The BIS role in collecting and disseminating Commercial Property Price Indicators[1]

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1. Historical background

BIS as ground setter

Information on the value of commercial properties can be an important input for economic and financial analysis, especially to **support policy-making in areas of financial stability**. The BIS was among the first to emphasise the usefulness of incorporating property price information in analytical frameworks in the late 1980s (BIS (1989)). Subsequent research conducted in the early 1990s highlighted the importance of considering aggregate asset prices when exploring the link between money and credit and the real economy (Borio et al (1994)). It also pointed to the specific role played by commercial property, as a distinct input to be considered in addition to residential property and equity shares when analysing the impact of asset prices on the economy and the financial system. Yet, reflecting a general lack of information on commercial properties, most of the analytical work conducted on these issues in the years preceding the Great Financial Crisis of 2007-09 (GFC) had been limited to Residential Property Price Indicators (RPPIs).

Focus on Commercial Property Prices after the GFC

Data efforts launched after the GFC aimed at addressing this information gap, especially in the context of the G-20 Data Gaps Initiative (DGI). Yet, the first phase of this initiative (2009-2014) mostly focused on RPPIs statistics (FSB-IMF (2009)). Nevertheless, it clearly recognised the importance of Commercial Property Price indicators (CPPIs).

The **second phase of the DGI** provided a new and important impetus for both the compilation and dissemination of CPPIs (FSB-IMF (2015)). First, it reiterated their importance for estimating corporate wealth and capital formation. Second, it highlighted their usefulness for detecting and monitoring asset price bubbles and thereby assessing broader financial stability implications. Third, it recognised that, compared to RPPIs, CPPIs are at a less developed stage as regards compilation methodology. In view of the above, a **specific DGI recommendation** (no 18) was launched and devoted to CPPIs, with two major points of focus: methodology and data dissemination. The IAG in collaboration with the Inter-Secretariat Working Group

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on Price Statistics[3] was accordingly tasked to enhance the methodological guidance on the compilation of CPPIs and encourage their dissemination via the BIS website.

As regards data compilation and related methodology aspects, a key development was the publication of the **Eurostat Report** to support the compilation of CPPIs (Eurostat (2017)). However, reflecting persistent methodological difficulties, this report did not provide a harmonised methodological framework nor detailed methodological guidance for compilers. Turning to data dissemination, in 2010 the BIS started disseminating a limited number of CPPIs collected from national central banks as part of its general work on property price statistics.

Lastly, it was decided in 2022 to continue **after the end of DGI phase 2 to highlight progress made on its relevant recommendations**, especially the one covering CPPIs. This monitoring exercise is now organised on an annual basis and published as an annex to the progress reports covering the new DGI phase 3.

2. Collecting both house and commercial property prices?

The specific information content of CPPIs

The important issue to consider when compiling CPPIs is whether the **information provided is useful**. In particular, collecting both CPPIs and RPPIs is only worth the effort if this provides complementary, not redundant information. Indeed, CPPIs and RPPIs can be driven by similar factors, such as the cost of credit, the price of land etc. There are also important similarities in terms of availability, sort of events recorded, and even types of data where CPPIs and RPPIs are compiled from the same sources. Moreover, while commercial and residential price developments may not move hand in hand in the short term, their co-movements could be stronger on a longer time horizon, which is typically more important from a financial stability perspective.

Yet, empirical analyses point to a **higher volatility** and correlation with business cycles of CPPIs, compared to RPPIs, suggesting a faster reaction to changing economic and financial conditions. From this perspective, the information content of CPPIs would thus deserve specific attention (ECB (2010)).

A related question is the treatment of **"buy to let" property**, ie the purchase of housing with the specific intention to rent it. This type of property has clearly a double nature. On the one hand, it is a residential property, as it can serve as a shelter; on the other hand, it is a commercial property as it generates income. Therefore, such properties may be included or excluded when compiling CPPIs, depending on users' requirements.

At the level of theory, the **analytical framework that can benefit from CPPIs** data can be quite broad (Tissot (2018)). In particular, and from a **financial stability perspective**, the price of a tangible asset like a commercial property can play a major role in driving episodes of booms and busts in the financial cycle. The upward phase of this financial cycle is typically triggered by favourable financial conditions, leading to an expansion in credit and asset prices and to an underlying deterioration in

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[3] The mission of the Intersecretariat Working Group on Price Statistics is to develop and document best practice guidelines on concepts and methods of price statistics and indicators consistent with the established international standards on the subject and to encourage their use. It comprises several international organisations; see www.ilo.org/public/english/bureau/stat/download/cpi/iwgps/iwgtor.pdf.

balance sheets. The process can quickly reverse once overly optimistic perceptions are adjusted, triggering a general deleveraging in the economy and sharp corrections in asset prices.

Such **forces can be particularly destabilising** in the case of commercial properties: rising prices typically tend to embellish corporates' balance sheets, with higher net worth supporting their borrowing capacity; moreover, banks have stronger incentives to provide funding against (more expensive) collateral, further relaxing firms' credit constraints. Past experience also shows that this is often associated with excessive tolerance for risk-taking, an inappropriate relaxation in lending standards and a tendency to provide credit with insufficient consideration of the sustainability of the projects financed (Borio et al (2001)). At some point, funding can thus quickly dry up and prices may adjust markedly, leading to higher banks' provisions for commercial property loans. One key reason is that tangible assets can rapidly become obsolete once they are no longer used in the production process.

Diverging residential and commercial price developments during the Covid-19 pandemic

The Covid-19 pandemic was an interesting period from this perspective. While both segments benefited from fiscal and monetary stimulus, a **number of contrasting factors influenced the prices of residential and commercial properties**.

As regard housing prices, the **perceived value of "home" was on the rise**, due to home office policies during the pandemic and hybrid working arrangements in its aftermath. This pushed the demand for housing, while on the supply side there was a **limited availability of new homes** (Igan et al (2022)). In this context, global real house price growth peaked in the middle of 2021.[4]

In contrast, Covid-19-related **containment measures kept owners/tenants away from commercial properties**. The demand for office space declined and many retail premises such as shops and hotels were vacant for extended period. Consequently, the level of activity decreased while vacancy rates increased, both triggering a substantial decline in prices despite some fiscal support (eg equity injections, loans, guarantees) and monetary stimulus. CPPIs declined the most in regions with most COVID-19 cases (Deghi et al (2022)). Looking further ahead, **structural changes such as a shift towards teleworking and e-commerce is expected to have long lasting effect on CPPIs**.

All in all, and as illustrated by BIS data, there has been a significant divergence between CPPIs and RPPIs during the pandemic period (Graph 2). In particular, for the three biggest advanced and emerging market economies for which data are available, real RPPIs have been much stronger compared to CPPIs[5].

[4] Global real house prices rose by 5.5% year on year in aggregate in the third quarter of 2021, the fastest growth rate recorded since the eve of the 2007–09 Great Financial Crisis (GFC). (BIS, Residential property price commentary, Q3 2021).
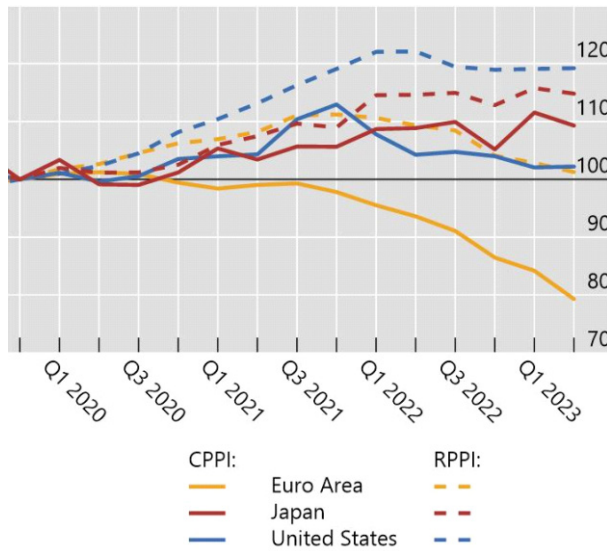
[5] While the graphs plot the most representative indicators available, they can only serve as illustration for several reasons: the CPPIs and RPPIs have different geographical coverage; they are sourced from different underlying data; and they are not compiled by the same organisation in several jurisdictions.

Real Commercial Property Price and Residential Property Price Indicators in Advanced and Emerging Market Economies
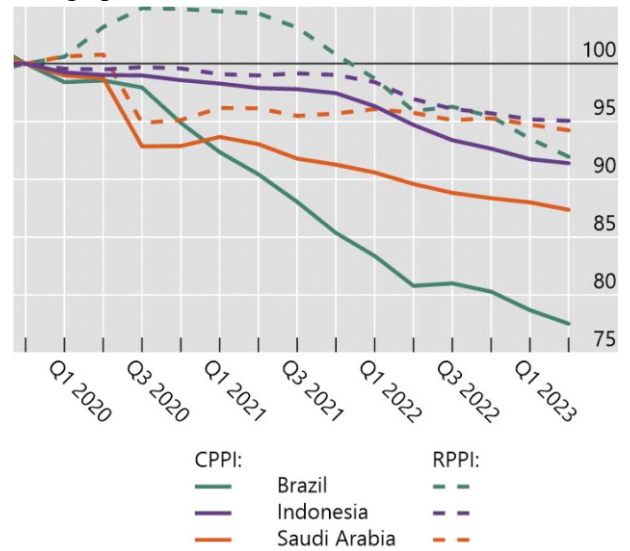
Q4 2019 = 100   Graph 1

Advanced Economies

Emerging Market Economies

CPPI:
- Euro Area
- Japan
- United States

RPPI:
- Euro Area
- Japan
- United States

CPPI:
- Brazil
- Indonesia
- Saudi Arabia

RPPI:
- Brazil
- Indonesia
- Saudi Arabia

Based on quarterly averages: CPI deflated

Source: BIS Property price data sets

Possible disaggregation of CPPIs

Even within the commercial segment the various users may have heterogenous data needs. For example the type of sectoral breakdown they are interested in will depend on their analytical purposes. For macro-economic analysis and monetary policy alike, aggregate indicators are typically sufficient. In contrast, more **disaggregated indicators may be useful for identifying financial stability vulnerabilities in a specified area**, especially since prices may move in opposite direction across the various segments of the commercial property market.

From this perspective too, the **Covid-19 pandemic** was an illustrative episode. As a result of containment measures, the **demand for office and retail properties declined and the surge in e-commerce activity generated demand for logistical/industrial warehouse premises**. The resulting shift in demand across commercial real estate sector market segments appears to have resulted in divergent price developments. In particular, a recent study shows that the industrial (and buy to let) residential subsectors fared relatively well in comparison to the retail and office subsectors during the pandemic (Deghi et al (2022)). This is also what one can observe for the three countries for which the BIS collects CPPIs by market segments: the industrial/logistical subsector has outperformed the office and retail subsectors in the period following the pandemic in the Netherlands, Singapore and Spain (Graph 2).

Another dimension to consider is that there may also be important geographical disparities. The CPPIs compiled in some places may not be representative of country-wide developments, and the BIS has therefore been encouraging national authorities

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to publish property price indicators at the level of both the whole country and the capital city (or its main financial centre).

Real Commercial Property Price Indicators by sector

Q4 2019 = 100   Graph 2
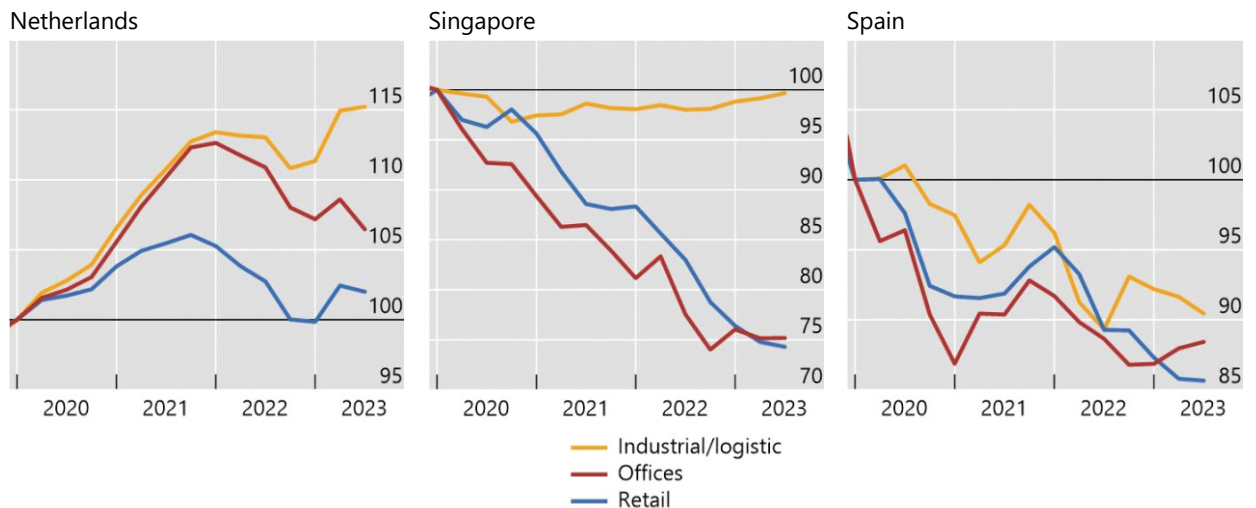
Based on quarterly averages: CPI deflated

Source: BIS Property price data sets

3. Main challenges in the compilation of CPPIs

While there is a growing policy need for more information on CPPIs, statisticians still face **important difficulties** in compiling them. Indeed, and as recognised in the context of the DGI initiative, "*CPPIs are at a less developed stage than RPPIs, both conceptually and in terms of available data*". Certainly, important steps have been taken in recent years to both enhance the methodological guidance on the compilation of CPPIs and disseminate more data (eg through the BIS website). Yet, important limitations remain that are still preventing the compilation of good-quality statistics that are harmonised across countries.

Several factors explain that the **availability of harmonised data** on commercial prices remains limited more than 15 years after the beginning of the GFC.

Institutional challenges

Statistical offices and central banks often mention the **lack of financial resources** as a constraint for CPPI compilation. With regards to the G20 economies, the DGI has helped to support CPPIs compilation exercises as noted above. In addition, there is important policy support in some jurisdictions such as the European Union, where the European Systemic Risk Board set a number of recommendations in 2016 in order to close information gaps related to real estate prices. In addition, the European Commission is currently working on a legal framework for developing,

producing and publishing commercial real estate indicators such as prices, rents, construction starts and completions,[6] and national statistical offices can apply for Eurostat grants for such compilation exercises. But, in many other regions, there is often little policy support to make rapid progress on this front.

Methodological issues

Another constraint is that potential CPPIs **compilers often lack the needed methodological and technical knowledge**. While various international organisations such as Eurostat and the International Monetary Fund offer technical assistance, there is still no Handbook or Manual summarising the best compilation practices and providing adequate guidance.

This certainly reflects important methodological difficulties. First, registering the sector of a commercial property is not always straightforward, especially when different types of activities can take place. For example, a property may comprise retail premises on the ground floor, and offices and rented-out dwellings on the higher floors. Second, in some jurisdictions a significant share of commercial properties are transacted through special purpose entities created solely to own property. Third, "artificial" prices may be registered in intracompany transactions, where the seller and buyer are part of the same corporate group. Finally, prices may not be representative for some specific transactions (eg leasebacks, for which the seller leases back the same asset from the purchaser).

Data limitations

Typically, statisticians interested in price measurement will be willing to capture quality effects when gauging the evolution of price indicators. **Transaction based, constant-quality CPPIs would thus be preferred** needs, as they allow for adjusting for changes in the composition of properties (eg their depreciation/obsolescence or, conversely, the impact of new investments on valuations).

However, in several jurisdictions there are either no transaction records or the number of transactions is insufficient for the compilation of quality adjusted-CPPIs. In particular, the number of transactions could be critically low during financial distresses when the commercial property market dries up. As a fallback solution, some compilers can prefer to publish low-frequency (annual or bi-annual) CPPIs. Or they may only focus on a subset of transaction records, for instance those limited to property purchases financed with mortgage loans.

Where no transactions records are available, one solution is to use appraisals made by financial institutions or commercial data providers for sourcing CPPIs. However, appraisal-based data also present several drawbacks. First, they often cover only a fraction of the market. Second, the appraisal quality depends on the expertise of the appraiser, who moreover may be pressured to bias the appraisal in the direction desired by the payer (ie the buyer, or the financial institution providing the loan). Third, appraisals can be conducted infrequently and collected over an extended period of time, with the risk of assessments being too conservative,

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[6]   https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13916-Commercial-real-estate-statistics_en.

for instance if appraisers react slowly to rapid market movements. Finally, commercial data providers may not be willing to disclose their methodology or authorise even a modest scale republication of their data for copyright and business reasons.

Finally, **financial market data** can provide almost real-time information derived from actual transactions observed in the market (eg investment in REITs). Such examples of CPPIs based on the performance indicators of portfolios investing predominantly in commercial properties can be found in many countries. This type of information has two advantages. First, financial market indicators provide frequent information and very rapidly, reducing the risk of lagged and/or smoothed signals. Second, they are accurate in the sense that they reflect actual market participants' views when investing/selling "for real". However, there are also important limitations when one is willing to use these data for compiling CPPIs. Given these limitations, REITs are used only as complementary source (at best) in the BIS CPPIs data set.

3. The BIS activities with commercial property price indices and outlook

The BIS is still the sole international organisation regularly disseminating CPPIs. The country coverage has improved significantly since the first publication in 2010. Currently, 57 series are available, covering 23 countries (Table 1), though this is far less than the 330 series available for residential properties (61 countries). Moreover, only a handful of national statistical offices or central banks are expected to publish CPPIs in the coming years according to a recent BIS survey.

The BIS also supports the sharing and dissemination of CPPIs by supporting ongoing efforts to set up a global SDMX[7] data structure definition (DSD) for property price indicators in cooperation with the Eurostat, IMF and OECD. The release of this new DSD will bring several benefits. First, the adequate classification of sources, property types, market segments will support a proper compilation of CPPIs. In particular, property price specific code lists may also serve as reference pending the publication of a comprehensive methodological manual for CPPIs. Second, the production of property price statistics compatible with a global DSD will enable data sharing, and therefore reduce the reporting burden for compilers. Finally, implementing the new DSD will facilitate dissemination on data portals and APIs and, hence, empower the users of these statistics.

The BIS is also leveraging the SDMX model in order to publish its CPPIs data sets on the BIS Data Portal as from end 2023.[8] This new portal will facilitate time series search and download, in particular with the use of interactive dashboards combing both CPPIS and RPPIs.

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[7] Statistical Data and Metadata Exchange: https://www.bis.org/statistics/sdmx.htm

[8] https://data.bis.org/topics/CPP

Inventory of the commercial property price indicators published by the BIS

As of October 2023.

Countries	Number of series	Geographical coverage			Source of price information			Property type		Starting year;[1] frequency
		All	Cities	Capital	Trans-action	Appraisal	Offer/ Survey	Only land	Building/ unit[2]	
Argentina	2			✓			✓			2017; quarterly
Brazil	1		✓			✓	✓		✓	2012, monthly
Denmark	3	✓			✓	✓			✓	1992; quarterly
Euro area	1	✓			✓	✓			✓	2000; quarterly
France	2	✓	✓		✓				✓	2010: quarterly
Germany	5	✓	✓		✓	✓			✓	1995; annual 2008; quarterly
Greece	4	✓		✓		✓			✓	2006; half-yearly
Hong Kong SAR	2	✓			✓				✓	1993; monthly
Iceland	2	✓			✓				✓	1995, quarterly
Indonesia	2		✓	✓	✓				✓	2017; quarterly
Japan	6	✓	✓	✓		✓	✓	✓	✓	1955; half-yearly, 2008; quarterly
Korea	1	✓				✓		✓		1987; monthly
Morocco	2	✓		✓	✓				✓	2006; quarterly
Netherlands	4	✓			✓				✓	2008, quarterly
Philippines	1			✓	✓			✓		2008; quarterly
Poland	3		✓	✓	✓				✓	2000; annual
Portugal	1	✓			✓				✓	2009, annual
Saudi Arabia	2	✓		✓	✓				✓	2014; quarterly
Singapore	3	✓			✓				✓	1998; quarterly
Slovenia	3			✓			✓			2008; quarterly
Spain	5	✓			✓				✓	2010; quarterly
Switzerland	1	✓			✓				✓	2005; quarterly
United States	1	✓			✓	✓			✓	1945; quarterly

[1] Earliest, in case of more than one series.   [2] For example: industrial, office, retail or rented flats. Countries highlighted were added to the data set after the publication of the IFC report no 8.

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

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