



EUROPEAN COMMISSION

EUROSTAT

# International Conference on Real Estate Statistics

Luxembourg, 20 – 22 February 2019

Report from the meeting



<https://www.real-estate-statistics.eu/>

## Introduction

Following the global financial crisis, real estate has moved into the focus of policy makers, in particular with a view to macro-economic and macro-prudential policies. Data gaps and information needs have been pointed out in the context of the G-20 Data Gaps Initiative with regard to both residential and commercial real estate. While good progress has been made in the compilation and dissemination of residential property prices, compilation of commercial property prices remains very challenging.

Against this background, Eurostat organised the International Conference on Real Estate Statistics in Luxembourg from 20 to 22 February 2019 in close cooperation with the ECB. It brought together high-level experts from the statistical community and important stakeholders. The conference addressed a broad range of conceptual and practical issues relating to residential and commercial real estate statistics. 59 submissions were received, covering all the topics suggested in the call for papers.

The meeting took the International Working Group on Price Indices, set up under the auspices of the United Nations Statistical Commission and known as the [Ottawa Group](#), as a role model. It was the first of its kind, dedicated explicitly to real estate statistics. 130 participants from more than 40 countries attended, including statistical offices / government departments, central banks, international organisations as well as the academic world and the private sector.

## Summary

The papers submitted for discussion at the meeting were grouped into six topics and eight sessions. The sessions and session chairs are shown below.

- Session 1: Commercial real estate (CRE) indicators  
Chairperson: Barra Casey
- Session 2: CRE statistics: prices and beyond  
Chairperson: Rhys Lewis
- Session 3: Data sources for CRE statistics  
Chairperson: Niall O’Hanlon
- Session 4: Putting policy into practice  
Chairperson: Andrew Kanutin
- Session 5: Residential real estate measurement  
Chairperson: Marc Francke
- Session 6: House prices and big data  
Chairperson: Bruno Tissot
- Session 7: Private data providers  
Chairperson: Jens Mehrhoff
- Panel discussion: Way forward  
Moderator: Paul Konijn

27 papers were presented for discussion in the seven plenary sessions and 22 papers were presented in two dedicated poster sessions. The panel discussion on the way forward featured the international organisations, in particular the BIS, the OECD, the IMF, the ECB and Eurostat. Peter Praet, Member of the Executive Board of the ECB, gave the keynote speech on the importance of real estate statistics.

Papers were well received by participants and useful discussions were held on various topics relating to the statistical standards, sources, methods and procedures for developing real estate statistics. Participants debated many issues at the forefront of current thinking on the development, production and dissemination of these indicators. The key points emerging from each session are given in the Chairperson's summary notes in Annex A.

The meeting demonstrated the increased international focus on developing statistics on real estate, both residential and commercial. On the way forward, it was argued that there is a need to enhance the coordination structures among international organisations in the development of this field, and to create a forum for the regular exchanges of practices and discussions of methodological development among experts from statistical institutes and central banks as well as researchers. The Inter-Agency Group on Economic and Financial Statistics member institutions will discuss this question and next steps further with the Ottawa Group Steering Committee and the Inter-secretariat Working Group on Price Statistics.

Evaluation forms indicated very positive feedback from participants on all aspects and some suggestions for further improvement have been made. A summary of the participants' feedback is given in Annex B.

The success of the meeting reflected the following contributions:

- the ECB for their support in organising this meeting;
- the Steering Committee members for their assistance in planning this meeting;
- the session chairs for leading the discussions and preparing the summaries;
- the authors for their contributions and the quality of the papers and posters presented;
- all participants for the fruitful discussions and feedback; and
- the staff at Adria Congrex, the European Convention Center and Eurostat for their help in organising the meeting and their support provided to participants.

Jens Mehrhoff, Eurostat  
Chairperson of the Scientific Committee

## **Annex A: Chairperson's summary notes**

### **Session 1: Commercial real estate (CRE) indicators**

#### **Chairperson: Barra Casey**

There were four quite diverse papers in this opening session of the inaugural meeting of the International Conference on Real Estate Statistics. Marc Francke (Amsterdam Business School & Ortec Finance) had the honour of presenting the first paper which looked at the holding periods in repeat sales models. Farley Ishaak (Statistics Netherlands) presented on the role special purpose entities (SPEs) play in the commercial property market. This is potentially a very significant issue that should be accounted for, certainly in particular countries, during the development of commercial property indicators. Mick Silver (formerly Principal Statistical Methodologist, IMF) then made a strong case for the use of transactions data, as opposed to valuation or appraisal data, as a source of information for a CPPI. Lastly, Jens Mehrhoff (Eurostat) and Sabine Georgi (RICS & ZIA) presented on the CPPI statistical report published by Eurostat. They spoke about the definitions and classifications that can be used for commercial property.

#### Marc Francke: The role of holding periods in repeat sales models

Marc Francke presented his research that shows that the average periodic return decreases with the holding period, both for residential real estate in the Netherlands and England & Wales, as well as for commercial real estate in the United States: The longer the holding period is, the lower on average the periodic return is. The first implication of this finding is that the widely used repeat sales (RS) model is misspecified, because it does not differentiate between holding periods. The second implication is that systematic revisions in RS indices are due to the changing distribution of holding periods over time. This link has so far not been provided in the RS literature on index revision.

This paper proposes an adjustment to the RS model by including dummy variables for each holding period, apart from a baseline holding period to avoid perfect collinearity. The estimated price index represents the left-out holding period. This model solves the misspecification issue. Moreover, it is shown that (systematic) index revisions are much smaller in RS models including holding period dummy variables compared to a standard RS model.

#### Farley Ishaak, Ron van Schie and Jan de Haan: Why investors utilize single purpose entities in real estate transactions

Farley Ishaak presented the ongoing work in the Netherlands on the topic of how market participants transact property in the real estate market. He made the distinction between asset deals where a property is exchanged directly between a buyer and seller and share deals where the transaction takes place via the shares of special purpose entities (SPEs) that hold property.

In this research the motives of investors choosing an asset or share deal are elucidated, which will help us to understand the trade-off between asset and share deals and what circumstances determine the popularity of either one. Furthermore several stylized SPE constructions are described, which will help us understand to what extent we should consider share deals as part of a CPPI. Finally the magnitude of SPE transactions in the Netherlands will be estimated. This will help us to determine whether SPE constructions should be considered in constructing commercial property statistics, which commonly exclude these transaction structures.

### Mick Silver: Data sources for CPPIs: an overview and strategy

Mick Silver made the case that CPPIs should be based on market transaction prices. However, when monitoring average price changes over time price data can be sparse and the properties transacted each period of a different quality-mix. Due to the heterogeneity of commercial property, CPPI measurement requires a quality-mix adjustment so that the prices of like properties are compared over time with like. An appealing way around this sparse data and quality-mix adjustment problem is to use price data on broadly the same properties over time and avoid transaction price data. Tax or investment appraisal data or market valuations of real estate investment trusts (REITs) are two commonly used alternatives. While convenient, both such series can seriously mislead macroprudential and macroeconomic-policy makers. In this overview paper, Mick Silver points to the deficiencies of these data sources, outline and argue for the use of hedonic methods of quality-mix adjustment that are designed to work with sparse transaction price data in thin heterogeneous commercial property markets.

### Jens Mehrhoff and Sabine Georgi: CPPI Statistical Report “Commercial property price indicators: sources, methods and issues”

Jens Mehrhoff and Sabine Georgi presented on the CPPI statistical report published by Eurostat. In the context of the G20 Data Gaps Initiative, Eurostat took the lead, under the auspices of the Inter-secretariat Working Group on Price Statistics (IWGPS), in coordinating the drafting of the report on “Commercial property price indicators: sources, methods and issues”.

The primary aim of the report is to outline concepts, methods, data sources and key issues for the compilation of commercial property indicators. The report makes a first attempt at setting out the wide range of challenges linked to the measurement of commercial property. The text covers the conceptual framework, the purposes and uses of CPPIs – as well as other indicators.

They also highlight the achievements of a working group of German government institutions and associations in the real estate and banking industry. They came together to develop a classification of real estate which should be a (national) standard; suitable for analysis; accepted by all market participants; compatible with the data pool; take account of existing norms (SNA and CC); and delineated using the property (as opposed to by the owner).

## **Session 2: CRE statistics: prices and beyond**

### **Chairperson: Rhys Lewis**

This session discussed several data sources used to inform statistics on the commercial real estate sector. The first presentation focused on the AnaCredit dataset which includes information on loans and collateral for the euro area and EU countries. The data is available monthly from September 2018. This new dataset will play a key role in addressing gaps on commercial real estate funding. The second presentation discussed the commercial real estate survey introduced by the Polish Central Bank in 2013. Respondents are surveyed bi-annually and provide information on commercial prices, rents and property attributes. The property attributes collected differ depending on the type of property. These data are then used to construct a hedonic rent index and transaction price index. The third presentation by Statistics Portugal focused on their work linking several administrative data sources to construct a commercial rent index. Challenges such as missing values for some variables, market coverage and a short time

series were discussed. The work presented was considered a good starting point for a new commercial rental index for Portugal, illustrating the potential of combining several data sources. The final presentation by Ireland focused on their assessments of data sources that could be used to construct commercial property statistics in Ireland. Potential sources from which to construct statistics on a; price index, rental index, building permits, starts and completions and vacancy rates were discussed. While each source had its own challenges, the paper highlights the strategic approach Ireland is taking to fill the data gaps on the commercial real estate sector.

### **Session 3: Data sources for CRE statistics**

**Chairperson: Niall O’Hanlon**

This session examined a broad range of data sources for commercial real estate statistics from the perspective of the indicators that can be developed from them, including market sentiment measures, national CPPIs and other price related measures, and physical real estate demand and supply measures.

The first presentation “The role of sentiment in understanding development in commercial real estate markets” by the Royal Institution of Chartered Surveyors (RICS) introduced the suite of survey-based sentiment indicators compiled by the RICS which are designed to capture current trends and expectations across markets rather than to provide data on actual prices or transactions. These indicators could provide some guidance towards understanding the likely direction of hard data and do show some close correlations to some price indicators. The RICS survey also provides estimates of perceptions around market point in cycle, valuation, and rent and capital value projections. The RICS plans to improve the consistency of the survey sample (since there may be some volatility accruing from responses not being based on fixed panel) and test data beyond Europe. The presentation emphasized that valuation measurements should be standardised across jurisdictions to ensure more accurate analysis of valuations data and comparable statistics.

The second presentation “Mind the data gap: ongoing development of the BIS commercial property price statistics” by the Bank for International Settlements (BIS) discussed the main uses of CPPIs; as input for policy makers and to economic and financial stability analysis, and for micro and macroprudential supervision. The G-20 Data Gaps Initiative Phase 2 Recommendation 18 on Commercial Property Prices encourages the G-20 economies, by 2021, to provide nationally available CPPI data to the BIS. The characteristics of the new BIS commercial property price statistics database were summarized. The database covers 16 economies (of which 8 are G-20), in comparison to the more mature residential property price data sets, encompassing 60 jurisdictions. The paper described the advantages and drawbacks of the various data sources underpinning CPPIs and noted issues in respect of availability and comparability of indicators across jurisdictions. The paper ends with a discussion on the challenges of expanding the country coverage and improving the cross-country comparability.

The third presentation “Combining administrative and market data in order to monitor the dynamics of the commercial real estate markets” by Statistics Denmark discussed the advantages and disadvantages of different types of source data for compiling commercial real estate indicators based on its experience of developing a register for Danish commercial real estate. The primary purpose of the register is to form the basis for the Danish tax authorities’ new system for valuating commercial properties, but data can be

used to produce commercial real estate indicators. The register is compiled from six different sources, four public administrative and two private online property portals - all of which are combined by matching to the Danish Buildings and Dwellings Register. The paper outlined the challenges to compiling the register, as well as the advantages and disadvantages of the respective data sources. Indicators that could describe the dynamics of supply and demand on the commercial property market could include price and rent price indexes, vacancy rates, measures of property availability/supply, building permits for commercial property, and lending supply and criteria. The new register will be used to further develop the current CPPI for Denmark and the measures of property availability/supply, to compile a rent price index for commercial property, and to develop a new measure of vacancy rates.

The fourth presentation “Short term business indicators for commercial real estate” by Eurostat discussed the development of European statistics on physical real estate indicators, to be collected as part of European short-term business statistics (STS) and accompanying statistical data on commercial property prices, rents and yields. Responding to increasing user needs from the European System of Central Banks, Eurostat is developing new quarterly short-term indicators to supplement the current system of measures which include: construction statistics covering monthly production volume of buildings and quarterly construction costs, material costs and labour costs of new residential buildings, as well as quarterly building permits measured in number of dwellings and useful floor area; and service statistics covering quarterly and monthly indices of turnover, production and producer prices of real estate services. More and better official data on commercial properties are needed for detecting systemic economic risks. The new indicators will be based on the administrative records of the construction process (construction starts and works completions in addition to the building permits indicators). Data on vacancy rates of commercial real estate buildings will also be investigated. A new STS CREI Task Force will work towards developing, harmonizing, collecting and aggregating the indicators and it is expected that outputs will become available on a phased basis over the medium term.

The session highlighted that a broad range of indicators are required by policy makers and other market actors, particularly in respect of the assessment of financial sector stability and measuring systemic risk. This in turn, requires compilers to consider varied data sources, both official and commercial, covering price related indicators (covering acquisition and rent prices, and yields) and physical indicators of real estate demand and supply.

#### **Session 4: Putting policy into practice**

**Chairperson: Andrew Kanutin**

This session gave a user perspective on data underlying the commercial real estate market from the point of view of a market participant, a central bank and a banking supervisor.

The first presentation “Challenges of an asset manager to base investment decisions on today’s available data in commercial real estate”, by Gunnar Herm of UBS Asset Management, described the key role that data has in assessing both optimal portfolio allocation and investment decision in general. The presentation emphasised that at present the market relied on commercially provided data in the absence of official statistics and explained why this was sub-optimal. The presentation concluded with a

plea for a lot more transparency and standardisation in the market as this would lead to more informed decision making.

The second presentation “The rationale behind a multi-indicator approach to real estate price analysis”, presented by Christine Schlitzer from the Deutsche Bundesbank, explained how, in the absence of predominant official data, the German central bank uses a suite of price indices produced by a number of public and private providers. The main arguments for this approach are that the currently available data show significant divergence - suggesting a large amount of measurement uncertainty - as well as a significant diversity in user requirements which leads to more than one price indicator being desirable. The main conclusion of the presentation was that in Germany, in the absence of official data, a multi-indicator approach is useful and that it is also highly important to have the associated compilation and definitional information about the indicators.

The final presentation of the session “Monitoring credit risk in commercial real estate: the role of idiosyncratic versus macro-economic factors”, was presented by Rob Nijsskens from De Nederlandsche Bank, and aimed at answering two main topics a) what are the main drivers of default for bank loans to the commercial real estate (CRE) sector in the Netherlands? and, b) what is the relevance of macroeconomic factors versus individual loan characteristics? The main results from the research were that the business cycle is very important for assessment of default risk of commercial real estate loans; the interest rate structure, loan to value data and collateral characteristics are also significant. The inference from this is that good quality data on these topics are imperative in order to underpin supervisory analysis.

The session brought to the fore the commonality of practical issues faced by users in three different parts of the analytical landscape – the market itself, a typical central banking environment and that of market supervision. In all three cases the provision of official, harmonised, transparent and detailed data would benefit the decision making process significantly. The status quo runs the risk of sub-optimal decision making with associated negative effects.

## **Session 5: Residential real estate measurement**

**Chairperson: Marc Francke**

### Kate Burnett-Isaacs: Alternative approaches for resale housing price indexes

This paper decomposes sale prices into land and value components. Decomposition is needed for a nation’s balance sheets, and to measure productivity performance of a country. The study uses quarterly data from Richmond, British Columbia Canada, from 2008Q1 up to 2016Q4. In order to disentangle land and structure the authors use the so-called builder’s model. To avoid potential multicollinearity issues the authors replace coefficients representing time-varying construction costs by a given residential construction cost index. The estimated depreciation rate of the structure is 2.85% per year, assuming a geometric function for depreciation. Introducing spline segments for the land and structure area of a property does lead to a massive improvement in the model fit. It is useful to introduce multiple depreciation rates for different (10 years) age cohorts of the structure in terms of improving the model fit. However, a single geometric depreciation rate does provide an adequate approximation to the more complex models for the Richmond data. Moreover, the different methods of measuring depreciation lead to similar index results for land, structure and properties. The traditional log price time

dummy hedonic regression approach generated overall property price indexes which were virtually identical to the builder's model overall property price indexes when both types of model used the maximum number of characteristics. The traditional log price time dummy hedonic regression approach did not generate reasonable land and structure subindexes.

Chihiro Shimizu: Residential property price index in Japan: discussion in methodology and data sources

The presentation provides an overview of available methods for residential property price index construction (standard hedonic, standard repeat sales, heteroscedasticity adjustments to repeat sales models, age adjustments to repeat sales, and rolling window hedonic price models), and showed the implementation of CPPI and RPPIs in Japan. The authors find that there remains a substantial discrepancy between the repeat sales and hedonic indexes, even after making various adjustments to both indexes. Especially, they find a substantial discrepancy in terms of turning points: the repeat sales index tends to exhibit a delayed turn compared to the hedonic index. The lead-lag relation between the two indexes may arise from omitted variable bias in the hedonic price model and/or sample selection bias in the repeat sales models.

The authors illustrated the use of asking prices as a potential source for residential property price index construction. They distinguishes 4 stages with corresponding prices, the initial and final asking price, the transaction price in realtor dataset, and transaction price in registry. The 4 price distributions coincide when using only properties that are available in all 4 stages. An implication is that one could use online asking prices for a flash or preliminary index estimate. Issues that need to be dealt with are the exact timing of the sale and withdrawals of listing, that may vary over the market cycle. The preliminary price indexes could be revised as additional transaction information (from realtors and registry) becomes available.

Alicia N. Rambaldi: Land value indices and the land leverage hypothesis in residential housing

The land leverage hypothesis implies that the value of the land component grows faster than the value of the structure component, and the predicted property price is broadly in line with the median price over time. The value of land and structure of a residential property is obtained using a new methodology where a state-space model produces the decomposition of the value of each site into its land and structure components. Two parameters in the model determine the degree of asymmetric behavior of the land and structure components. The method is applied to unit record level sales data for all properties that were transacted between 1975Q1 and 2018Q2, across the state of Victoria (Australia)'s 79 local government areas (LGAs). The model valuations are used to compute land and structure price indices (Fisher hedonic imputation) for the Inner, Metro and Outer regions of Greater Melbourne. Site values are provided by the Valuer-General Victoria (VGV) and serve as a benchmark value of land for every two-year snapshots. The model estimates of the sites sold in 2014 are priced for 2016 and compared to the 2016 VGV revaluation outcomes. The average difference is 3.27 percentage points. The land value indices computed from the model's estimates for LGAs within the inner, metro and outer regions are consistent with the land leverage hypothesis. This is established by analyzing the annual growth rates of each component across the three regions as well as using a regression of the property price indices on the corresponding land leverage. We find that the magnitude of the responses vary across the regions and has a seasonal pattern.

### Robert Hill: Owner occupied housing in the CPI and its impact on monetary policy during housing booms and busts

The consumer price index (CPI) measures the price of goods and services consumed by households. The CPI is used for monetary policy, indexation (e.g. public sector wages) and serves as a benchmark in private sector wage negotiations. The focus of this paper is on monetary policy. The treatment of owner-occupied housing (OOH) is probably the most important unresolved issue in CPI measurement. The European Union has been grappling with this problem for over a decade. Available methods are the acquisition, the rental equivalence, and the user cost approach. The authors discuss pros and cons of the different approaches. The authors argue for measuring OOH costs using a new method that combines aspects of the user cost and rental equivalence methods. They then compare the impact of eight different treatments of OOH on the consumer price index (CPI), using quantile hedonic regression methods applied to data for Sydney. On average, inflation is half a percentage point higher per year when OOH is included using our preferred user cost method. This finding is applicable to other countries as well, and hence has implications for the choice of inflation target. The treatment of OOH also emerges as an essential prerequisite to discussions over how an inflation targeting central bank should respond to housing booms and busts. Furthermore, the authors show that changing the way that OOH enters the US CPI can at least partly explain the disinflation puzzle during the global financial crisis.

### **Session 6: House prices and big data** **Chairperson: Bruno Tissot**

This session reviewed the possibilities offered by new types of data sources and techniques (summarised by the acronym of “Big Data”) for producing, disseminating and analysing house price information. The issues at stake are not simple. To start with, opinions differ on what big data actually is and how it can contribute to the production of official statistics. Moreover, the concept of property prices can differ markedly across countries and sector (eg between the residential and the commercial sectors). Furthermore, the communication of analyses based on somewhat opaque and complex big data sources and analytical techniques can be challenging, especially to support policy. Nevertheless, the four presented papers provided useful insights to help addressing these various issues in an effective way.

The first paper, “An alternative hedonic residential property price index for indices using big data: the case of Jakarta”, by Bank Indonesia, showed how to use big data to construct quality-adjusted house price indices for the capital centre in Indonesia. The presentation emphasised the inherent difficulties related to property markets, namely the infrequent number of transactions and the significant heterogeneity between tangible assets, which make it difficult to assess quality effects. The approach followed tried to deal with these issues by, first, capturing the various characteristics of a property as displayed in web-based advertisements; and, second, applying a hedonic method to estimate the impact of quality changes. The exercise also underlined the challenges in using big data sources, especially related to quality issues: incorrect references displayed on the web; non-standardised characteristics (eg address of the properties); existence of duplicates (both across web portals and over time); discontinuity over time (because the data sources and their coverage of the market can significantly change); etc. Dealing with these challenges requires significant work when cleaning and processing the data. Yet the results, compared to other “official” indicators available for property markets, suggested that the approach can be effective.

The second paper, “Construction of residential property price indices using hedonic approach: an application to the condominium market in Sri Lanka”, by the Central Bank of Sri Lanka, started by highlighting the importance of real estate prices for policy, not least because of their interaction with monetary policy transmission and consumer spending. In Sri Lanka, a very important market segment relates to condominiums located in the urban areas, for which price information was scarce. The project conducted at the central bank was successful from three perspectives. First, in the absence of reliable statistics, alternative sources could be found using big data: in that case, advertisements from property websites and newspapers, which nicely complemented the quarterly survey targeting condominium developers. Second, the use of various hedonic techniques helped to adjust for quality changes. Third, the approach was timely, in contrast to the important time lags observed when compiling “traditional” survey indicators.

The third paper, “The potential of big housing data: an application to the Italian real estate market”, by the Central Bank of Italia, highlighted the current limitations related to the property data available in Italy, despite importance of this information for financial stability as well as structural analyses (eg spatial features of the labour market). To address this information gap, housing sales advertisements posed on a specific website were collected and matched with other sources of information (census and tax registry) using granular, spatial-level identification. This approach faced a number of challenges. A key one was to deal with duplicates, since several advertisements can be associated with the same dwelling; this required cleaning and “deduplicating” the datasets, with significant resources costs. Yet the approach also presented significant benefits. One is the ability to nowcast official prices indices. Another was to get structural indicators that provide new insights to analyse the housing market, for instance in terms of liquidity, market tightness (with the assessment of demand intensity by measuring the number of clicks on specific ads), discounting practices (by comparing asking and transactions prices, which can differ markedly for instance during turning points), and geographical specificities.

The fourth paper, “Valuing housing services in the era of big data: a user cost approach leveraging Zillow micro data”, by the US Bureau of Economic Analysis (BEA), also used a “big data set”. This one was not derived from the internet of things, but from a very large register of property transactions compiled by a commercial data provider and combined with tax assessors’ public assessments. These data were used to enhance the compilation of housing services estimates. The current practice of the BEA is to follow the rental-equivalence approach for estimating imputed rental of owner-occupied nonfarm housing, by considering census survey-based information for similar homes. The new approach aimed at a more direct measure, by capturing various elements such as the price of the house, mortgage costs, depreciation impact, taxes etc... A key benefit was the ability to incorporate actual market prices. Another was the possibility to use hedonic regression techniques applied to granular housing characteristics, such as zip code-based location and local taxes.

To summarise, the session highlighted the potential of big data sources and techniques for compiling house price indicators, at least as a complementary way to more “traditional” data sources. They can provide new sorts of signals that can be useful especially for policy makers, for instance for analysing liquidity and tensions in property markets as well as geographical dispersion effects and boom/bust patterns. Yet there are important challenges, related in particular to: the methodological choices for computing house prices indices; the need to clean the vast of amount of granular data collected, not

least to deal with duplicates, outliers etc; the difficulty to measure real transaction prices and avoid capturing obsolete information (since internet-based ads can remain on the web for a long time); and the issues posed by matching different datasets. Looking forward, key was to make more, sometimes untested information available, so that researchers and policy analysers can “play with the data”.

## **Session 7: Private data providers**

**Chairperson: Jens Mehrhoff**

The session consisted of three presentations from private data providers and one discussion-like contribution on the use of this source.

Hela Hinrichs from Jones Lang LaSalle (JLL) presented pitfalls with the current data availability. JLL publishes the Global Real Estate Transparency Index; its components include inter alia the availability of market fundamentals. Hela continued discussing that supply is a key factor for rental forecasts, with no complete data for stocks / inventories publicly accessible. Likewise, transactions are key ingredients for property pricing, again with no complete data for lease contracts and transactions publicly accessible; furthermore, the proportion of confidential deals is increasing. Eventually, indices for prime European offices suggest that yield compression is the main driver of capital value growth this cycle but rental growth will underpin capital value growth moving forward. A final challenge is the measurement of vacancy rates in the wake of flexible space providers.

Ken O’Brien and Sebastian Glaesner from MSCI talked about the challenges and opportunities of the MSCI real estate data. Detailed data are collected from their primary stakeholders (institutional investors, asset managers and related parties); as a by-product, indices are calculated. A wide range of metrics on investment criteria, transparency measures, performance indicators and real estate fundamentals is derived. Ken showed some of the opportunities of their data base, telling the current ‘stories’ in some markets (retail total return by segment in the Netherlands, industrial total return distribution in the UK, retail capital growth decomposition in Australia). Different valuation regimes in different markets pose a challenge, though, resulting in a discrepancy between valuations and sale prices. Sebastian continued explaining the systematic deviations in this comparison across countries, in particular for Germany and Switzerland.

Simon Mallinson and Tom Leahy from Real Capital Analytics (RCA) introduced commercial property price indices and capital liquidity scores produced by RCA. The data allows understanding the event impact on pricing, such as during the global financial crisis, when valuation indices fell further than transacted prices suggested; quantifying the capital flow impact on pricing; and measuring diverging sectors. Tom continued with their clients requirements to assess liquidity for risk management and portfolio allocation purposes, which has been done previously less sophisticatedly based on a volume ranking. The liquidity scores show strong relationships with ask-sale price spreads, cap rates (in the long-term) and the CPPI (with a lead). Different ways to quantify liquidity risk were presented. Simon wrapped up with future plans: get more granular CPPIs, expand the set of liquidity scores and develop cap rate series.

Andrew Kanutin from the European Central Bank (ECB) examined the commercial micro data and the use of this ‘imperfect’ source in the analysis of financial exposures, localised responses to policy, etc. The requirements encompass the frequency, timeliness and granularity (type and geography) of the data. The ECB conducted an informal search

with market coverage, i.e. geography, segments, ownership, etc., as the key attributes. Overall, it emerged that transaction-based RCA data dominates valuation-based MSCI data, which in turn dominates notional JLL data. Yet, all data sets have advantages as well as drawbacks and no one-size-fits-all solution exists. Country coverage for European aggregates remains problematic and it is a significant task to explain the caveats to end-users. The future either needs to see significant improvements commercially or new official data.

The questions and answers touched upon a wide range of issues. These included but were not limited to

- the reliability of valuations or notional data vis-à-vis transactions, where the lack of transactions makes the cases both in favour (data requirements) and against (statistical properties) the use of alternative sources;
- the role of special purpose entities and share deals in real estate transactions, which are considered important but official statistics have yet been unable to quantify the magnitude;
- the loss of transparency in the market due to increasing data protection (and cultural differences), and the lack of cross-country comparability due to different valuation regimes;
- the demand for sharing of privately held data for statistical purposes, including the issue of a potential coverage bias of the private sources towards prime properties;
- the very definition of prime location, which is broadly considered to be ‘best in class’; and
- the use of micro, i.e. asset level, data for prudential purposes, where granular information is necessary in order to look into the tails of distributions (risk assessment).

The session exposed that it will be very challenging, hugely labour-intensive and extremely costly to develop the whole breadth of official real estate statistics in the required frequency, timeliness and granularity from either administrative or other sources. Hence, there is a strong case for alternatives in terms of ‘unusual’ approaches.

### **Panel discussion: Way forward**

**Moderator: Paul Konijn**

The panel noted that the large number of participants to this conference as well as the substantial number of paper submissions are evidence of the significant interest that currently exists for the further development of real estate statistics. Residential property price indices are fast becoming important elements of official statistics, but much more work is to be done to address current data limitations, expand the scope of indicators, for example on house sales or affordability, or to provide additional granularity, for example by location. Big data sources (including web-based indicators as well as large administrative datasets) and solutions could speed up these developments.

For commercial real estate, data are still sparse, but a lot of research is on-going, in national statistical offices, in national central banks and in the academic world. During

the panel, the international organisations showed how they contribute to these activities by e.g. collecting and disseminating available data, facilitating the exchange of country experiences, developing data templates, promoting capacity building, coordinating countries' work in task forces and stimulating the development of a conceptual framework. In this area, it is recognised that useful relations should be maintained with the private sector, which possesses key knowledge and data.

In developing commercial real estate statistics, the panel recommended to be both pragmatic and ambitious. On the short run, already available information should be used to answer key user needs, while developing a more encompassing framework and methodology for the longer term.

To do this, the panel agreed that it is essential to continue the intensive exchange of practices, knowledge and research that was exhibited during this conference. This is especially important in view of the early stage of development of this statistical field. One possibility is that a “city group”-like forum similar to the existing Ottawa group on price statistics could be set up to facilitate future cooperation and exchange among all stakeholders. Such a group could cover the development of both residential and commercial real estate statistics.

In addition, the panel agreed that there is a need to enhance the coordination of the activities of the international organisations in the domain of real estate statistics, in order to ensure a common approach to meeting the various user needs. Currently, the mechanism for this coordination is still relatively informal. A more formal mechanism could involve the organisations that are stakeholders in this area, in particular those working on the financial sector. Among various options, the existing Working Group on House Prices, under the auspices of the Inter-Agency Group on Economic and Financial Statistics, could be expanded to cover all real estate statistics. This WG could play a pivotal role in developing the methodology of real estate statistics by steering the compilation of manuals and guidance, as well as defining templates for data transmissions, in liaison with the price statistics community. In addition, it could be the sponsoring organisation for the “city group”-like forum potentially envisaged. The panel recommended to further discuss these suggestions in the appropriate international fora.

Panel members: Bruno Tissot (BIS), Paul Schreyer (OECD), Niall O’Hanlon (IMF) and Caroline Willeke (ECB). Moderator: Paul Konijn (Eurostat).

## **Annex B: Summary of the participants' feedback**

In what follows a summary of the participants' feedback along with an evaluation of the results is presented. In total, 56 questionnaires were received after the meeting. A graphical analysis is presented at the end.

The general questions about the meeting quality showed that the International Conference on Real Estate Statistics was perceived a great success with constructive discussions and debates on many of the key issues faced by compilers and users of real estate statistics today. Timeliness of papers was an issue raised by some participants. To some extent, though, this is beyond the control of the organisers (several reminders were sent closer to the meeting date).

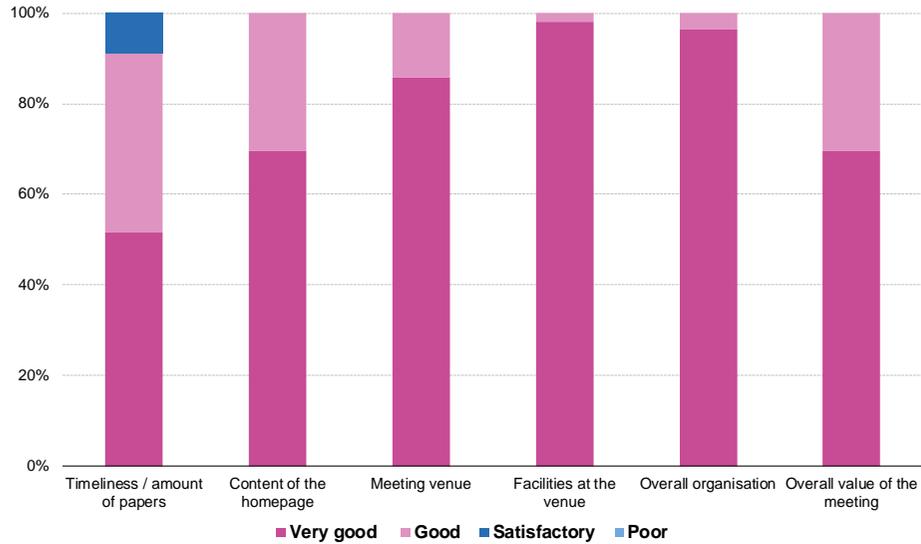
That all relevant information could be found on the homepage was praised; it still serves as a repository for all meeting documents. The venue and the food were praised too, albeit some participants considered the room a bit too large. The latter aspect was to some extent due to the very high number of participants. The organisation in terms of timing and the meeting itself as regards content were perceived extremely well. On the other hand, it was mentioned that the amount of presentations and length of days was overwhelming. This was a concession towards the quality and quantity of submissions. Further, the diverse mix of expert participants and high-quality papers as well as the great networking opportunities, e.g. at the social events, were pointed out very positively.

While it was felt important to have a specialised meeting for such an important topic, the focus on indicators on the physical market, e.g. prices, and, to some extent, commercial real estate was questioned. In a continuation of this meeting, residential real estate might become more prominent, e.g. taking forward affordability measurement or the treatment of owner-occupied housing. Indicators on credit exposures or lending standards, however, would be a mismatch as regards the background of most participants at a future gathering, not least for those from statistical institutes.

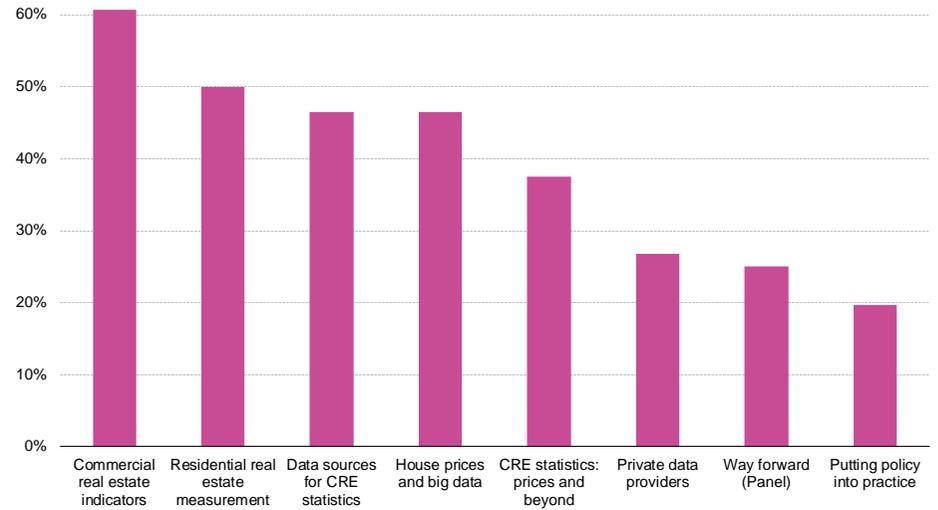
Last, the results of the questionnaire confirm the value of the poster sessions for those submissions, which could not be presented for discussion in the plenary due to time constraints given the very high number of excellent submissions. This was seen as a welcome development that facilitated discussions in a less formal environment. In the same vein, sufficient time for contributions should be ensured, both for the presentation and for the subsequent discussion.

In conclusion, the overall value of the International Conference on Real Estate Statistics was assessed equivalent to that of the [15<sup>th</sup> Meeting of the Ottawa Group on Price Indices](#). This meeting might hence be an effective forum to take the subject forward.

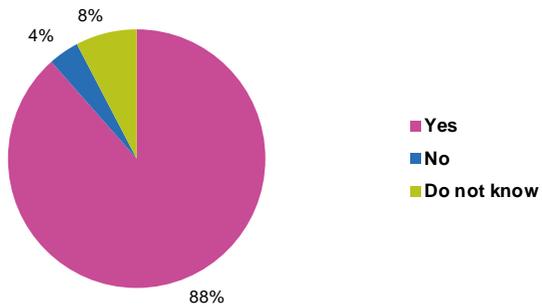
### International Conference on Real Estate Statistics evaluation



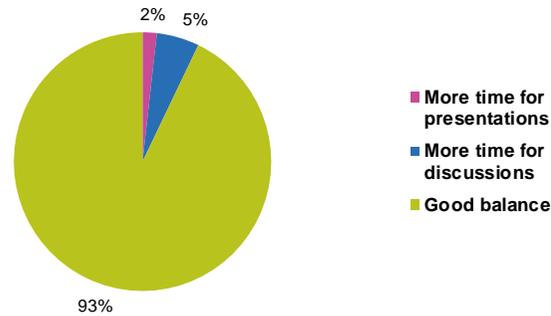
### Which sessions in the agenda did you find most useful? (more than one allowed)



### Did you consider the poster sessions valuable?



### How was the division of time between presentations and discussions?



### From which kind of institution are you?

