

BANK FOR INTERNATIONAL SETTLEMENTS

Information on property prices for policy use in central banking

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The views expressed are those of the author and do not necessarily reflect those of the BIS or the IFC.



Overview

1. Property Prices (PPs) and economic analyses
2. PPs and policy use
3. PP indicators in the international agenda
4. Still important data gaps
5. Complementary insights from residential and commercial PPs



1. PPs and macrofinancial analyses

- Direct **economic impact**

- Rising prices and demand for new construction
- Stimulate credit demand for purchasing properties
- Wealth effects? Not clear...

- **Financial accelerator mechanism:** property assets as collateral

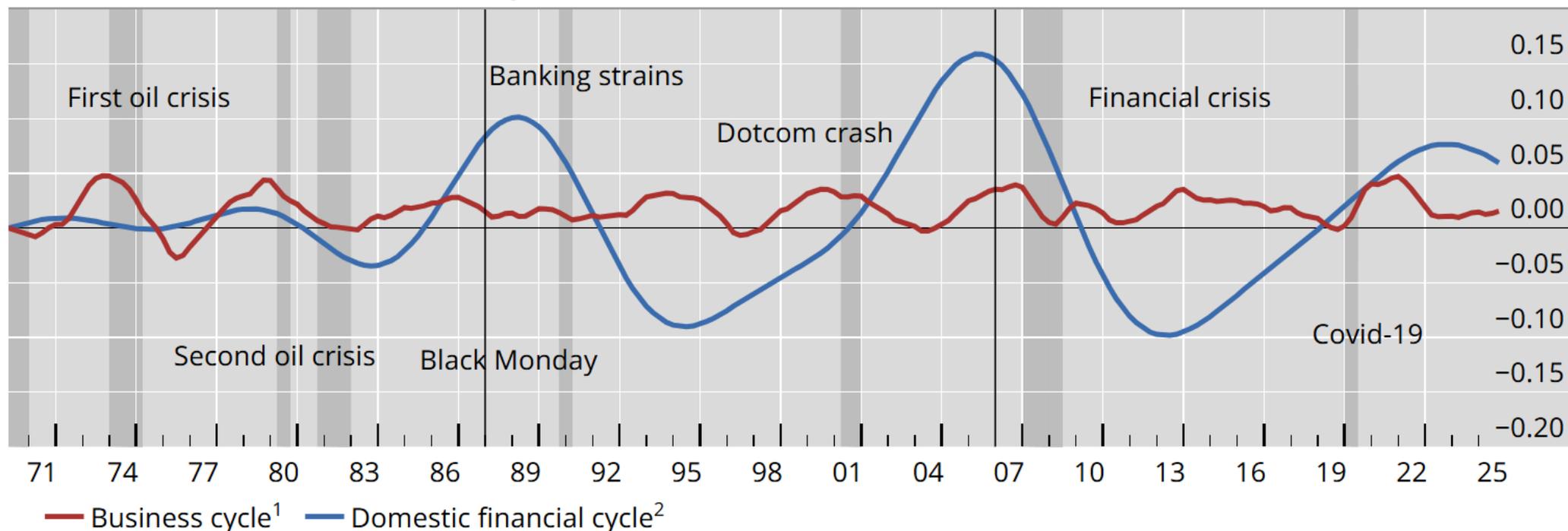
- Depends on local characteristics: eg possibility for consumers to borrow against the value of houses (“mortgage equity withdrawal (MEW)”)
- Role of credit market imperfections (pricing of credit)
- Moral hazard issues (when loans have to be repaid)

- **Dynamic interactions** between asset prices and credit creation



House prices and the financial cycle – an illustration

The domestic financial and business cycles in the United States



The shaded areas indicate recessions; the solid black lines indicate the start of a banking crisis as defined by Laeven and Valencia (2018).

¹ The business cycle as measured by a frequency-based (bandpass) filter capturing fluctuations in real GDP over a period from one to eight years. ² The financial cycle as measured by frequency-based (bandpass) filters capturing medium-term cycles in real credit, the credit-to-GDP ratio and real house prices.

Sources: Drehmann et al (2012); Laeven and Valencia (2018); BIS calculations.

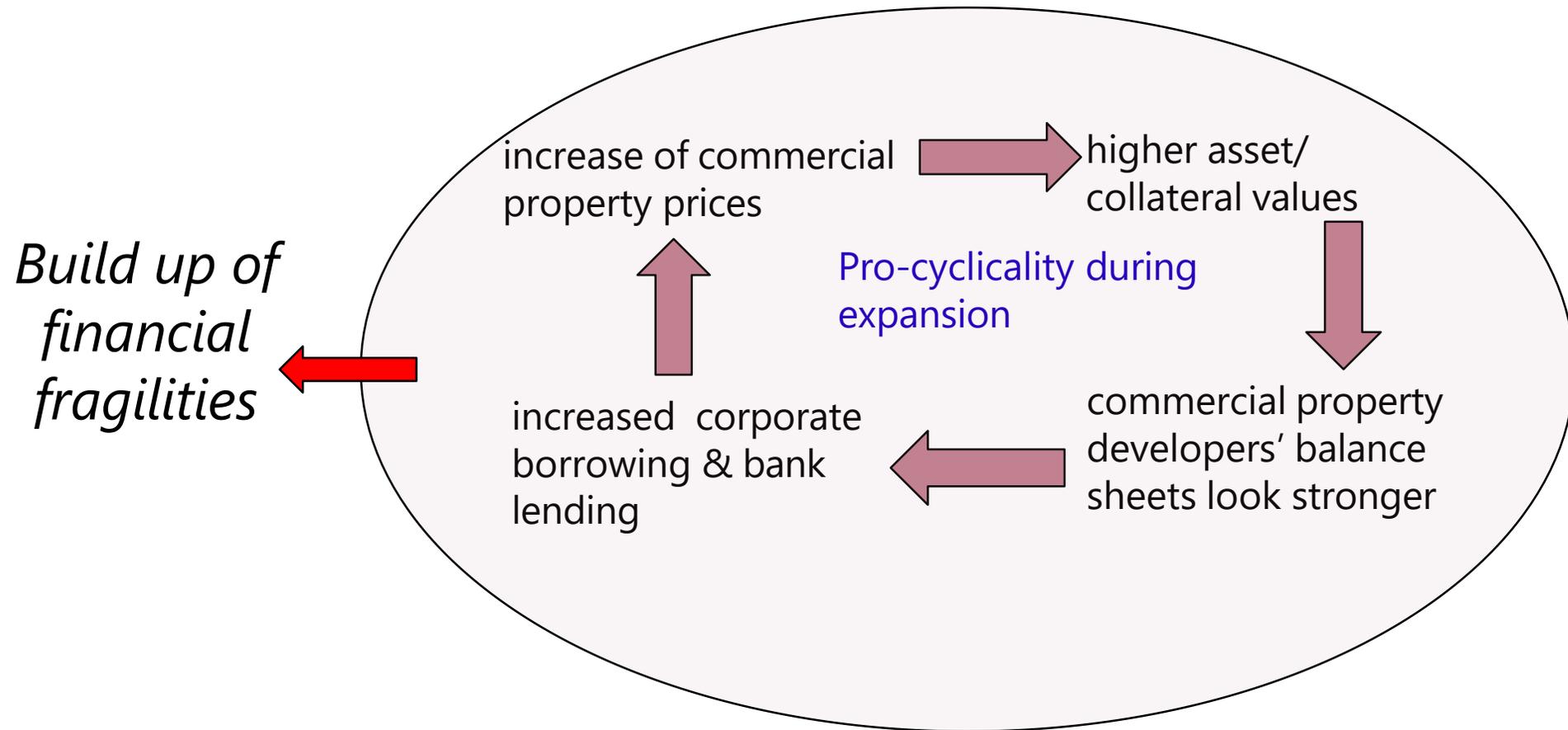


1. PPs and financial stability issues

- **Financing cycle:** self-reinforcing forces between
 - Asset prices
 - Financial conditions eg risk premium / appetite
 - Credit demand & supply
 - Perceived loan quality
- Impact on **financial system's soundness:** property as a guarantee and an asset (when invested directly)
- **Turn of the cycle**
 - Underlying vulnerabilities as financial conditions tighten
 - Level of indebtedness matters (non-linearity)



Example of macro financial interactions: impact of commercial property prices



Source: BIS



1. PPI and micro financial impact

- **Credit supply:** impact of asset prices on banks' lending decisions
 - Quantities
 - Prices
- **Risk taking**
 - Excessive risk tolerance / imprudent lending in "good times"
 - Difficulty to assess "true", underlying values esp. for commercial property
- **Performance of banks**
 - Profitability and lending margins in the short run
 - Longer run impact: provisions/losses for bad loans (after lags)



2. Widespread interest in PPs for policy makers...

- **Monetary** authorities

- Demand and inflation
- Monetary policy transmission mechanisms (eg banking intermediation)

- **Macro prudential** authorities

- Systemic risk across the financial system
- Over time (pro cyclical)

- **Micro supervisors**

- Banks
- Other Financial Institutions (regulated or not: eg shadow banks)



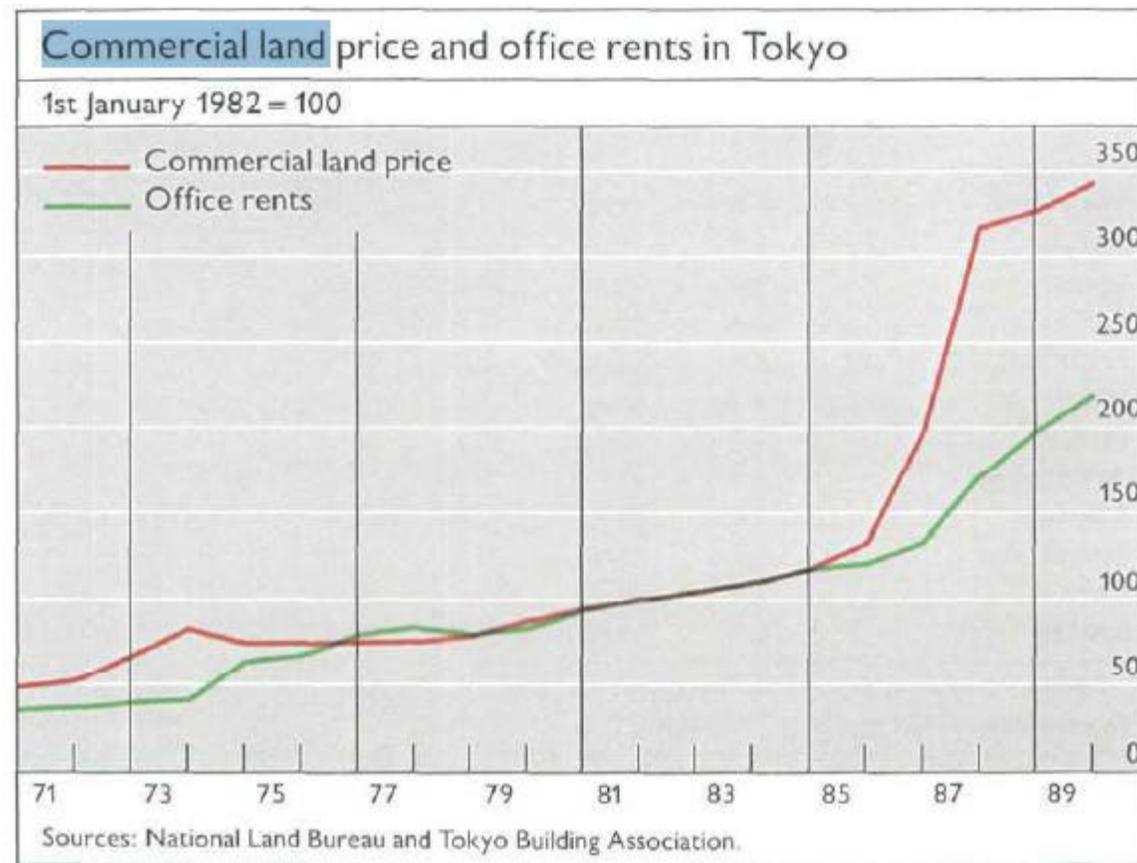
2. ... with some differences

- Property values affected by **3 factors**: $Val = P * Qual * Quant$
 - P: Price, ideally measured at constant quality
 - Qual: Quality
 - Quant: Quantity
- Policy interest can differ
 - **Monetary** policy: separating price and **volume** ($Vol = Qual * Quant$)
 - **Micro supervision**: evolution of **unit values** ($U Val = P * Qual$)
 - **Macro prudential**: all 3 factors relevant for analysis (eg when identifying & characterising a type of property bubble)



3. PPI in the international agenda: BIS work in the 1980s...

- Not a new topic: BIS PP analyses started already in the 1980s...



BIS 60th Annual Report (1990)
*The boom in **commercial real estate** in the larger cities also appears to be related to the strong expansion and growing internationalisation of the services sector, in particular of the financial industry. Rapid increases in **office prices and rents** have been associated with the "Big Bang" in London and the transformation of Tokyo into a major international financial centre...*



3. ... the 1990s...

- **Set up of a comprehensive dataset on "aggregate asset price index"**
(including property prices)
- **C.E.V. Borio, N. Kennedy and S.D. Prowse (1994):**

Exploring aggregate asset price fluctuations across countries : measurement, determinants and monetary policy implications, BIS Economic Papers, no 40

Table A1.1
Data sources for price indices

Country	Residential property	Commercial property
Australia	Index of median dwelling prices Source: Central bank	Sydney CBD capital value index Source: Central bank
Belgium	Weighted sales prices of small and medium-sized dwellings Source: Anhyp SA	Capital value price index for Brussels Source: Jones Lang Wootton (JLW)
Canada	Multiple listing service price index of existing homes Source: Central bank	n.a.
Denmark	Price index for residential houses Source: Central bank	Cash price index for production/storage commercial property Source: Central bank
Finland	National house price index Source: Central bank	Price Index for Prime Office Space in Helsinki CBD Source: Central bank
France	Kennedy and Andersen (1994)	Capital value price index for Paris Source: JLW
Germany	Average sales prices of owner-occupied dwellings in Frankfurt, Munich, Hamburg and Berlin Source: Ring Deutscher Makler	Capital value price index for Frankfurt, Munich, Hamburg and Berlin Source: JLW
Japan	National average of residential housing prices Source: Central bank	National average commercial property index Source: Central bank
Netherlands	Prices of residential buildings Source: Central bureau of Statistics	Capital value price index for Amsterdam Source: JLW
Norway	Secondary market national house price index Source: Central bank	Capital value price index for Oslo Source: JLW
Sweden	"Purchase coefficient" of house prices Source: Central bank	Index of commercial buildings Source: Central bank
United Kingdom	Index of house prices (all dwellings) Source: Department of the Environment	Office capital value index Source: Richard Ellis
United States	Median sales price of existing single-family homes Source: National Association of Realtors	Russell-NCREIF Commercial property index Source: NCREIF



3. ... and greater international interest in recent decades

- IMF Financial Soundness Indicators Guide 2006 (updated since)

"...the Guide does recommend that **separate indices be compiled for residential and commercial real estate**, because of the very different conditions..."

→ *RPPI Handbook* (2013), *Commercial property price indicators* (2017)

- **DGI 1** (2011-15):

- Lessons of the Great Financial Crisis (GFC)
- Start methodological work for compilation

- **DGI 2** (2016-21):

- Methodology guide & BIS dissemination
- Policy use of the indicators

- **DGI 3** (2022-27): progress monitoring



4. Still important data gaps

- **BIS global role** in collecting and disseminating property prices after the GFC
 - But important challenges remain for collecting **RPPIs**...
 - ... and even more so for **CPPIs**

- **3 main data issues**
 - **Information value** of the data collected
 - **Reliability**
 - **Usefulness** (for policy)



4. Information value?

- Both RPPIs and CPPIs **reflect the same 2 cost components**
 - Land (location)
 - Structure (construction costs)
- **Common forces driving residential and commercial prices**
 - State of the economy, financing conditions, building costs
 - Structural factors (building permission, land availability, etc.)
- **Different economic purposes**
 - RPPI: household primary need for shelter (role of owner occupation rate)
 - CPPI: underlying activity is to generate income (business investment nature)
 - Impact of obsolescence



4. Reliability?

- **Various (conflicting) sources & uncertainties**
 - Official / private / web based **records**
 - **Judgement** esp. in context of banks' lending
 - Financial market **prices**
 - **Transactions** / stocks
- **Noisy indicators?**
 - **Sectoral heterogeneity** (commercial property sector, residential population segment)
 - **Geographical** dispersion
 - **Weighting** schemes



4. Usefulness?

- Markets' **liquidity** changes
 - **Volatile** price signals
 - **Non-linearity** over time: lower level of transactions during recessions
 - For PPs and even more so CPs
- The problem of **low numbers** of observations
 - Difficult to **observe** prices for identical (large/pricy) items over time
 - **Adjustment** for quality
 - Various market indicators subject to **biases** (role of judgement, importance of idiosyncratic/structural factors)



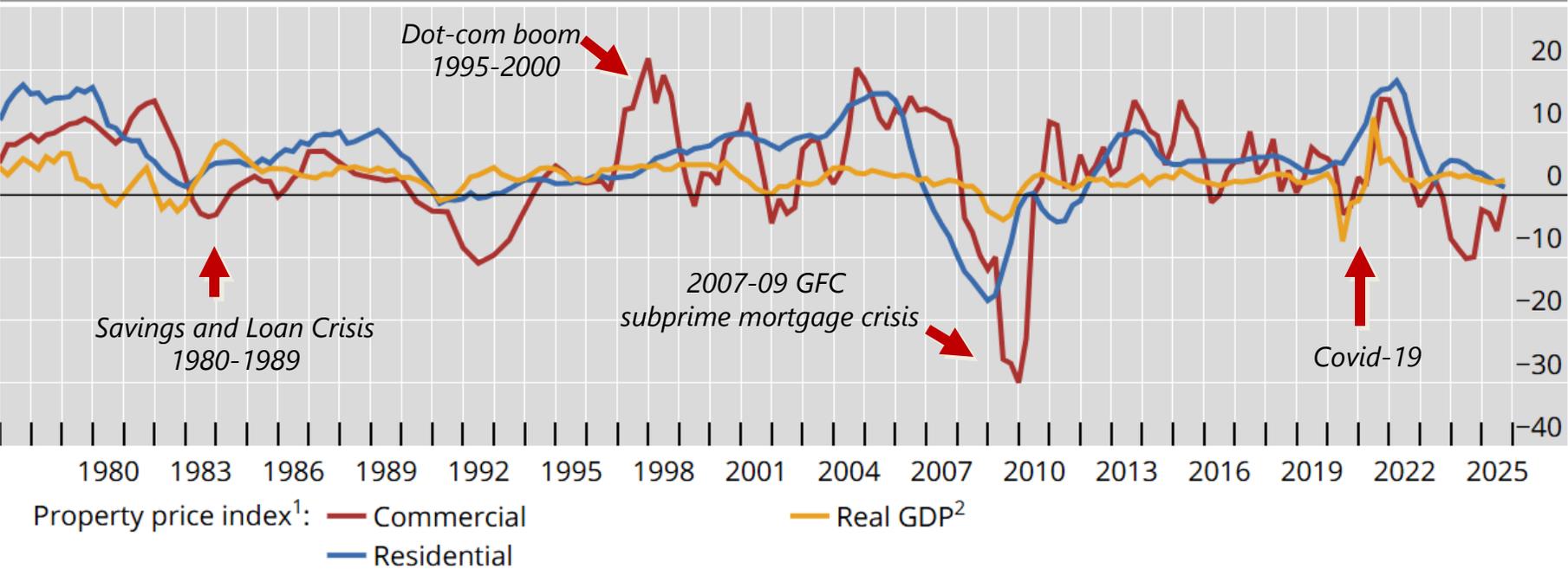
5. Complementary insights from residential and commercial PPs

- More data / tested methodologies for **RPPs**
- Greater **CPPs' correlation with business cycles**
 - Business investment highly **cyclical** (compared to household demand)
 - Shorter **financing conditions** (maturity, leveraged finance)
- More **amplitude (volatility) of CPPs**
 - Rates of **depreciation** in bad times / rapid obsolescence of non-occupied assets
 - Influence of **bankruptcy procedures** (firms versus households)
 - Fluctuations of **banks' exposures** (provisions / losses)



Illustration: US residential and commercial property prices

Commercial and residential property price developments and real GDP growth in the United States
Annual growth, in per cent



CPPIs appear more volatile than RPPIs

Both fluctuate more compared to the business cycle

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

Source: BIS; Board of Governors of the Federal Reserve System.



Thank you!!



- Mind the data gap: commercial property prices for policy (2019), *IFC Report*, no 8
- Residential property price statistics across the globe (2014), *BIS Quarterly Review*, Sept.
- Exploring aggregate asset price fluctuations across countries : measurement, determinants and monetary policy implications, *BIS Economic Papers*, no 40
- Research and analysis using the BIS property price statistics

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