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**TITLE: STRATEGIES TO ENHANCE THE CREDIBILITY & RELIABILITY
OF REAL ESTATE VALUATION IN SERBIA, PART 2 (TRANSACTIONS
DATABASE)**

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EXECUTIVE SUMMARY OF MAIN RECOMMENDATIONS TO NBS**DEVELOPING A PROFESSIONALLY COMPETENT VALUATION PROFESSION**

- 1) Improve the existing valuer qualification system by requiring court experts to “retrain” as real estate valuers by gaining a diploma in valuation studies recognized by the National Bank of Serbia. The latter should also recognize court experts with expertise in economics and geodesy as suitable for such conversion to the status of a real estate valuer;
- 2) Establish a “Real Estate Valuer Education Commission” to approve an appropriate curriculum for real estate valuer “conversion” courses and to certify courses which follow such curriculum;
- 3) Decree that all relevant court experts wishing to continue to practice real estate valuation should gain a diploma in real estate valuation within a two year transitional period.
- 4) Empower the “Real Estate Valuer Education Commission” to set requirements for the compulsory Continuous Professional Development (CPD) or Lifelong Learning of valuers.

DEVELOPING RELIABLE NATIONAL VALUATION STANDARDS

- 5) Develop reliable national standards for the valuation of residential property for mortgage lending purposes in accordance with the Mortgage Credit Directive in cooperation with the Association of Appraisers of Serbia (AAS) and the National Association of Valuers of Serbia (NUPS-NAVS)

DEVELOPING A NATIONAL TRANSACTIONS DATABASE AND PRICE INDEX

- 6) Act as a catalyst for the development of a national real estate transactions database and residential property price index working in partnership with the Association of Serbian Banks, the Association of Appraisers of Serbia (AAS), the National Association of Valuers of Serbia (NUPS-NAVS) and Republic Geodetic Authority (RGZ)
- 7) Support, as and when such opportunity arises, a change in the law which would allow court experts undertaking valuation work for mortgage lending purposes, access to source information on real estate transactions held by the Courts.

1. INSTRUCTIONS

- 1.1 I Krzysztof Grzesik FRICS REV was instructed by Cardno Emerging Markets USA Ltd on 23rd September 2013 to prepare this report titled “***Strategies to Enhance the Credibility & Reliability of Real Estate Valuation in Serbia – Part 2 (Transactions Database)***” under USAID’s Business Enabling Project in Serbia.
- 1.2 This report follows an earlier report dated 20th November 2012 (hereinafter referred to as “1st Report”) by John J. Hentschel CRE MAI FRICS titled “***Strategies to Enhance the Credibility & Reliability of Real Estate Valuation in Serbia***”.
- 1.3 Amongst its recommendations the 1st Report emphasized the need to improve valuers’ access to reliable information about market transactions. as stated in the final paragraph of page 36 “*Since the output of all market based techniques is a function of the data input, a dearth of reliable, accurate, verifiable information, creates a degree of uncertainty in the resulting value conclusion which increases risk. Increased risk typically demands a corresponding increase in reward or return resulting in an elevated overall cost of capital*”.
- 1.4 In the 1st paragraph of page 37 the 1st Report states “*In nascent and evolving markets like Serbia where the dearth of data is amplified geometrically, what is meant to be an empirical exercise can often be transformed into a mere subjective declaration resulting in considerable uncertainty and lack of confidence in the value conclusion*”.
- 1.5 In paragraphs 3 and 4, page 38 the Author concludes “*The National Bank of Serbia is uniquely positioned to facilitate the creation of a comprehensive data base of relevant information for use by valuers in the valuation of residential, retail, office, hotel, and industrial income producing properties that could improve the accuracy of and confidence in value conclusions, and thereby afford the potential to reduce the risk associated with uncertainty, and correspondingly, the cost of capital for the lender and borrower. Neither access to information nor the development of professional organizations has as yet developed in Serbia to the point at which the compilation of such database could occur spontaneously as without a catalyst*” and

“A directive to banks and lenders under National Bank of Serbia’s jurisdiction to collect and report salient information during the initial underwriting and annual reporting processes which could thereafter be compiled into databases for use in conjunction with the valuation process would, over time, yield invaluable information and development of useful benchmarks that are not only essential inputs to contemporary market based valuation techniques, but that would also vastly improve the accuracy and reliability of valuations. Compilation of the information into databases could be performed in such a way that the data could be sanitized to protect the confidentiality of proprietary information.”

- 1.6 The objective of this 2nd Report is to develop a concept for the establishment of a central national data base that will contain all information necessary for sound collateral valuation, detailed analysis of the real estate market and calculation of the real estate value index for Serbia.
- 1.7 However in the first instance, given that many of the findings of the 1st Report were influenced by proposals then contained in the European Union’s draft Mortgage Credit Directive, it is incumbent on me to relay the significant changes made to the text of the Mortgage Directive since the issue of the 1st Report and offer revised recommendations accordingly.
- 1.8 Since the 1st report was issued, the text of the Mortgage Credit Directive in so far as it relates to real estate valuation of residential property has changed fundamentally from an emphasis on the need to follow international valuation standards to one which places the responsibility on EU Member States to develop "**reliable national standards**" as well as a "**professionally competent**" valuation profession.
- 1.9 Furthermore the European Union has recently opened the door to the negotiation of 35 Chapters which need to be closed before Serbia is admitted as a Member of the Union. No doubt in this connection the National Bank of Serbia will have a significant role to play in the negotiation of Chapter 9 (Financial Services). It is understood that compliance with the Mortgage Credit Directive falls under Chapter 9.

2. MORTGAGE CREDIT DIRECTIVE

- 2.1 Following a final vote of the European Parliament on 10th December 2013, the text of the Mortgage Credit Directive in so far as it affects real estate valuation includes the following paragraphs:

Extracts from Mortgage Credit Directive

Article 19

Property Valuation

1. *Member States shall ensure that **reliable standards for the valuation of residential immovable property for mortgage lending purposes** are developed within their territory. Member States shall require creditors to ensure that those standards are used where they carry out a property valuation or to take reasonable steps to ensure that those standards are applied where a valuation is conducted by a third party. Where national authorities are responsible for regulating independent appraisers who carry out property valuations they shall ensure that they comply with the national rules that are in place.*
2. *Member States shall require that internal and external appraisers conducting property valuations are **professionally competent** and sufficiently independent from the credit underwriting process so that they can provide an impartial and objective valuation, which shall be documented in a durable medium and of which a record shall be kept by the creditor.*

Recital:

- (26) *It is important to ensure that the residential immovable property is appropriately valued before the conclusion of the credit agreement and, in particular where the valuation affects the residual obligation of the consumer, on default. Member States should therefore ensure that reliable valuation standards are in place.*

In order to be considered reliable, valuation standards should take into account internationally recognised valuation standards, in particular those developed by the International Valuation Standards Committee, the European Group of Valuers' Associations or the Royal Institution of Chartered Surveyors.

Those internationally recognized valuation standards contain high level principles which require lenders, amongst others, to adopt and adhere to adequate internal risk management and securities management processes, which include sound appraisal processes, to adopt appraisal standards and methods that lead to realistic and substantiated property appraisals in order to ensure that all appraisal reports are prepared with appropriate professional skill and diligence and that appraisers meet certain qualification requirements and to maintain adequate appraisal documentation for securities that is comprehensive and plausible.

In this regard it is desirable to ensure appropriate monitoring of residential immovable property markets and for the mechanisms in such provisions to be in line with Directive 2013/36/EU of the European Parliament and the Council of 26th June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (OJ L 176, 27.6.2013, P. 338). The provisions of this Directive relating to property valuation standards can be complied with for example through law or self regulation.

- 2.2 The Mortgage Credit Directive is the most important and fundamental EU law concerning real Estate valuation in Europe to date. Whilst it concerns only residential property it will have major repercussions in other sectors. The Directive is a charter for reliable National Standards reflecting internationally recognized standards (International Valuation Standards, European Valuation Standards and RICS Valuation Standards).
- 2.3 The Mortgage Credit Directive clearly places a responsibility on the banking community to ensure that reliable national standards are developed and that valuers are professionally competent and appropriately educated. In this respect it seems that in Serbia, the National Bank of Serbia is well placed to take a lead in developing a more competent valuation profession in Serbia.
- 2.4 It should also be noted that the European Parliament has forced the EU Council to give power to the **European Banking Authority** to monitor violations of the Mortgage Credit Directive and intervene to get the competent national authorities to fix them.

2.5 Implementation of the Mortgage Credit Directive will require relatively quick improvements to the quality of real estate valuation work in Serbia. This is not the moment for revolution but rather for an evolutionary approach of building upon the existing valuer qualification system in place. It will require a partnership between the National Bank of Serbia and the established valuation profession as represented by the National Association of Valuers in Serbia (NUPS-NAVS established 2006) and the Association of Appraisers of Serbia (AAS).

3. DEVELOPING A PROFESSIONALLY COMPETENT VALUATION PROFESSION

3.1 Given that a significant proportion of valuation instructions in Serbia derives from banks in connection with mortgage loans, valuers are largely dependant on recognition from those banks and the National Bank of Serbia in particular. In this connection of most significance is a Decision of the National Bank of Serbia on Capital Adequacy of Banks dated 16th June 2011.

3.2 Article 24 of the above decision states that *“market value of real estate means the estimated amount for which the property may be sold on the date of valuation, provided the buyer and the seller act voluntarily, knowledgeably, prudently and without coercion; this value shall be transparently and clearly documented and determined by an authorised valuer;*

Article 25) defines authorised valuer as “(...)a court expert of relevant profession, a legal entity established to perform expertise activities in accordance with the law on requirements for the performance of expertise activities or an authority which, pursuant to the law governing tax procedure and tax administration, is competent for conducting tax proceedings; this person shall not be a person related to the obligor in the manner set forth by the Law on Banks and shall not be involved in the process of lending approval or sale of real estate”.

3.3 In practice valuations are carried out by court experts approved by the Ministry of Justice. Furthermore relevant court experts are assumed by the National Bank of Serbia to be those who have a civil engineering or architectural qualification.

- 3.4 According to the Ministry of Justice’s on-line register of court experts there are a total of 1390 registered experts in civil engineering and architecture. Also it should be noted that a recent innovation has been the establishment of a sub category of 221 civil engineers and 49 architects who are described as specializing in real estate valuation. However the criteria applied by the Ministry for categorizing a court expert as a real estate valuer are not clear.
- 3.5 In the long term it is unlikely that a valuation profession made up exclusively of architects and civil engineers will be sustainable given that real estate valuation requires knowledge and expertise in several different fields. Thus graduates in economics, law, geodesy, real estate management and other subjects may be considered equally worthy of access to the valuation profession. Furthermore it is likely the European Union would consider such a qualification system as unduly restrictive
- 3.6 In this connection please note that the EU’s Professional Qualifications Directive (Directive 2005/36/EC) is under review and Council and Parliament have reached informal agreement that comprises a new obligation on member states to review each individual national professional regulation – activities and titles – including delegations of the task to professional associations, and in each case, either end the regulation or justify its total or partial retention. The European Commission has already issued a communication announcing a review process that divides the regulated professions to be reviewed into two tracks:
- a priority fast track for *“regulated professions in those economic sectors where modernisation of the regulatory framework could significantly contribute to employment and growth”* and
 - a slow track for *“others”*.

Real estate professions are on the fast track (*“first cluster”*).

- 3.7 Nevertheless the short term way forward would be to improve the existing system by requiring that court experts “retrain” as real estate valuers by completing a diploma in valuation studies recognized by the National Bank of Serbia. At the**

same time the latter should at least also recognize court experts with expertise in economics and geodesy as suitable for such conversion to the status of a real estate valuer.

- 3.8 In this connection it should be noted that the The European Group of Valuers' Associations (TEGoVA) which represents 57 valuer' associations in 31 countries requires a minimum educational standard for valuers based on 3 levels of knowledge: a) understanding b) general knowledge and c) in depth knowledge.

Under TEGoVA's Minimum Education Requirements (MER) a valuer should possess:

- An understanding of the principles of economic theory, practical real estate economics and the principles of business and finance.
 - A general knowledge of real estate marketing, energy, environment and resource protection and building and construction.
 - An in depth knowledge of real estate law, professional practice, valuation, statutory valuation and valuation standards.
- 3.9 So far, the only valuation course in Serbia which meets the above requirements is that which is being run by the National Association of Valuers of Serbia (NUPS-NAVS). The course which leads to a certificate in valuation practice is run part time over 140 hours. The course was originally established in 2008 under the guidance of the USA's Appraisal Institute and Romania's valuation association, ANEVAR. More recently the course has gained the approval of TEGoVA under the latter's "Recognised European Valuer" scheme. All the subjects referred to above are covered by the course which is specifically geared towards training qualified civil engineers, architects, economists and land surveyors as real estate valuers.
- 3.10 It is likely that more such courses will be established in the near future. Indeed it is understood that the Association of Appraisers of Serbia is preparing to run a similar course.
- 3.11 The support of the National Bank of Serbia for such valuer "conversion" courses would act as a catalyst and give encouragement to course providers in this field.**

- It is recommended that the National Bank of Serbia establishes a small “Real Estate Valuer Education Commission” which would approve an appropriate curriculum for real estate valuer “conversion” courses and then examine and certify courses following such curriculum. It is recommended that for the time being the set curriculum is modeled on that of the NAVS course but which in time would evolve to meet changing market led educational requirements.**
- 3.12 It is further recommended that all relevant court experts wishing to continue to practice real estate valuation should be required to gain a diploma in real estate valuation within a two year transitional period.**
- 3.13 Finally the proposed “Real Estate Valuer Education Commission” could also be made responsible for developing requirements for valuers to undergo compulsory Continuous Professional Development (CPD) or Lifelong Learning, the minimum worldwide standard for such CPD being 20 hours per year.**

4. DEVELOPING RELIABLE NATIONAL VALUATION STANDARDS

- 4.1 As set out in section 2 above the Mortgage Credit Directive is a charter for reliable National Standards reflecting internationally recognized standards (International Valuation Standards, European Valuation Standards and RICS Valuation Standards).
- 4.2 The Directive places a responsibility on the banking community to ensure that reliable national standards are developed in each EU member state. In this respect it seems that the National Bank of Serbia is the competent authority in Serbia to ensure that this requirement is met.
- 4.3 Fortuitously last month, both the National Association of Valuers of Serbia (NUPS-NAVS) and the Association of Appraisers of Serbia (AAS) published their own Valuation Standards.
- 4.4 The booklet published by NAVS is a consultation paper titled “National Standards for Valuation of Real Estate” which “(...) has taken into account the EU legislation which impacts the valuation of real estate and rules following Basel II and III

- agreements which govern the credit structure of lending institutions (Capital Requirements Directive 2006/48). The recently adopted EU Mortgage Credit Directive, though relating only to residential property, will have a wider impact on the valuation profession in general, in all member countries.”*
- 4.5 The stated aim of the consultation document is to achieve the objective “(...) of securing that National Valuation Standards in Serbia are in alignment with internationally recognized valuation standards and therefore Serbian valuation standards will follow International Valuation Standards set out by IVSC, European Valuation Standards set out by TEGoVA and “Red Book” set out by RICS” .
- 4.6 It should be noted that NAVS has the sole permission to translate into Serbian both International Valuation Standards and European Valuation Standards, being a member of both IVSC and TEGoVA.
- 4.7 A similar book of “Valuation Standards” was published at the same time by the Association of Appraisers of Serbia but not exclusively relating to the valuation of real estate. These standards likewise purport to be in line with International Valuation Standards and RICS “Red Book” but make no reference to European Valuation Standards.
- 4.8 The above publications are proof that much of the work towards developing reliable property valuation standards for mortgage lending purposes in Serbia has been done. It remains for the relevant Authority, assumed to be the National Bank of Serbia to review the work carried out to date and issue an official document titled “Valuation Standards for Mortgage Lending Purposes” after a period of consultation.
- 4.9 As the official standards would inevitably incorporate much of the material already published by NAVS and AAS, it is recommended that before drafting its own document, the National Bank of Serbia invites both NAVS and AAS to re submit their standards in a shortened form relating only to the valuation of property for mortgage lending purposes.**

5. NATIONAL TRANSACTIONS DATABASE – THE BACKGROUND

- 5.1 As already mentioned in the introduction to this report (Section 1), the 1st Report emphasized the need to improve valuers' access to reliable information about market transactions, as well as the unique position of the National Bank of Serbia to facilitate the creation of a comprehensive data base of relevant information for use by real estate valuers to help them improve the accuracy of their valuations.
- 5.2 As also already stated in Section 1 above, the 1st Report advised that *“A directive to banks and lenders under National Bank of Serbia’s jurisdiction to collect and report salient information during the initial underwriting and annual reporting processes which could thereafter be compiled into databases for use in conjunction with the valuation process would, over time, yield invaluable information and development of useful benchmarks that are not only essential inputs to contemporary market based valuation techniques, but that would also vastly improve the accuracy and reliability of valuations.*
- 5.3 The objective of this 2nd Report is to develop a concept for the establishment of a central national data base that will contain all information necessary for sound collateral valuation, detailed analysis of the real estate market and calculation of the real estate value index for Serbia.
- 5.4 In developing the concept for such a national transactions database it is important not to lose sight of the primary aim of helping valuers to improve the quality of their valuations by facilitating access to source information about individual property transactions. Such database should not be confused with databases which are being developed in several European countries (eg Austria, Czech Republic, Germany) for the purposes of constructing so called hedonic house price indices. Of course the database which is the subject of this report would constitute an excellent foundation for the development of a hedonic house price index in the future and my comments concerning such an index are set out in Section 7 below.

- 5.5 The need for a central transaction database which amongst others would benefit the valuation profession arises out of the difficulty faced by valuers in obtaining verifiable source information about individual property transactions. Currently such information is held by the Courts and by law, shared only with the tax authorities and the Republic Geodetic Authority (RGZ). Unfortunately Court Experts undertaking valuation work for other than court proceedings are denied access to the court records of real estate transactions.
- 5.6 **It is recommended that the National Bank of Serbia should support, as and when such an opportunity should arise, a change in the law which would allow court experts, undertaking valuation work for mortgage lending purposes, access to source information on real estate transactions held by the courts.**
- 5.7 The implementation of the above recommendation would provide valuers working in local markets across Serbia the opportunity of immediately enhancing the accuracy of their opinions of market value. However it is recognized that such change in the law may be difficult to secure in practice
- 5.8 It should be noted at this point that RGZ has made good progress towards the development of a transactions database for mass appraisal purposes in accordance with Articles 149 to 152 of the 2009 and 2010 statutes on State Land Surveying and Cadastre. However this is a long term project and the resulting database whilst useful for mass appraisal purposes and for the development of price indices will only be of marginal assistance to valuers requiring detailed information about individual property transactions.
- 5.9 Likewise the National Mortgage Insurance Corporation (NKOSK) maintains a “Domex” index for residential properties financed by loans that it insures. However again such an index whilst very helpful as a barometer of the market, is insufficient to satisfy the needs of valuers.

6. THE PROPOSED CENTRAL TRANSACTIONS DATABASE

6.1 The following proposal for the development of a central transactions database for Serbia assumes close co operation between the following stakeholders:

- The National Bank of Serbia
- Association of Serbian Banks
- National Association of Valuers of Serbia (NUPS-NAVS)
- Association of Appraisers of Serbia (AAS)
- Republic Geodetic Authority (RGZ)

6.2 To date several meetings have been held with the above identified stakeholders and all have expressed a willingness to participate in this project subject to the support of the National Bank of Serbia. All stakeholders recognize that such a database would benefit all stakeholders through the delivery of greater market transparency and improved valuation accuracy.

6.3 The aim is for the Association of Serbian Banks to lead in house the practical development of a database which will be fed detailed information of transactions in respect of properties financed by the member banks as well as by valuers engaged in valuation for mortgage lending.

6.4 Such database should be self financing and whilst the remit of this report does not extend to the business model itself, it is likely that the cost will need to be financed by both the banks and to a lesser extent by the valuers who gain benefit from access to the central database. In time, selected information and indices produced by this activity could be made available at a fee to other potential users such as investment funds, insurance companies, developers and other interested parties.

6.5 It is envisaged that such a database could be set up in 3 stages as follows:

- Residential Property Transactions – 1st stage (to assist in valuations under Mortgage Credit Directive)
- Land Transactions – 2nd Stage
- Commercial Property Transactions – 3rd Stage

6.6 The 1st stage Residential Database would include as a minimum the following information provided by the lending banks and the banks' valuation reports.

- Address (street, no):
- Type: House, Flat/Apartment
- Plot specification (number)
- Type of ownership
- Number of floors of the building
- Construction (description)
- Position on floor
- Garage (yes/no)
- Area (m²)
- Price
- Price per m²
- Date
- Purchaser (private individual/company)
- Seller (private individual/company/developer)
- Photographs, Google Map, Register Map and Zoning Plan

6.7 A similar template suitably adjusted could be devised for 2nd stage "land transactions database and 3rd stage "commercial transactions" database albeit the latter would also need to include additional analysis concerning rental income and yields.

6.8 The above proposal is of necessity in an early outline form as the details should be established by further dialogue with the stakeholders. However it does appear that what will be required at the outset is the establishment of a small expert team of property analysts and IT specialists employed by Association of Serbian Banks or by a

separate joint venture company to be overseen by an advisory/supervisory board made up of representatives of all stakeholders.

7. RESIDENTIAL PROPERTY PRICE INDEX

- 7.1 The successful establishment of the above proposed database could in turn lead to the development of a sophisticated hedonic price index for residential properties.
- 7.2 House and apartment sales price data is becoming an essential tool for both housing policy formulation and financial stability purposes. Not only does it support collateral valuations for mortgage lending but also supports monetary policy in terms of the monitoring of asset price inflation.;
- 7.3 The hedonic approach to measuring changes in residential property prices views the total price paid for the property as constituting a sum of the implicit prices of that property's attributes including location, neighbourhood, floor area, age, and condition. The approach involves identifying the relationship between the value relevant attributes and the sale price. This relationship is first tested for each attribute separately and then a multi-dimensional statistical model is developed to mimic the interactive effect of all the attributes on sale price.
- 7.4 The advantage of using hedonic models to construct a residential property price index is that they are relatively best able to identify the net price change and explain the changes in the quality and structure of transactions occurring during the index period.
- 7.5 The best way of obtaining reliable and comprehensive data for the construction of a hedonic price index is from valuations of properties for bank loan purpose, hence the importance of the basic database proposed in Section 6 above and the need to ensure that the valuers adapt their reports to a common template so that the information can be submitted electronically for central processing

- 7.6 A hedonic price index has been implemented successfully in the Czech Republic on the basis of sold properties subject to mortgage loans. The objective of the project was to construct an index to be accessed by most of the mortgage lending banks in the Czech Republic.
- 7.7 In order to achieve this objective, it was necessary to establish a uniform format for electronic data collection applied by all mortgage lenders. Thus in cooperation with Česká spořitelna, a.s., the 2nd largest mortgage lender in the Czech Republic (part of ERSTE financial group), in 2005 a new format for data collection was devised. After testing the hedonic models on data collected in 2007 and 2008, the number of relevant attributes in the data collection form was reduced to the 78 most significant attributes.
- 7.8 Subsequently the form was also adopted by Hypoteční banka, a.s., the largest mortgage lender in the Czech Republic (part of KBC financial group). These two banks together hold approximately 60% of the total outstanding mortgage balance in the Czech Republic. In 2010 the price index was calculated for the first time using the shared data of these two mortgage lenders. In 2013 two more banks entered the project namely UniCredit Bank and Wüstenrot leading to a total market coverage to 70% of the country's outstanding mortgage balance. Other banks are being invited to join the project on an ongoing basis through a working group set up within the Czech Banking Association.
- 7.9 It would appear that the costs incurred by the stake holding banks in connection with the establishment of the Czech data base and index have been mainly justified by the need to revalue mortgage properties at regular intervals and such revaluations have become more reliable as a result of the data sharing. It should be noted that the database is not only used just for the purposes of a price index, but also by the banks for automatic revaluations of mortgaged properties.
- 7.10 Another successful attempt to develop a database and hedonic price index has been that of Vdp Research which was founded in 2008 as a subsidiary of the Association of German Pfandbrief Banks. Vdp's primary aim is to provide analysis of real estate markets for the German financial industry.

- 7.11 The research unit also provides actual market information such as rents, prices, etc. for use in property valuation. The Vdp transactions database that is updated quarterly by over 20 participating member banks and the first delivery of transaction data from the National Association of Cooperative Banks (BVR) is expected at the end of this year. (BVR members represent about 20% of market volume in real estate financing). All Vdp price indices are published quarterly, six weeks after end of the preceding quarter.
- 7.12 Finally the development of a hedonic index of residential property prices could lead in turn to the development of commercial property market indices albeit such exercise may prove less cost effective given the competition from already well established indices maintained by global research companies and the international real estate consultancies (See Appendix 1). These if they do not already do so are likely to cover the Serbian commercial property market in the near future.

APPENDIX 1:**AN OVERVIEW OF INTERNATIONAL REAL ESTATE MARKET DATABASES**

Research and analyses of the real estate market started to take shape in the 1980s in the United Kingdom. Due to the absence of official statistics and national initiatives regarding the commercial market, these functions became the task of the private sector. Organisations such as the Society of Property Researchers, Investment Property Database (IPD) were established as well as market research departments in international consulting firms such as CBRE, Cushman & Wakefield and others.

Most notable the Focus database, created in 1984 by Property Intelligence was acquired by CoStar Group, the largest real estate market research company in the world.

The Focus database provides information on the British market, including contractual rents, transaction prices, rates of return, information on commercial buildings and multi-faceted analyses of local market.

The main obstacle to the creation of property transaction databases lies in the various legal restrictions to access to information. In many countries, access to information is restricted to specific professional groups. In addition, legal constraints arising from the need to maintain confidentiality in many companies prevent market data from being published.

Furthermore global firms operating in the real estate market hold the vast amount of information and data and as a result, reliable market analysis of the commercial market can be undertaken almost exclusively by global companies.

Globally, the organization seeking to solve the problem is the Open Standard Consortium for Real Estate (OSCRE), which promotes a uniform pattern of gathering data on the real estate market. The adoption of a common, specific format of data collection, both in terms of structure and software, would allow for a full exchange of global data.

Also the Investment Property Database (IPD) which deals with the real estate market research in collaboration with OSCRE is seeking to implement a method for reporting data obtained from the investment market.

The degree of the complexity of the analysis of the real estate market is dependent on the extent to which each local market has developed. In highly developed markets such as the United States, Australia, Japan and some countries in Western Europe, such analysis include real estate indices as well as detailed market and rental research.

Methodology used for the creation of the real estate market indices may vary. A popular approach is the calculation of rental income from real estate and changes in the capital value occurring over time. Investment Property Database (IPD) has developed its index in this manner, as shown in Figure 1 below.

A different approach is presented by the global information company Thomson Reuters which maintains its real estate market index on the basis of the valuation of shares of companies operating in the real estate market, on domestic stock exchanges.

The approach adopted in the United States, the most transparent of all markets, reflects the most up to date situation. For example the Moody's rating agency, in cooperation with Real Capital Analytics, has recently created a real estate market index called Moody's/RCA CPPI. The latter is based on the sale prices of properties which have been the subject of multiple trading. The index which is published every month, is fast becoming an indicator of changes in the US real estate market.

Founded in 1985, the Investment Property Database (IPD) is one of the pioneers in market research. In 1994, IPD published the first index of the real estate market in the UK.

IPD subsequently managed to increase the transparency of the French market by monitoring the value of two thirds of the country's commercial real estate and publishing a real estate index since 1998. This model was later reproduced in the Irish and Dutch markets. It should be noted, however, that indicators developed by IPD are based on data obtained from companies interested in the disclosure of results of periodic valuations of their own assets to third parties and they are willing to pay high annual fees to IPD for monitoring of the value of their portfolios.

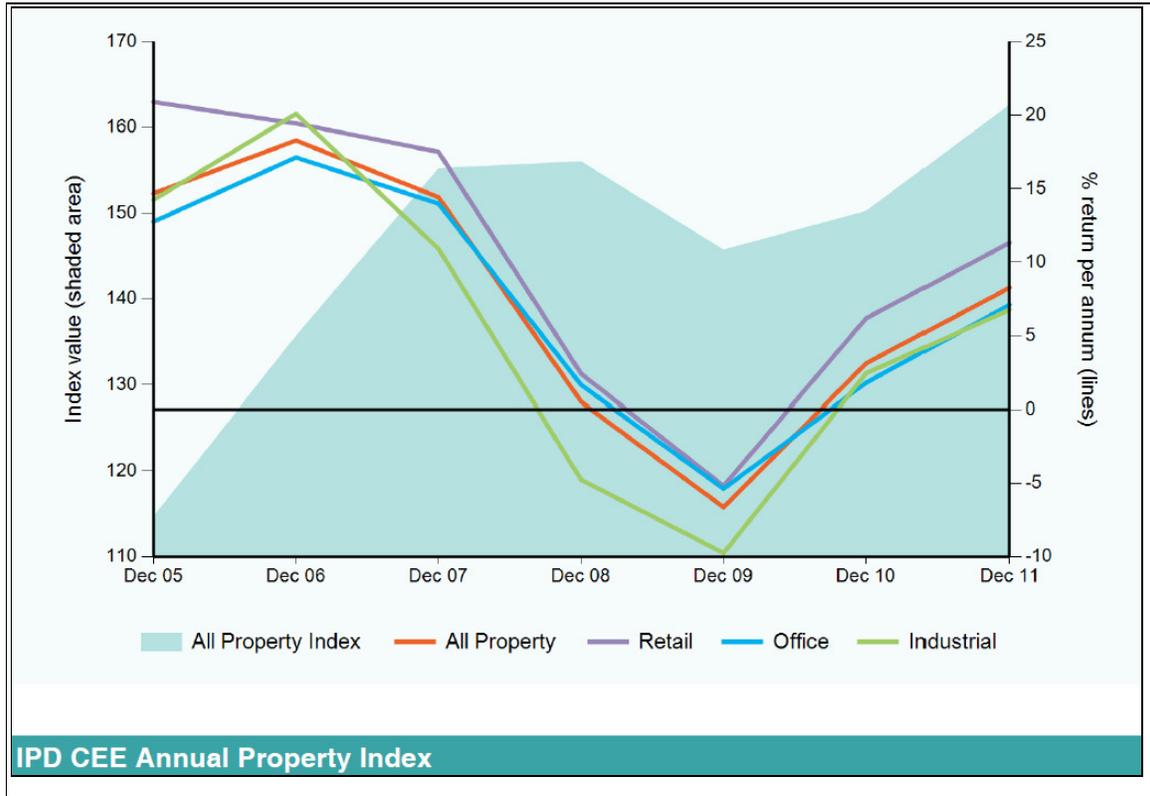
With the increase in aggregated data, other types of indices have been developed. For example, details of building maintenance costs enable the preparation of indices measuring the costs of the operation and maintenance of buildings. In this connection IPD has recently created an indicator named IPD Occupiers.

By the end of the 1990s, IPD had extended its business activities to several European markets and South Africa. It has also been monitoring over 20 markets including Canada, United States, New Zealand and Japan.

Services relating to the IPD indices include real estate portfolio analysis, tools supporting the management of real estate portfolios, analysis of costs of building maintenance and buildings cash flow analysis.

In 2011, IPD published the first studies of the real estate markets of Central and Eastern Europe and established the IPD CEE Property Index. Its last report is based on data from the valuation of real estate belonging to fifteen international investing institutions holding property portfolios in Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovakia. In total the index monitors 558 office, retail and warehousing properties. This study, when compared to the analysis of the UK market which is based on the monitoring of approximately 10 000 properties belonging to 250 funds, may seem unreliable, but it is impressive nonetheless.

Figure 1: Index for commercial properties for Central and Eastern Europe countries



Source: www.ipd.com

There are now several other companies providing market research services throughout the world. The largest are Real Capital Analytics, Inc. (RCA) and CoStar Group. Both companies set out standards for the collection and analysis of data, whilst setting the direction of further developments in the industry.

CoStar was established in 1987 and for many years focused solely on the US market. The company’s market share increased significantly following the purchase for USD 680 million, of LoopNet, Inc., a company providing information on sales offers and market analysis.

Real Capital Analytics (RCA) was founded in 2000 and initially dealt with the collection of information on real estate transactions in cities across the USA. However, after opening offices in London, The Hague and New York, RCA increased the range of its information including real estate market data from around the world.

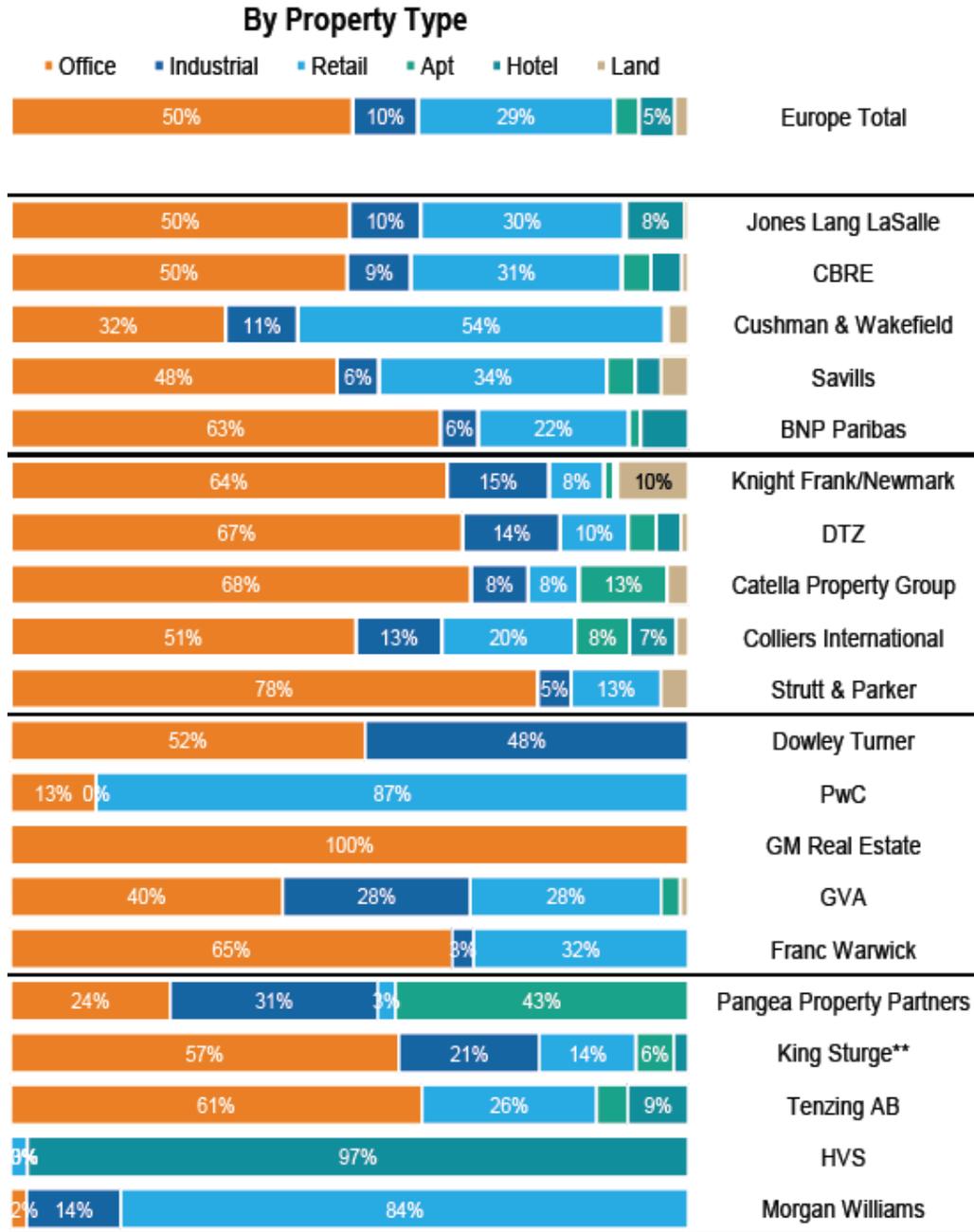
The RCA market analysis is based on information about individual transactions from the key market segments: offices, commerce, warehouses, apartments, development land, hotels and nursing homes. The information provided is fairly detailed and includes information on the transacting parties, agents, intermediaries, prices, rates of return, and leased space in buildings for sale.

Figure 2: Example: Table of commercial property transactions worldwide



Source: RCA

Figure 3: Example: Table showing share of global advisory firms in commercial property transactions.

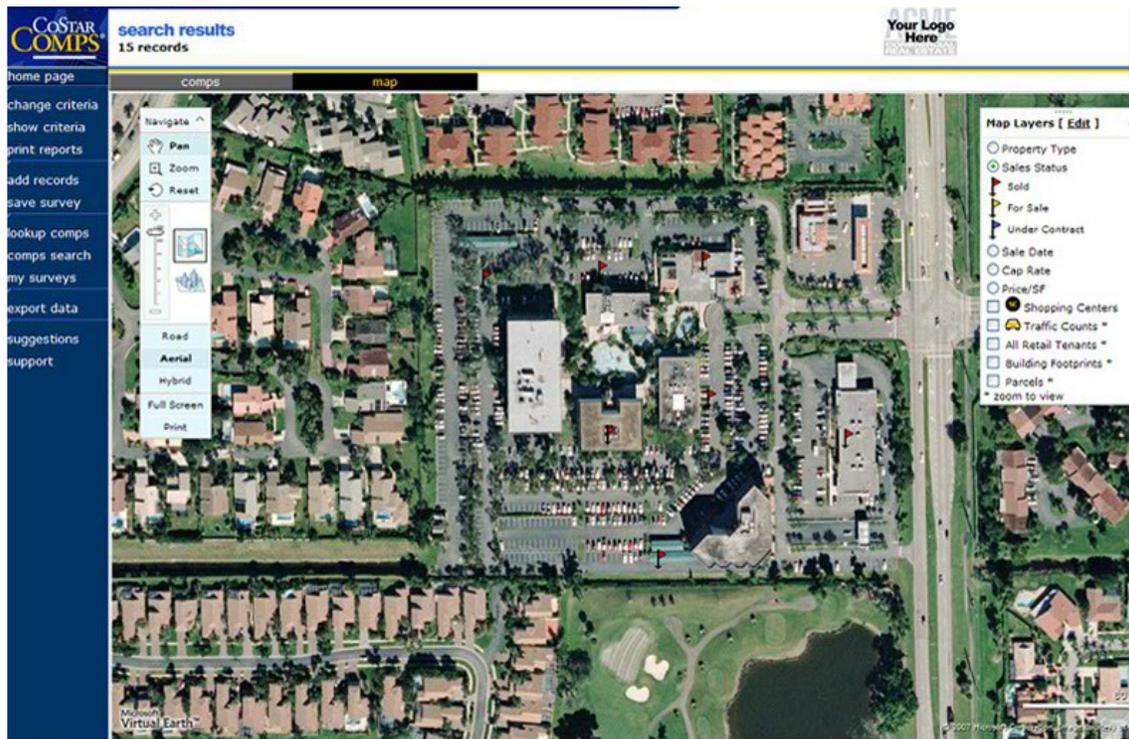


Source: RCA

It should be noted that more widely used in the analysis of the real estate market are innovative methods of using spatial information systems and other imaging methods. CoStar is a pioneer in this field. It possesses specialized vehicles making videos and photographs of selected objects. Full access to the database offered by CoStar provides not only locational maps of individual properties, but also three-dimensional images of buildings.

Geo information demonstrated in Figure 4 below can be analysed from different angles, including the imaging of comparable real estate or information about lessees of commercial space in the neighbourhood.

Figure 4: Geo map presenting for purpose of analysis of local commercial property market.



Source: Costar.com

The use of spatial information systems in conjunction with mobile applications recently launched by CoStar, providing immediate access to current data will no doubt become the norm in the analysis of real estate markets.

Another important aspect of market research is information on the financing of the real estate sector. Currently, the only entity offering such a database worldwide is RCA collecting information contained in loan agreements. This type of data is particularly important for market participants from the banking sector and other financial institutions.

Interest in emerging markets as well as attempts to fill the existing information gap regarding these markets has resulted in the establishment of new providers of data. Noteworthy is Reidin, an international company which specializes in providing real estate market data. The company, based in Dubai, provides information from the emerging markets including Asia, South America, Europe, and Russia.

APPENDIX 2**ACCESS TO REAL ESTATE MARKET INFORMATION IN LOCAL MARKETS FOR VALUATION PURPOSES**

The overview below of the current state of valuer access to property market data in various countries across Europe is indicative of how little transparency there is local real estate markets with the exception of the information generous markets of the United Kingdom, Sweden and to an increasing extent Germany.

Source information about real estate market transactions is generally difficult to obtain and therefore Serbian valuers are not alone in facing difficulties in expressing accurate opinions of value supported by verifiable market data. The difference is that in most other “secretive” real estate markets valuers have practiced for much longer than their counterparts in Serbia and have had more time to develop effective methods of gathering source information.

Fortunately, to the rescue, central banks and associations of mortgage lending banks (eg in Germany and the Czech Republic) are beginning to support the development central databases as an aide to valuation.

BELGIUM

Ownership of real property is subject to registration in Official Mortgage Office, part of the Ministry of Finance, which records property rights and delivers certificates of property title. Public notaries register all property transactions, including sales, company creation and long lease contracts.

The Belgian Cadastre records all properties in the form of a cadastral number for each parcel of land represented in the cadastral map. For tax purposes, each parcel of land has a cadastral value. The purpose is to provide a correct representation of property and ownership to allow the Ministry of Finance to levy property taxes and property owners to describe their property holdings. All sales, leases or transfers of property are registered both in the Mortgage Office and the Cadastre.

CZECH REPUBLIC

Valuation data is derived from a comprehensive database covering all sales of real estate from 1994. These results are then summarized in annexes to Valuation Decrees which are updated annually.

There is no requirement to report sales data in the Czech Republic. Actual transaction prices are protected as so called trade secrets. If any sales are listed in valuation reports, these are included only as information to support the notion that sales are actually taking place. The main information used in the valuation of residential properties is found in the sales offers listed by real estate agencies. Also some communities have developed so called property price maps which may be referred to in valuations.

It should be noted that more recently a hedonic price index has been implemented successfully in the Czech Republic on the basis of sold properties subject to mortgage loans. The aim was to construct an index to be accessed by most of the mortgage lending banks in the Czech Republic.

In order to achieve this objective, it was necessary to establish a uniform format for electronic data collection applied by all mortgage lenders. Thus in cooperation with Česká spořitelna, a.s., the 2nd largest mortgage lender in the Czech Republic (part of ERSTE financial group), in 2005 a new format for data collection was devised. After testing the hedonic models on data collected in 2007 and 2008, the number of relevant attributes in the data collection form was reduced to the 78 most significant attributes.

Subsequently the data form was also adopted by Hypoteční banka, a.s., the largest mortgage lender in the Czech Republic (part of KBC financial group). These two banks together hold approximately 60% of the total outstanding mortgage balance in the Czech Republic. In 2010 the price index was calculated for the first time using the shared data of these two mortgage lenders. In 2013 two more banks namely UniCredit Bank and Wüstenrot joined the project leading to a total market coverage to 70% of the country's outstanding mortgage balance. Other banks are being invited to join the project on an ongoing basis through a working group set up within the Czech Banking Association.

It would appear that the costs incurred by the stake holding banks in connection with the establishment of the Czech data base and index have been mainly justified by the need to revalue mortgage properties at regular intervals and such revaluations have become more reliable as a result of the data sharing. It should be noted that the database is not only used just for the purposes of a price index, but also by the banks for automatic revaluations of mortgaged properties.

FRANCE

The IPD database was established in France in 1998 as the first database of property investments. IPD also maintains a property index based on reported valuations, representing two-thirds of the French property investment market. This is the most comprehensive databank in France for real estate asset performance data. Whilst the IPD index is a key market driver towards more standardization it is not based on transactions but on valuations. .

The idea of standardizing data formats for data transfer picked up momentum in 2008 with the creation of the Format d'Inter-Echanges de donnees juridiques et immobilieres (FIDJI), an association of investors, asset managers, appraisers, property/facility managers and software editors. It is also the name of the common language for real estate data that can be exchanged at no cost among real estate players without having to be reformatted by each user's respective information technology environment.

At the moment FIDJI and OSCRE are working together on technical resources while IPD and OSCRE are collaborating on a global data standard for investment data reporting. The framework will provide investors, support service providers and IPD with a comprehensive and consistent data exchange process.

GERMANY

Due to the Data Protection Act, sale price information in respect of both residential and commercial properties is rarely openly available. To overcome this problem, German notaries must send copies of real estate purchase contracts to 1380 local authorities (so-called "Gutachterausschüsse"). These municipal authorities in turn have the legal responsibility of

maintaining a database of purchase prices and to analyze market data which would be of use to valuers. They should also publish land values for each plot in Germany.

The databases thus produced cover the majority of real estate transactions and some Gutachterausschüsse indeed provide high quality data suitable for professional valuations, for example in Berlin. The data covers the whole range of property transactions and the publication of land values is used for the determination of mortgage lending value.

However the weakness of the system lies in the lack of centralization as each community has its own database, its own philosophy and way of organizing the system which sometimes translates into poor quality. Also the staffing in some municipalities is not sufficient for the maintenance of good quality up to date information. Furthermore only valuers with a certain a certain high level state recognized qualification have access to the database.

Whilst the information and data of the “Gutachterausschüsse” is important to valuers in Germany, it is not the only data now available. Thus other institutions and consultants also provide important up to date information. Whilst for the comparison approach the data of the “Gutachterausschüsse” is still highly prized other databases are likely to become more important in the future.

Thus a successful attempt to develop a database and hedonic price index has been that of vdpResearch which was founded in 2008 as a subsidiary of the Association of German Pfandbrief Banks. Vdp’s primary aim is to provide analysis of real estate markets for the German financial industry.

The research unit also provides actual market information such as rents, prices, etc. for use in property valuation. The Vdp transactions database is updated quarterly by over 20 participating member banks and the first delivery of transaction data from the National Association of Cooperative Banks (BVR) is expected at the end of this year. (BVR members represent about 20% of market volume in real estate financing). All vdp price indices are published quarterly, six weeks after end of the preceding quarter.

IRELAND

In Ireland, there is a dearth of public information related to property. This information includes transaction price histories of properties and accurate GPS coordinates of sites and buildings. However data protection legislation precludes the disclosure of property transaction prices without the specific consent of both the purchaser and vendor.

The Irish government has indicated a willingness to remedy this situation in the near future. At present valuation firms maintain their own records of property transactions. The Investment Property Databank (IPD) in association with the Society of Chartered Surveyors (SCS) produces a regular index of Irish commercial property values based on information given from a sample of firms.

Also the Irish government and the Permanent TSB bank in association with the Economic and Social Research Institute (ESRI) produces indices of residential property values, again based only on information given by a sample of individual firms.

ITALY

In Italy the sales comparison approach can be difficult because of the scarcity of available market data and lack of up-to-date reliable real estate data banks.

PORTUGAL

Real estate market data, rental data and comparable sales data can be obtained from local real estate agency offices. Much of this data is available on the internet, however, discretion in data collection and data verification is advised.

POLAND

For comparative valuation purposes the most credible information about sale prices in Poland is that recorded by notaries in deeds of sale. In Poland, all land transactions must be recorded

by deed in front of a notary. Under Polish law, notaries should, within 3 months of a sale, send copies of all “notary deeds” concerning property transactions to the relevant Local Authority and licensed valuers by virtue of being recognised as belonging to a profession of public trust are, by law, allowed access to the source information including the notary deeds.

To this extent, from the point of view of a qualified valuer the real estate market is relatively transparent. In addition the Association of Polish Banks maintains a database called “Amron” of largely residential property transactions provided by cooperating valuers who in turn are afforded access to the centralised database.

ROMANIA

In Romania there are few databases which could offer detailed information about transactions for valuation purposes. Each valuation company has its own database. There are also some specialized websites but they must be verified before used for valuation purposes. More recently a set of real estate indices has been published by the National Institute of Statistics in collaboration with the National Bank of Romania and the National Union of Public Notaries of Romania.

The lack of market data in Romania represents one of the most significant limitations for the appraisal practice.

Finding information on yields and rents is very challenging and information is usually limited to the most important cities. Analysis and application of this information may also require significant adjustment.

RUSSIA

Russian appraisers face the country’s history of closed and confidential transactions and the general lack of reliable market data..

However as the number of transactions increases, more data is seeping out and becoming known in the market place. Most appraisers in Russia have to rely on information on the

websites of real estate brokerage firms, professional appraisal and real estate associations, other valuers and press announcements

The summarized market information on websites of real estate brokerage firms has proved to be useful albeit representing a more general mix of asking and selling prices.

Transaction data collection can also occur at the association level and asking actual buyers and sellers depending on individual relationships and connections is also often productive..

A new force in transaction data gathering is Real Capital Analytics which has been collecting, analyzing and providing on-line access to verified transaction data in Russia for some 10 years.

SLOVAK REPUBLIC

Exact and complete data about property prices are available in the real estate cadastre offices in each district of the Slovak Republic. Documents connected with every property sale, including original copies of selling contracts are collected by the cadastre office. However by law, the data may be provided only to the contracting parties and cannot be provided to valuers.

SPAIN

Data on property transactions in Spain is not widely available but the leading international firms do publish good quality rent and yield data relating too certain key markets including the Madrid and Barcelona office markets and prime retail, industrial and hotel markets. Details about certain deals (though not always complete or accurate) are sometimes published in the press.

SWEDEN

Datscha is web-based service for Swedish property market analysis. The service includes information on approximately 350 000 properties as well as rental, vacancy and yield levels

on local markets, completed transactions and property portfolios. It also has the capacity to simulate a property's market value.

Datscha has more than 1500 users in 300 companies. Banks (such as Nordea Bank, Handelsbanken, Swedbank and SEB), property companies and appraisers use Datscha for market analysis and valuing properties. The database which includes reference to owners, property size, taxation information and addresses offers market information from all municipalities in Sweden.

Datscha's comparable sales information is updated daily. The comparable sales provide information on which properties have been sold, the buyer and seller, the date, the purchase price, taxation information. The program also enables appraisers to find property owners. When an area on the map is drawn, a list of the property owners in that area will be displayed.

The real estate property system (FDS) contains official data on property names, locations in terms of XY-coordinates, addresses, land areas, current owners, most recent purchase prices, building permissions and building areas divided into areas for use as office, retail, residential, industrial and so forth. Assessment values and classifications for land and buildings as well as mortgages can also be found here.

The property register database (Lantmateriet Swedish Surveying) contains official data from transactions of all property types in Sweden including buyers and sellers, dates of transaction and prices. The database includes data from the official property Register and the official Assessment register for all real properties. This transparency has provided a unique opportunity to create comprehensive databases for comparable sales all over Sweden. This has been well exploited by commercial companies that specialize in computerized market data information. It is common for Swedish appraisers to use property and market data from specialized companies, such as Datscha, Ljungquist Fastigheetsinformation and NAI Svefa, which sell data through continuous subscriptions at low cost.

SWITZERLAND

In Switzerland, market data is most readily available for land and residential property in cities and suburbs. However, there is often little data available in respect of investment properties.

UK

Access to market data is improving rapidly and all property sale prices are disclosed by the Land Registry albeit there is invariably a time lag between, a market sale and the addition of that data to publicly accessible databases. Public material will not always contain the full details of a sale and lettings and there is a lot of sharing of data between firms of real estate consultants. Some of this information is confidential, but even if provided on a confidential basis it may still help to support an opinion of market value.

US

Market data is generally easy to obtain in US, a fortunate situation given the voluminous documentation requirements that apply to most appraisals reports. In addition, there is a strong sense of camaraderie among appraisers, evidenced by a general willingness to exchange data about comparables sales and rents, However income and expense data about the subject property are almost never disclosed to other appraisers because to do so would violate the appraiser-client-relationship.

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