TEGoVA – Setting European Valuation Standards for 40 Years

TEGoVA
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European Banking Authority limits use of statistical methods in valuation

As reported in the October 2016 edition of *European Valuer*, last year the Dutch Parliament revised its law implementing the **Mortgage Credit Directive** (2014/17/EU) by allowing banks to grant mortgage loans on the basis of values estimated by automated valuation models (AVMs) without the input of a qualified valuer, where the loan-to-value ratio does not exceed 90%. TEGoVA's contention that such law runs counter to European law is supported by a legal opinion which concludes that, under the Mortgage Credit Directive, the use of an AVM without valuer involvement is not allowed and in any case under the **Capital Requirement Regulation** (EU) No.575/2013 (CRR), statistical methods (including AVMs) can only be applied to monitor the value of the property and to identify property that needs revaluation. The use of such methods, however, is not allowed for the actual valuation of the immovable property.

"TEGoVA's contention that such law runs counter to European law is supported by a legal opinion which concludes that, under the Mortgage Credit Directive, the use of an AVM without valuer involvement is not allowed."

The above opinion caused some disquiet in banking circles, and at the beginning of this year an un-named bank took it upon itself to apply to the **European Banking Authority** for a detailed interpretation of Articles 229 and 208 (3).

CRR article 229 states that in the context of the internal ratings based or IRB-approach, *"… the collateral shall be valued by an independent valuer at or at less than the market value. An institution shall require the independent valuer to document the market value in a transparent and clear manner. In those Member States that have laid down rigorous criteria for the assessment of the mortgage lending value … may instead be valued by an independent valuer at or at less than the mortgage lending value … The value of the collateral shall be the market value or mortgage lending value reduced as appropriate to reflect the results of the monitoring required under Article 208(3) and to take account of any prior claims on the property."*

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Chairman's message

Dear Colleagues,

The debate about the appropriateness of statistical methods of valuation has been raging for decades, but matters have come to a head with the rapid development of automated valuation models (AVMs) at the very time when the European Union, through the **Mortgage Credit Directive** and **Capital Requirements Regulation**, has **restricted** their use in the valuation of property for mortgage lending purposes. Last year the Dutch Parliament breached EU law by allowing banks to grant mortgage loans on the basis of values estimated by AVMs. TEGoVA is seeking a reversal of the Dutch law through dialogue with the **European Commission**. The European valuation profession embraces the development of technologically advanced valuation tools, but we should also recognise the drawbacks of such advancements and handle them with care. Since the financial crisis, valuers have been placed under **intense scrutiny**. Questions have been asked about the level of our **education**, **training**, **competence**, **independence**, **ethics** and the **methodologies** which we apply. In response, TEGoVA has developed pan-European professional designations, namely **REV** and **TRV**, and its European Valuation Standards are continually being updated to guide valuers.

"TEGoVA is seeking a reversal of the Dutch law through dialogue with the European Commission."

As indicated in a report (summarised in this edition) by Professor George Matysiak, the European AVM industry is shrouded in secrecy. It is difficult to verify the accuracy of what are being sold as highly sophisticated models. Can AVMs ever be accurate in those many European countries where property sales data is extremely difficult to obtain? If valuers and consumers alike are to embrace AVM technology, they must be assured of their accuracy and face the same level of scrutiny as endured, quite properly, by valuers.

European Valuer in mother tongue

We now offer the opportunity of providing the material from European Valuer in a form which will facilitate translation to **mother tongue**. Email the Editor, John Roberts, on ***jcroberts54@hotmail.com*** and the text of the articles will be forwarded in MS Word along with the images so as to replicate the original journal.

A Polish version has already been circulated widely. Translation will help spread the TEGoVA message even further, as we reach out to the valuation community in Europe and beyond.

I wish you all an enjoyable and restful summer season. ●

Krzysztof Grzesik REV.

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CRR Article 208 (3) further provides the following requirements on **"monitoring of property values"** and on **"property valuation"**:

"(a) institutions monitor the value of the property on a frequent basis and at a minimum once every year for commercial immovable property and once every three years for residential real estate. Institutions carry out more frequent monitoring where the market is subject to significant changes in conditions;

(b) the property valuation is reviewed when information available to institutions indicates that the value of the property may have declined materially relative to general market prices and that review is carried out by a valuer who possesses the necessary qualifications, ability and experience to execute a valuation and who is independent from the credit decision process. For loans exceeding EUR 3m or 5% of the own funds of an institution, the property valuation shall be reviewed by such valuer at least every three years.

Institutions may use statistical methods to monitor the value of the property and to identify property that needs revaluation."

On 12th May 2017, the EBA answered as follows:

"According to Article 208(3) last subparagraph a statistical model may be used "to monitor the value of the immovable property and to identify immovable property that needs revaluation". This last subparagraph clarifies how institutions could monitor the value of the property, according to article 208(3)(a).

In contrast, Article 208(3)(b) CRR requires that "the property valuation is reviewed" under certain circumstances and that this "review is carried out by a valuer who possesses the necessary qualifications, ability and experience to execute a valuation and who is independent from the credit decision process".

Article 208(3)(b) CRR does not allow the use of a statistical model as the sole means of undertaking the review of the property valuation. The same applies to Article 229(1) CRR."

The above authoritative interpretation should certainly inspire the European Commission to apply pressure on the Dutch Government to amend its ill thought out legislation concerning AVMs. ●

New TEGoVA Board elected

The main business of TEGoVA's Spring Assembly in Belgrade on 22nd April was the election of a new TEGoVA Board of Directors and Chairman. There were twelve candidates for eight seats, for a three year term. From left to right in the photograph, those elected are: **Wolfgang Kälberer** (vdp), **Roger Messenger** (IRRV), **Danijela Ilić** (NAVS), **Krzysztof Grzesik** (PFVA), **Silvia Cappelli** (ASSOVIB), **Jean-François Drouets** (AFREXIM), **Konstantinos Pallis** (AVAG) and **Patrick Davitt** (IPAV).

The Assembly also re-elected Krzysztof Grzesik REV as Chairman of the Board of Directors.

In expressing his thanks to the Assembly, Krzysztof Grzesik said that he and his Board member colleagues would continue to implement the business plan approved by the Assembly a year ago at its meeting in Brussels. The focus would be on further developing the REV and TRV designations across Europe and also on the updating of TEGoVA's flagship product, namely **European Valuation Standards**. The latter would for the first time include a section on residential property valuation. Also, following the recent establishment of the **European Practice and Methodology Board** (EPMB), guidance on valuation methodology would become a priority. The overriding aim of the TEGoVA leadership team would be to raise the profile, proficiency and status of the European valuation profession. ●

Accuracy of automated valuation models in Europe challenged

A recent report by **Professor George Matysiak** has raised questions about the accuracy of automated valuation models (AVMs) in Europe. George Matysiak is a visiting Professor at **Krakow University of Economics**, as well as the **Lisbon School of Economics and Management** (ISEG) and **Antwerp Management School**. Previously he was a Professor of Real Estate Investment at the University of Reading/Henley Business School and a Senior Research Fellow at City University/CASS Business School, London. Professor Matysiak is an acknowledged authority on the assessment of valuation accuracy.

In his report, Professor Matysiak notes that, *"There is little hard impartial evidence on the accuracy of AVMs in the public domain. European vendors are reluctant to release details."* Whilst acknowledging that AVM operators recognise the need for considerable volumes of up-to-date market data in combination with a strict filtering of "outliers" to ensure reliable estimates of value, Professor Matysiak observes that other than submitting information to rating agencies, AVM operators in Europe are unwilling to have their data/methodologies exposed to wider independent scrutiny.

In contrast to the lack of transparency in the European AVM industry, the report notes the availability of accuracy results in the USA, for example from *HouseCanary* and *Zillow*. These figures provide a point of reference. Thus for example, based on an analysis of 666 US Counties in the Zillow database, if +/- 10% is seen *"as an acceptable margin for error"*, on average some 70% of AVM valuations would fall within such a bracket. The report suggests that this *"would likely be an upper limit for European AVMs."* However, depending on location, the distribution of valuations falling within this bracket ranges from 20% to 92%.

Professor Matysiak also states that, *"despite high average accuracy levels, statistically-based valuations may be widely off the mark and need to be augmented by professional judgement. The margin for error will likely vary over different market conditions, types of property and countries"*.

The report concludes that for there to be a meaningful debate on the accuracy and usefulness of AVMs in Europe, the operators need to make available access to their models for independent accuracy testing and verification.

A presentation of Professor Matysiak's report at the TEGoVA's Spring Assembly in Belgrade may be downloaded from ***www.tegova.org*** ●

Why regression analysis is not best valuation practice. Barbara Majewska explains

Real estate is characterised by a high level of heterogeneity. No two properties are identical and even if they are very similar, they are unlikely to be the subject of a sale at the same time. Real estate has both objective features (use, location, floor area, floor level, year of construction, etc.), and subjective ones (quality of the surroundings, standard, etc.), which are assessed in different ways by buyers and sellers depending on their needs, such as their financial standing, family situation, age, and aesthetic considerations. Moreover, property buyers and sellers make many cognitive errors in the process of negotiating the conditions of a sale, as a result of their knowledge, personality traits and other factors relating to the transaction. A valuer, when assessing the market value of a property, has to draw **objective conclusions**, based on **limited** and **imperfect market data**. The subject property has many defining characteristics which influence the decisions of the parties to the transaction in different ways. The question is, how should a valuer diagnose those characteristics and their influence on the agreed transaction price.

Regression methods

It seems that a parametric model such as regression, which seeks to estimate relationships among variables, in particular the relationship between a dependent variable (property value/price) and one or more independent variables (property characteristics), will best diagnose these relationships in determining the value of a dependent variable when one of the independent variables changes.

Let us consider if such approach to valuation is correct, using the example of the sale of **549 apartments** in **1970s-built blocks** of the same construction situated in the same district. The transactions were concluded between 2004 and 2016 between **private individuals**, each acting independently. Differences in agreed prices between properties sold were the result of their different floor areas and situation on a given floor within the building. Moreover, the properties differed in terms of unspecified characteristics, including internal quality and the surroundings. For the purposes of this analysis, let us assume that the valuer has been instructed to value an apartment with specified characteristics in the same neighbourhood.

For the purpose of regression analysis let V equal property value and A the floor area, where i =1, … ,549 (the number of transactions). Let us also assume that the model of dependency of sale price to floor area is defined by the regression equation $V_i = ß_0 + ß_i A_i + \epsilon_i$ where $ß_i$ i $ß_i$ are the parameters of linear regression and ϵ is the error. Of course, the model is far from ideal, but based on the available data we can incorporate into the model, information about the floor level on which each property is situated, intuitively it seems, should have an important influence on the value of the subject property. Having thus taken the floor level of the comparable properties into account, a model emerges with **15 one-dimensional equations of regression**. As the model becomes more complex, the estimators of parameters become less precise, and we will obtain results with a low diagnostic value, leaving room for many different interpretations. For example, the transaction value of an apartment with a floor area of 53 sq m calculated on the basis of the model will be as **Table 1** below.

From the results presented in **Table 1** we can see that when we increase the floor area by 1 sq m, the value of an apartment can increase or decrease from -33.8 PLN (4th floor) to 18 PLN (1st floor) and there is no regularity. Thus, one cannot expect that the results concerning the price of an apartment with a floor area of 53 sq m will be correlated in a sensible way with the floor level on which it is located.

Figure 1 below shows the different dependencies of price, floor area and the floor level (ground to fifth floors) – own study.

It should be noted that there is a range of other variables which may diversify the price of the property in a similarly dramatic way as the **"floor level"** variable. We do not know the extent of the influence that these characteristics have and we do not know their values for the comparable properties.

A valuer will also need to examine any change of price levels over time. But a large spread of prices **(Figure 2 below)** indicates that there are additional determinants which influence buyers' decisions.

The advocates of linear regression models

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Table 1

Slope coefficients and values of a 53 sq m apartment on the basis of a regression model.

Floor	0	1	2	3	4	5	6	7	8	9	10
ß0	-19.7	18	-14.7	-33.8	-11.4	-25.2	-16.4	-13.6	-32.7	-24.4	-28.7
Price [PLN/sqm]	5831	4715	6313	6958	5945	6576	6401	6017	7074	6484	6761

Source: own study.

Figure 1

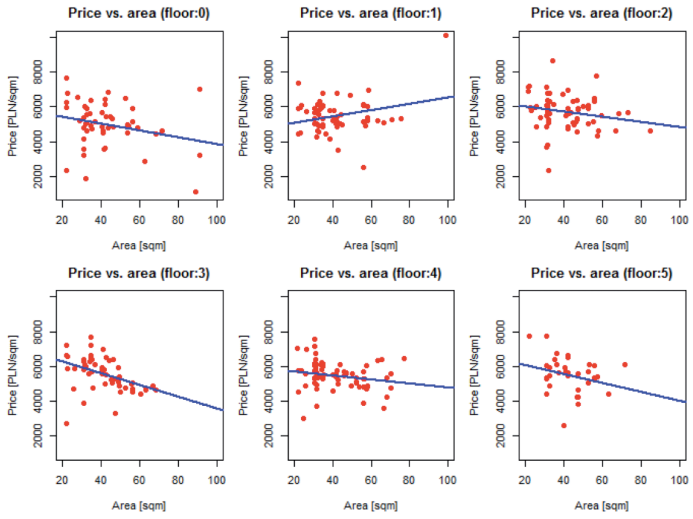
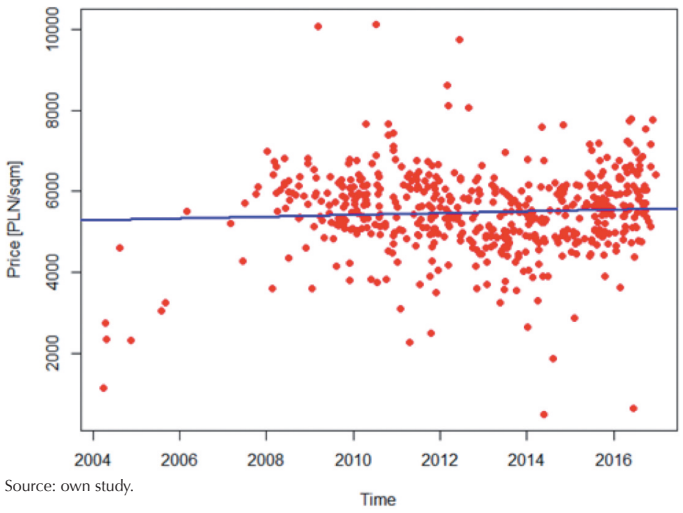


Figure 2

Linear regression of price vs. time.



Source: own study.

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will assume that transaction prices and the identified characteristics of the property are in a linear relationship. But the multidimensional regression model has **several defects**, including the implicit assumptions that all property characteristics influencing transaction prices have been defined and that they are independent, that past relationships and phenomena will be repeated in the future, that all non-analysed variables are stable and that relationships based on the **global dataset** are applicable to the small subset of transactions constituting the direct basis for the valuation.

Some valuers attempt to use regression models for valuation purposes, but often in practice such valuations are not really based on a regression model, but the regression model is used to justify the valuer's intuition.

By adapting different regression models, using trial and error, as well as discarding some transaction data or modifying the characteristics analysed, valuers can obtain a model which will yield a pre-determined result. Such an approach is **neither** credible **nor** of high quality and may be seen as manipulation.

Best practice

When assessing the market value of a property by means of a comparative approach, a valuer seeks to determine the price at which a potential **rational** and **well-informed** buyer and seller should transact the property at a given date. The valuer does not seek a model of dependency of price in relation to property characteristics, but establishes at what prices properties with the same or similar characteristics are sold in the given market. A valuer usually has regard to factors such as the legal interest held in the property, its location, immediate surroundings, availability of services, accessibility, size, type of the building, its age, type of construction and internal finish.

Next, the valuer selects and analyses **comparable transactions**, usually focusing on a particular segment of the market where there is a representative dataset of transacted comparable properties which have the same characteristics as the property undergoing valuation.

Usually only a few such transactions are found suitable for direct comparison and this selection requires **extensive experience** and **market knowledge**.

After viewing the property during a site visit (which is not possible or economically justified in the case of hundreds of transactions, required by parametric models) the valuer compares each of the selected comparables in turn with the subject property, making adjustments to the comparable prices to reflect differences to the subject property. The whole process is largely based on the valuer's experience, professional expertise and intuition. Such a comparative approach to valuation may be employed in both mature and emerging markets where transaction data is scarce. In these circumstances, automatic statistical methods are useless, while a competent professional can effectively value the property in question. ●

Barbara Majewska MRICS is a Polish Licensed Valuer

The above is an edited extract of a paper appearing in the Journal of Real Estate Management and Valuation published by the Polish Real Estate Scientific Society. The paper was also co-authored by Professor Grzegorz Krzykowski and Olga Majewska MPhil.

Ukraine: the challenges of *force majeure* valuation

Ukraine has been changing! We started membership of TEGoVA last year, with a second association joining in Belgrade, Serbia in April this year, which we again welcome. The step towards Europe is the choice of our society. **Our people have shown that Ukraine is a European country and we want European standards of work and life.**

Our system of valuation has existed for 25 years and the model of its regulation and practice doesn't differ substantially from those generally accepted in Europe and beyond. The economic and political situations are the most complex and interesting issues connected with valuation, and the most dynamic is the banking system. There are nearly two hundred banks, and half of them are in the process of liquidation. The fund of guaranteed deposits manages the assets of these banks' value, which amounts to around **18 billion Euros**. These assets must be valued too. This subject gives the opportunity for our practitioners to gain valuable practice and methodological experience. This experience is being gained in *force majeure* conditions and it is both a difficult and an interesting time.

A large volume of valuation work is connected with the enforcement of non-standard loans, which saturate the real estate market, requiring the serious consideration of procedures in use.

Debates are now taking place in the Ukrainian Parliament, and the sale of agricultural land may soon commence. At present, this market is closed by law, but there are more than 40 million hectares of fertile land, which are located on more than ten million plots.

"Ukraine is a great country, with market potential and a confident future, but to bring this future closer, we need to build effective communications between different government departments that regulate the market."

The state has announced a large volume of **privatisation** and plans during this year to sell **270 plants and enterprises**, including the largest ones. This process will follow fair rules and requires the transparent assessment of assets, but this will be difficult to determine.

Ukraine is a great country, with market potential and a confident future, but to bring this future closer, we need to build **effective communications** between different government departments that regulate the market.

Much must be done to widen the practice of using IVS and EVS, and we will do it. We have completed translation of the **"Blue Book"** into Ukrainian and it was available for use at the end of May. We fully recognise TEGoVA in the Ukraine and we look forward to the support of European colleagues as we progress.

The most successful professional communities are formed without borders. TEGoVA, as well as the European Union, erases boundaries and makes it possible for colleagues from many countries to communicate and work together, giving the opportunity for active and capable people to reveal their potential in our profession. ●

Serhii Frolov is President of the Ukranian Association of Bank Valuation Specialists (UABVS) and President of the "Argument" group of valuation companies.

To contribute to this journal, contact the Editor, John Roberts, on

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