collection and publication

1. 1989: BIS starts collecting RPPI

2. C Borio, N Kennedy and S Prowse (1994): "Exploring aggregate asset price fluctuations across countries: measurement, determinants and monetary policy implications"

3. 2009: Recommendation 19 in the Report on the Financial Crisis and Information Gaps:
   "*BIS and member central banks to prepare the dissemination of real estate prices*"

4. 2010: First publication of the detailed RPP series on the BIS website (with an initially coverage of 37 countries).

5. 2014: publication of selected and long series

3.1 RPPI: a bird's eye view

60   countries covered

19   of the G20 countries

290   series

23   countries with long series

1970   start date for most of the long series

3.1 RPPI Country coverage

Reporting countries*
Reporting countries where long series are additionally constructed
*Saudi Arabia and the United Arab Emirates are not yet shown on the map but they started to report data recently

3.1 RPPI: Global diversity

1. No binding international standard
   - Major step: Handbook on compilation of RPPI (2013), but not widely applied beyond the EU

2. Data availability varies across countries
   - Covered: area, vintage (new/existing) and type of dwellings
   - Compiler: statistical office, central bank, private sources
   - Source of data: transactions, valuations, offers
   - Quality adjustment: non-adjusted, only size-adjusted or quality adjusted with various methods

3.1 RPPI data sets

	Advantages	Drawbacks
Detailed data set	• Several series from most of the 60 countries (subindices or different sources) • Updated monthly	• Heterogeneous series • High number of series may hamper usage
Selected series	• Homogenous* • Best for international comparison • Nominal and real terms • Rebased to 2010=100 • Regional aggregates • Analysed in a conjunctural note	
Long series	• Start date: 1970 or earlier: suitable for financial stability analysis	• 23 countries • Heterogenous compilation methods • Quarterly data are partly estimated

*Remaining heterogeneities: source of data, quality adjustment method

3.1 RPPI: Selected series

Target

- Covering the whole market
  -new and existing
  -flats, houses
  -the whole country

- Transaction based

- Quality or at least size adjusted

- Starting in 2007 with quarterly frequency

- From public sources

These series are available for the vast majority of countries
    ...when not the best proxy series is selected

3.1 RPPI in the G20 countries: From the latest Quarterly note on RPP developments

Year-on-year changes in Q3 2016, in per cent

Graph 3
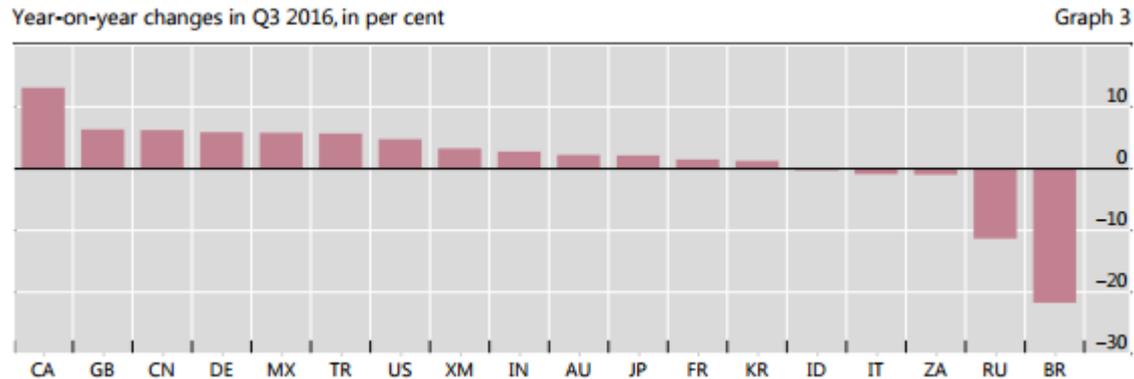
Aggregate developments, in real terms, of residential property prices in advanced and emerging market economies since the Great Financial Crisis

Q4 2007 = 100

Graph 4

— Advanced economies   — Emerging market economies
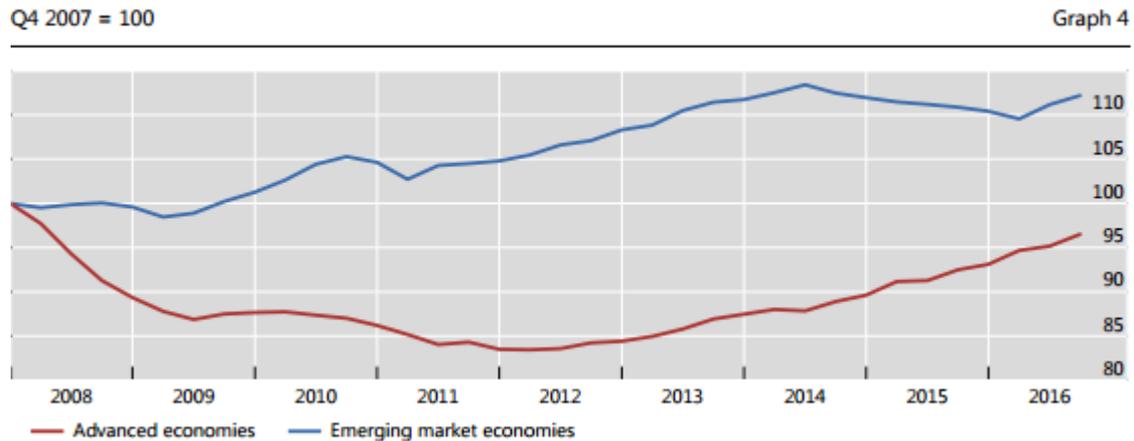
Estimated weighted averages based on rolling GDP and PPP exchange rates.

http://www.bis.org/statistics/pp_commercial.htm

Inventory of the commercial property price indicators published by the BIS

Countries	Number of series	Geographical coverage			Source of price information			Property type		Starting year;[1] frequency
		All	Cities	Capital	Trans-action	Appraisal	Offer	Only land	Building/unit[2]	
Brazil	2	✓	✓			✓	✓		✓	2000, quarterly
Denmark	3	✓			✓	✓			✓	1992; quarterly
Euro area	1	✓			✓	✓			✓	2000; quarterly
Germany	6		✓		✓	✓			✓	1995; annual
Greece	4	✓		✓		✓			✓	2006; half-yearly
Hong Kong SAR	2	✓			✓				✓	1993; monthly
Iceland	2	✓			✓				✓	1995, quarterly
Indonesia	1			✓	✓				✓	2002; quarterly
Japan	3	✓	✓	✓		✓		✓		1955; half-yearly
Korea	1	✓				✓		✓		1987; monthly
Philippines	1			✓	✓			✓		2008; quarterly
Poland	3		✓	✓	✓				✓	2000; annual
Saudi Arabia	2	✓		✓	✓				✓	2014; quarterly
Singapore	3	✓			✓				✓	1998; quarterly
United States	1	✓			✓	✓			✓	1945; quarterly

[1] Earliest, in case of more than one series.   [2] For example: industrial, office or retail.

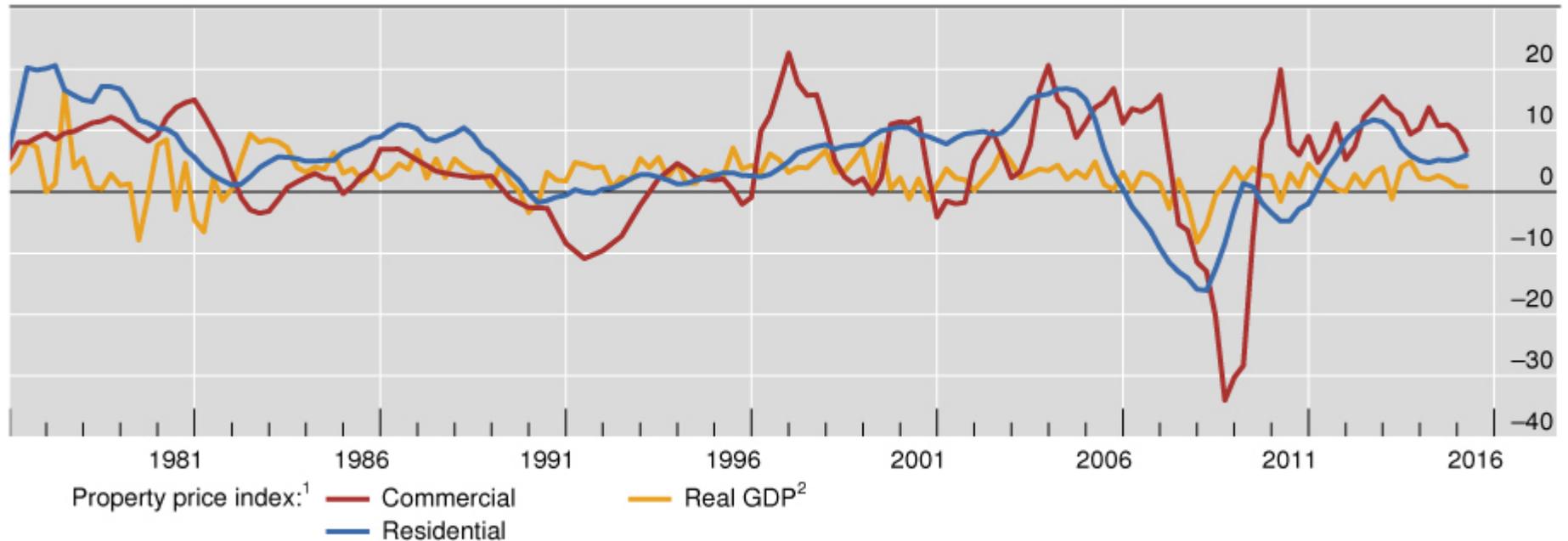Source: BIS property prices statistics, based on national data.

3.2 CPPI: Illustration

Commercial and residential property price developments and real GDP growth in the United States

Annual growth, in per cent

Graph 2

Property price index:[1]   —— Commercial   —— Real GDP[2]
                            —— Residential

[1] Year-on-year growth rates.   [2] Seasonally adjusted annual rate.

Source: Board of Governors of the Federal Reserve System.

4. Future developments

1. Residential property price series:

- Collect and publish data for Argentina (the missing G20 country)
- Collect and publish data for capital cities and urban areas

2. Commercial property price series

- Increase country coverage, especially by including data on further G20 countries

Your feedback and contribution is most welcome!

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4. Background documents

All downloadable from http://www.bis.org/statistics/pp_analysis.htm

1. BIS publications:

- Residential property price statistics across the globe (M. Scatigna, R. Szemere, K. Tsatsaronis)

- BIS Collection and publication of residential property prices M. Scatigna, R. Szemere)

- Recent enhancements to the BIS statistics

2. Non-BIS publications

- Eurostat: Handbook on Residential Property Price Indices

- ECB: Experimental Indicators of Commercial Property Price Indices

- Financial Stability Board: Second Phase of the G-20 Data Gaps Initiative