



BANK FOR INTERNATIONAL SETTLEMENTS

Recent Enhancements to the BIS Property Market Statistics

Frank Packer

Bank for International Settlements

Conference on Real Estate and Financial Stability

City University of Hong Kong/Hong Kong Institute for Monetary Research

Hong Kong, SAR 22-23 August 2016

**The views expressed are my own and do not necessarily reflect
those of the BIS**



Property Markets and Financial Stability

Introduction Alexandra Heath, Frank Packer and Callan Windsor	1
Opening Remarks Glenn Stevens	7
Land and Housing Price Measurement In China Yongheng Deng, Joseph Gyourko and Jing Wu Discussant Halbin Zhu	13 44
Developing Housing Finance Systems Francis E Warnock and Veronica Cacciac Warnock Discussant Joseph Gyourko	49 68
When Is a Housing Market Overheated Enough to Threaten Stability? John Muellbauer	73
Property Market Cycles as Paths to Financial Distress Luci Ellis, Mariano Kulsh and Stephanie Wallace Discussant Christine Whitehead	109 133
Securitisation and the Commercial Property Cycle Frank Packer and Timothy Riddiough Discussant Jie Gan	143 191
Property Prices and Bank Risk-taking Giovanni Dell'Ariccia Discussant Piti Disyatat	197 224
Taming the Real Estate Beast: The Effects of Monetary and Macroprudential Policies on Housing Prices and Credit Kenneth Kuttner and Ilhyock Shim Discussant Prasanna Gal	231 260

Closing Remarks

Overall, the work discussed ... clarified the need for international comparable data on property prices, something that is clearly missing today. ...

Stephen Cecchetti, Sydney Australia, August 2012

Global diversity of residential property price statistics

1. No binding international standard
 - Major step:
 - 2013: Handbook on compilation of RPP
 - But not widely applied beyond the EU
2. Data availability varies across countries
 - Area coverage, vintage (new or existing), type of dwellings
 - Compilers: statistical offices, central banks, private sources
 - Quality adjustment: non-adjusted, only size-adjusted or various methods

BIS: history of data collection and publication

1. 1989: BIS starts collecting RPP
2. C E V Borio, N Kennedy and S D 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 (G-20):
“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
Initial coverage: 37 countries
5. 2014 a banner year with several new series added (the selected series and the long series) as well as a quarterly note.

BIS RPP statistics from a bird's-eye view

58 countries covered

18 of the G20 countries

310 series

23 countries with long series

1970 start date of the long series

Country coverage:



Reporting countries but no long series constructed

Reporting countries where long series additionally constructed

Characteristics of the published data sets

	Advantages	Drawbacks
<u>Detailed data set</u>	<ul style="list-style-type: none"> • Several series from most of the 58 countries (subindices or different sources) • Updated monthly 	<ul style="list-style-type: none"> • Heterogeneous series • High number of series may hamper usage
<u>Selected series</u>	<ul style="list-style-type: none"> • Homogenous* • Best for international comparison • Nominal and real terms • <u>Analysed in a conjunctural note</u> 	
<u>Long series</u>	<ul style="list-style-type: none"> • Start date: 1970: suitable for financial stability analysis 	<ul style="list-style-type: none"> • 23 countries • Heterogeneity of series, compilation methods • Quarterly data are partly estimated

*Remaining heterogeneities: source of data, quality adjustment method

Characteristics of the published data sets

	Advantages	Drawbacks
<u>Detailed data set</u>	<ul style="list-style-type: none"> • Several series from most of the 58 countries (subindices or different sources) • Updated monthly 	<ul style="list-style-type: none"> • Heterogeneous series • High number of series may hamper usage
<u>Selected series</u>	<ul style="list-style-type: none"> • Homogenous* • Best for international comparison • Nominal and real terms • <u>Analysed in a conjunctural note</u> 	
<u>Long series</u>	<ul style="list-style-type: none"> • Start date: 1970: suitable for financial stability analysis 	<ul style="list-style-type: none"> • 23 countries • Heterogeneity of series, compilation methods • Quarterly data are partly estimated

*Remaining heterogeneities: source of data, quality adjustment method

Real residential property price changes in G20 countries:

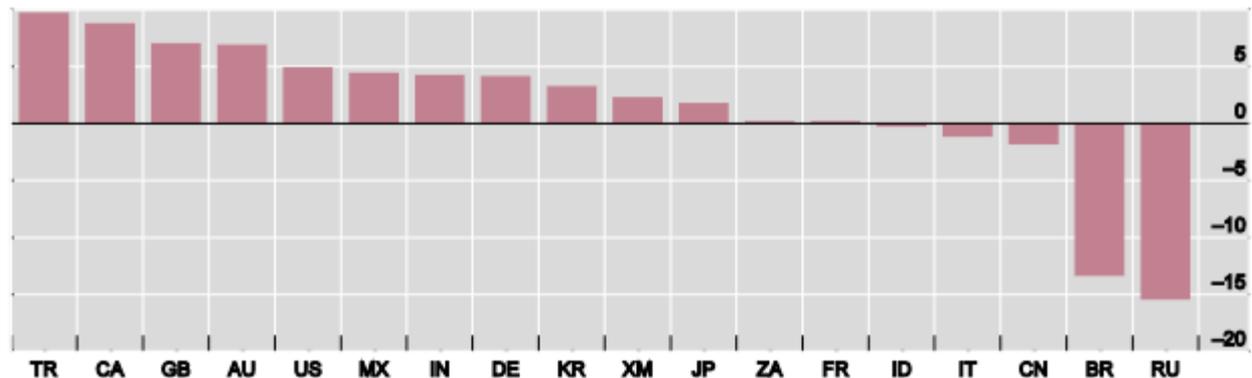
From a recent Quarterly note on RPP developments

(http://www.bis.org/statistics/pp_residential.pdf)

Real residential property prices in selected G20 countries

Year-on-year changes in Q4 2015, in per cent

Graph A



AU = Australia; BR = Brazil; CA = Canada; CN = China; DE = Germany; FR = France; GB = United Kingdom; ID = Indonesia; IN = India; IT = Italy; JP = Japan; KR = Korea; MX = Mexico; RU = Russia; TR = Turkey; US = United States; XM = euro area; ZA = South Africa.

Source: BIS selected residential property prices series.

Characteristics of the published data sets

	Advantages	Drawbacks
<u>Detailed data set</u>	<ul style="list-style-type: none"> • Several series from most of the 57 countries (subindices or different sources) • Updated monthly 	<ul style="list-style-type: none"> • Heterogeneous series • High number of series may hamper usage
<u>Selected series</u>	<ul style="list-style-type: none"> • Homogenous* • Best for international comparison • Nominal and real terms • <u>Analysed in a conjunctural note</u> 	
<u>Long series</u>	<ul style="list-style-type: none"> • Start date: 1970: suitable for financial stability analysis 	<ul style="list-style-type: none"> • 23 countries • Heterogeneity of series, compilation methods • Quarterly data are partly estimated

*Remaining heterogeneities: source of data, quality adjustment method

Using the long data set

Asymmetric co-movement of house prices across countries¹

Graph 3



¹ Calculated using CPI-deflated residential property prices across all countries in the database; mean values.

Sources: BIS long series and selected property price database; authors' calculations.

Characteristics of the series included in the three data sets:

Characteristics of series included in the three data sets

Summary of attributes for all series available for each country

Table 1

Country	Number of series	Geographical coverage			Source of price information			Quality adjustment			Series starting year	
		All	Cities	Other	Trans- actions	Appraisal	Adver- tised	None	Size only	Sophis- ticated ¹	Selected	Long
Australia	6		✓		✓				✓		2003	1970
Austria	16	✓	✓	✓	✓		✓	✓	✓		2000	
Belgium	9	✓	✓	✓	✓						2005	1970
Brazil	1		✓			✓		✓			2001	
Bulgaria	1		✓		✓			✓			1993	
Canada	3	✓			✓	✓			✓		1970	1970
China	3		✓		✓			✓			2011	
Croatia	3	✓	✓	✓	✓				✓		1997	
Cyprus	3	✓	✓			✓					2002	
Czech Republic	7	✓			✓	✓		✓	✓		2008	
Denmark	7	✓			✓				✓		1971	1970
Estonia	7	✓	✓		✓			✓			2005	
Euro area	1	✓									1980	
Finland	17	✓	✓	✓	✓				✓		2005	1970
France	10	✓	✓		✓						1996	1970
Germany	48	✓	✓	✓	✓	✓		✓	✓	✓	2003	1970
Greece	18	✓	✓	✓	✓	✓	✓		✓	✓	2006	
Hong Kong SAR	3	✓			✓			✓			1993	
Hungary	5	✓	✓		✓			✓	✓		2007	
Iceland	1		✓		✓			✓			2000	
India	1		✓		✓				✓		2009	
Indonesia	5		✓		✓	✓	✓	✓			2002	
Ireland	8	✓	✓	✓	✓				✓		2005	1970
Israel	1	✓			✓				✓		2001	
Italy	1	✓			✓				✓		1990	1971
Japan	12	✓	✓		✓	✓	✓		✓		1955	1970
Korea	1	✓			✓				✓		1986	
Latvia	3	✓			✓				✓		2006	
Lithuania	1	✓			✓			✓			1998	
Luxembourg	5	✓			✓				✓		2007	
Macedonia	1		✓					✓		✓	2005	
Malaysia	4	✓	✓		✓				✓		1999	
Malta	1	✓						✓	✓		2000	
Mexico	1	✓				✓			✓		2005	

¹ Includes all other types of quality adjustment methods (hedonic regression, repeat sales, stratification, etc).

Source: BIS.

- Continued -

Table 1

Country	Number of series	Geographical coverage			Source of price information			Quality adjustment			Series starting year	
		All	Cities	Other	Trans- actions	Appraisal	Adver- tised	None	Size only	Sophis- ticated ¹	Selected	Long
Morocco	5	✓	✓		✓					✓		2006
Netherlands	6	✓			✓			✓		✓		1995 1970
New Zealand	3	✓	✓			✓				✓		1979 1970
Norway	9	✓	✓		✓				✓	✓		1992 1970
Peru	1		✓					✓				1998
Philippines	2		✓		✓				✓			2008
Poland	14	✓	✓	✓	✓			✓	✓	✓		2006
Portugal	2	✓			✓			✓		✓		1988
Romania	6	✓	✓	✓	✓					✓		2009
Russia	2		✓		✓				✓			2001
Singapore	4	✓						✓				1998
Slovakia	1	✓						✓				2005
Slovenia	9	✓	✓	✓	✓					✓		2007
South Africa	4	✓			✓			✓				1966
Spain	3	✓				✓			✓			1995 1971
Sweden	2	✓			✓			✓		✓		1986 1970
Switzerland	5	✓						✓				1970 1970
Thailand	4		✓			✓				✓		2008
Turkey	2	✓				✓				✓		2010
United Kingdom	5		✓	✓	✓	✓				✓		1968 1970
United States	3		✓		✓					✓		1975 1970

¹ Includes all other types of quality adjustment methods (hedonic regression, repeat sales, stratification, etc).

Source: BIS.

Planned improvements

In line with the Second Phase of the Data Gaps Initiative

(<http://www.imf.org/external/np/g20/pdf/2015/6thprogressrep.pdf>)

1. Increase the number of countries included
2. Broaden the collection of quality adjusted price indices
3. Enrich the coverage of long series data

BIS publication of Commercial Property Prices

- September 2016: Commercial Property Prices will be published as a new data set to be extended with newly reported series
- Country coverage:
 - DE, DK, GR, HK, ID, JP, PH, SG, Euro area
 - September 2016: US
 - Objective to enlarge to G20 and possibly all BIS shareholders
- Number of series: 25
- Currently published in the BIS detailed property price data set:
http://www.bis.org/statistics/pp_detailed.htm

References

- Borio, Claudio and Philip Lowe (2002), "Asset prices, financial and monetary stability: addressing the nexus" BIS Working Papers, No. 114, July.
- Borio, C, N Kennedy and S Prowse (1994): "Exploring aggregate asset price fluctuations across countries: measurement, determinants and monetary policy implications", *BIS Economic Papers*, No 40, Basel, April.
- Cecchetti, Stephen G. (2012) "Closing remarks: Property Markets and Financial Stability – Issues and Interpretations" in *Property Markets and Financial Stability*, Reserve Bank of Australia and Bank for International Settlements conference volume, December.
- Scatigna, Michela, Robert Szemere, and Kostas Tsatsaronis (2014) "Residential property price statistics across the globe," BIS Quarterly Review, September.

For inquiries about the BIS Property Price statistics:

Robert Szemere (robert.szemere@bis.org)

Data Bank Services

Monetary and Economic Department,

Bank for International Settlements