

Koloman Ivanicka

*Institute of management,
Slovak University of
Technology*

E-mail: koloman.ivanicka@stuba.sk

Housing Market Information in CEE countries*

The paper aims to show how the historical development of CEE countries and their institutional framework has influenced the quality of information on housing markets. Central and Eastern European countries (CEE) have undergone the serious economic and institutional transformation. The functioning of the residential sector was changed by introducing the new institutions, regulations, housing finance institutions and internet. The newly established residential markets, the actors operating on these markets, and the governments (both national as well as EU) have generated the demand for better information. This was partially fulfilled, yet the quality of the information on the residential markets is still lagging behind the developed Western economies. Moreover there is clear lack of the historical market data, which make the decision making regarding the regulation of the markets and the mortgage provision more risky. The global economic crisis has uncovered the economic vulnerabilities of the CEE and their residential markets. At the same time the crisis created the serious pressure for more responsible investments and higher efficiency, and the triggered demand for higher quality and more comprehensive information on the residential markets.

Key words: residential market, residential market information, global economic crisis, CEE countries

1. Background of housing reforms in CEE region

At the end of Communist period, the official housing markets in CEE were almost inexistent. There existed black housing markets that were not considered to be legal. The history of the regions' housing sector has been determined largely by its role in the socialist orthodoxy, one which designated housing as a social rather than an economic good, a right to which all citizens were entitled. The main characteristics of the East European housing model were single party political control over the housing sector, the subordinate role of market mechanisms, lack of competition among housing agencies (bureaucratic coordination), and broad control over the allocation of housing services (huge, non-transparent subsidies). (Hegedus, Tosics, & Mayo, *Transition of the housing sector in the East Central European countries*, 1996). In spite of that there existed the differences in various countries of former Communist bloc. Although the Western countries had the tendency to look on Central and Eastern Europe as the homogenous region, there were in fact many differences. These differences were further broadened during the transformation period.

* This contribution is the result of the project implementation: "SPECTRA Centre of Excellence for the Settlement Infrastructure Development of the Knowledge Based Society" supported by the Research & Development Operational Program funded by the ERDF under the contract n. 2624012002. Gratefulness belongs to the funding from VEGA grant No. 1/0456/09, and to Ce.S.E.T., Italian Association of appraisal and regional economic scientists.

The creation of markets was closely linked to the privatization and the restitution of the housing stock that brought the substantially higher rate of home-ownership than before. During the privatization the properties were sold for low prices that were quite distinct from the economic fundamentals. Only after several years the prices on the residential markets became more realistic, nevertheless the problem of the adequate housing supply and demand was not solved.

During the existence of centrally planned economies the new housing construction was funded mostly by the state and built by the public companies or by people themselves. After the fall of iron curtain the transformation brought the general decline of the incomes of population. Existing housing funding mechanisms were mostly dismantled, and the new forms of the housing finance and housing subsidies were not developed yet. As the result of it the construction of the new housing units dropped substantially, while the prices were growing. At the same times the subsidies for utilities were gradually removed, which brought the growing share of housing services costs in the family budgets, which negatively influenced the housing affordability. These services were delivered by private local monopolies, which were regulated by the governments, but not very successfully. At the same time the land markets were created, however they often suffered from unclear title on ownership. This had affected the legal costs and delays in construction.

The institutions that underpin a housing market were largely absent during socialism and have been put in place only gradually. This could be explained by the fact that the real estate market involves an extremely complex set of interacting institutions, with a large number of participants from a number of important sectors, including construction, banking, legal services, insurance and government. (Palacin & Shelburne, 2005)

Market institutions and legislation in Central and Eastern Europe were built on trial and error basis based on the policy changes. The policy changes were the result of different social forces, such as bureaucracy, interest groups, international donor organizations, non-profit groups etc. The strength of these groups was different in the different countries. Introduction of often unregulated market forces has shocked the society, and the governments took often uncoordinated efforts to ameliorate the situation by the undertaking the new measures of social policies.

2. CEE housing markets in the past decade

After the first difficult transitory decade the household incomes in CEE recovered and increased, but the population incomes became very stratified and the inequalities have risen.

In the past decade, the real estate markets in Central and Eastern Europe became more transparent. While at the beginning of Nineties the real estate databases and broker's reports practically did not exist, the situation has changed in the recent years. At the beginning of the transition period, the profession of real estate brokers and real estate consultants was not developed. The banks only started to transform their business, the mortgage credits were non-existent, the project fi-

nancing was not very well known. This situation was the result of the historical development of the banking sector, when the function of the banks was very different from what they perform nowadays.

Today we are witnessing the growth of the professionalization and division of the labor in real estate sector. The globalization is the important driver of the real estate markets. This process is partly characteristic by transfer of the intangible assets to other countries. The intangible assets include the proprietary knowledge, access to capital and information, professional expertise, specialized human capital and the reputation of internationalizing entity. (D'Arcy, 2009)

The important factor of the development of the real estate markets including the residential ones were the foreign direct investments. The globalization brought the privatization of the banks in CEE that are now to a large extent owned by foreign banks. Recently we have also witnessed the professionalization of the brokerage services, when the multinational broker chains started to operate in the regions. The subsidiaries of such consulting firms as Deloitte and Touche, Colliers international John La Salle, Cushman and Wakefield, Richard & Ellis and many others are now operating in majority of countries of the former Soviet bloc, where they closely monitor the real estate markets and provide the professional services to domestic as well as to foreign clients.

Moreover the fast development and penetration of internet services provides fast growing availability of information on the real estate markets. Variety of real estate information is now readily accessible to majority of the active population in CEE that was not the case 10 years ago. While much information is still not reliable enough, nevertheless one can find also higher quality reports that were not available before. Moreover the timeliness of the information grew substantially thanks to the electronic data processing and their dissemination by internet.

3. Residential market efficiency

In spite of the achieved progress of the CEE residential market development, these markets are still characterized by the quantitative and qualitative shortages. The number of housing units per thousand inhabitants is 413 in the region, which is below the Western standard (472 units). The average usable area of housing at the regional level is around 63 square meters, vs. average 87 square meters in the more mature Western EU countries. In the "old" EU, homes have an average of 4.2 rooms, while only 2.8 rooms in CEE.

Residential market efficiency depends on well-functioning institutional structure and good access to accurate information on property prices and their estimates in future. Also the ability to efficiently use the existing information is crucially important. The accurate information on prices depends on the valuation, that is itself always partially subjective process. Based on the valuation the return on real estate investments can be calculated, however the inaccuracy of the information can be further exacerbated by the longer holding periods, wrong estimation of the rental values. The residential markets are characteristic by high

transaction costs, incomplete information, heterogeneous goods and the lack of the central market place. All these aspects negatively affect the efficiency of the markets and their transparency.

The access to the information in CEE countries is often difficult because of hiding mentality of the real estate market participants. Investors, agents, government agencies and developers tend to rely upon their network of personal contacts which can make it difficult for a new investor to gain the necessary market intelligence, or for a vendor to reach serious investors (Clancy, 2011).

This culture is gradually changing as the real estate professionals realize that there is growing interest in their opportunities, but the information on these opportunities can be reached only with the difficulties. For instance the advertising of the asking prices on the web sides of the real estate companies is much less efficient than their advertising on the specialized web pages that are accessed by substantially larger community than the individual pages. In addition the company web pages are more difficult and costly to maintain. Such development gradually influences the growing transparency of the market.

The serious problem for the potential investors in the real estate in CEE countries is an access to comprehensive market property data from the central source. At present numerous data is available, but its quality is often unknown and the data are scattered in many websites. In response to the needs of investment committees, analysts, evaluators, compliance departments and auditors to acquire the comprehensive information on the behavior of the real estate markets, including the residential markets necessary for the effective investment decision making, the Beta version of the Investment Property Search, was launched on web at MIPIM in Cannes in 2009 (Clancy, 2011). The aim of developers of this property database was to raise the transparency of property information for the CEE region, while applying the modern marketing methods for the acquiring the necessary data. It is probable, that the other similar initiatives are being developed also in other places in Europe. Thus in couple of years we may have much better information on the markets than today.

4. Information on housing prices

Housing prices provide the important signals for the investors. If they are high, the investors expect high returns on the investments and they prefer to invest their money to real estate. Unfortunately if the property bubble has emerged, the housing prices do not represent any more the fundamental values of the properties and such prices send the wrong signal to investors. Investors then invest to the assets, where they risk suffering the serious losses. The high real estate prices incite the developers to build the new premises during the boom period, however if they are not able to finish them before the bust period, they run into the financial problems and in some cases even abandon the completion of buildings.

It is well known that the fast growth of residential prices may not represent only investment opportunity, but may rather signal the existence of the housing

bubble that will negatively affect the financial intermediaries, solvency investments and consumption. Housing sector has relationship to many related activities, such as notaries, appraisers, movers, real estate agents, construction, maintenance, renovation, utilities, banking services related to trading and financing real estate, etc. These activities make usually 5 to 10% of the activities of GDP (Hilbers, Hoffmaister, Banerji, & Haiyan, 2008). Thus the movement of housing prices affects all above mentioned activities. And finally problems with repayment of housing debt may have the serious consequences for the whole country. These causal relationships are well known from the theory and practice, yet the erroneous allocation of investments and credits is repeated again and again during the peaks of boom periods.

The inaccuracy of the valuation of the housing prices is further exacerbated by the cyclical behavior of the markets. The real estate cycles are difficult to forecast in the environment with high volatility of the housing prices. For the large cities the information on the residential markets are more reliable, since there is more transactions on the markets that are monitored by banking and real estate institutions.

The accurate valuation of the residential property is crucially important for the banks that have to fix correctly their loan to value ratios. Correct valuation is thus the prerequisite of the correct risk management. If the correct valuation is not possible, then the risk averse lenders would reduce appraised value by the significant percentage. The incorrect valuation also impacts the insurance of the property.

The functioning of the housing finance sector is also a key factor in housing market developments. A large share of housing transactions is conducted with outside funding, mostly bank credit. Conditions in the financial sector thereby determine the ease and cost of funding real estate purchases.

5. Housing statistics

Housing statistics in CEE is not yet enough comprehensive and well developed. Majority of CEE countries monitor housing conditions, housing production and housing market dynamics at the national, local and regional levels. They use the census data (every 10 years, but some countries carry out the censuses in shorter periods). Specialized housing surveys are rather exceptional. They are carried out each 5 years in Western countries, such as France, Germany, US, and UK. By contrast, most countries in Central and Eastern Europe have only census-based information with limited indicators, which is complemented by annual data on housing production. Essential information on the affordability of housing is non-existent and data on house prices and rents are sketchy at best (Tsenkova, 2008).

The development of effective monitoring system of the housing sector and housing and land markets in CEE was also required by European Union for the countries, which joined EU in last decade. Now data on prices of the residential property are sent by all members of European Union to European Central Bank in the common EU-wide database (through the Bank for International Settlements - BIS).

For example in response to the EU requirements Slovakia started to monitor the housing price data since 2004. At that time the National Bank of Slovakia (NBS)

has explored the potential sources of information. Later in 2005 NBS established the contractual co-operation between the NBS and National association of real estate offices of Slovakia (NARKS) and prepared the methodology for calculating the average housing prices. The year later in 2006 NBS formalized the raw data processing and preparation of procedures of regular quarterly publication of data on average prices of residential property according the typology of properties and according the regions. The regular quarterly publication of data on property prices was at first published on the official web site on first quarter of 2007. The current practice is such that the housing indices are sent within 60 days after the reference quarter to the BIS database. Thus the first time series on residential property prices in Slovakia is now available, albeit they are yet quite short. The NBS monitors also the rents, the prices of commercial and office real estate. The calculated aggregated data do not satisfy, however a number of people interested in detailed information.

According to analysts, who compared the data on average residential property prices development in Slovakia based on the 2005 NBS methodology applied by the Statistical Office and Eurostat methodology, the relatively strong similarity between two methodologies could be observed (Car, 2011). There are some differences in values, but housing price development trends calculated by both methodologies are similar. Differences in the calculated values result mainly from the different sources of data, use of asking, respectively the real prices and applied weighting schemes. Given the minimal differences in data on average prices of residential property by the NBS and Statistical Office the both institutions are convinced that they had successfully managed the creation and application of methodology for calculating the average residential property prices in Slovakia.

An important element in the construction of housing price index is not only the methodology, but also use of other potentially available sources of information for this purpose. The aim of the NBS, in cooperation with the Statistical Office as an official sponsor of national price statistics is to focus more attention on the real possibility of obtaining the housing data from administrative sources such as Land register or Register of real estate loans for housing from the credit institutions (Car, 2011). This is in line with the recommendations of Eurostat, which stresses the need to focus attention mainly on the administrative and direct sources of residential property price data. The practical realizations of this recommendation may take some time, as well as the removal of organizational barriers.

As we can see, the construction of the detailed real estate databases in Eastern European countries is not yet very well developed. One of the interesting projects that should enable to overcome this problem at least in the local area was realized in Buzau in Romania using hedonic price modeling as the one of the mass valuation methodologies. The project REMIS (Real Estate Monitoring Information System) was the part of the development of the Romanian land NACLRL register (cadastre) that now contains the numerous data related to residential real estate. The project is also interesting, since so far the Cadastre data has never been used to estimate housing in any East European Country (De Vries & Faber, 2009).

The necessary information for understanding the housing markets and housing sector is extensive and it is not easy to collect. According to Hilbers and al.

(Hilbers, Hoffmaister, Banerji, & Haiyan, 2008) the following indicators are necessary for understanding of developed housing market and for preparation of the policy measures:

- Market conditions: house prices (nominal, real, mean, median, repeat sales and hedonic indicators), turnover/sales and the stock of unsold houses (including stocks expressed in monthly sales).
- Demand factors: disposable income, including income per household, interest rates: mortgage and risk-free rates, debt-servicing costs as a share of income, population and household size, rents, price-rental ratios, rent controls, rent subsidies.
- Supply factors: housing stock (developments), vacancy rates, residential investments, housing starts, permits issued, land prices, construction costs, zoning rules, stock prices and ratings of listed building companies.
- Taxation: real estate taxes, turnover taxes, interest deductibility, capital gain
- Financial sector: functioning and efficiency of the housing finance market (products, fees, refinancing options, etc.), regulatory and supervisory regime for housing finance (maximum LTV and/or LTI ratios), mortgage delinquencies, foreclosures, stock prices and ratings of mortgage banks, mortgage-backed securities' spreads; risk premia on subprime mortgages, equity prices and price-earnings ratios (general).
- Other indicators: household balance sheets, home-ownership ratio.
- The collection of reliable and comprehensive data necessary for the detailed housing market analysis including the data on mortgage markets can hardly be realized at this moment in majority of CEE countries.

As we can see the CEE residential market coverage by official statistics is too recent, patchy, methodologically suspect or simply non-existent. Real estate agents are a source of additional information, but this is generally limited to particular areas, often is based only on asking prices, and suffers from methodological weaknesses such as composition biases (Palacin & Shelburne, 2005). This makes the cross-country comparisons of the different countries difficult and the results of such analysis are not reliable enough. These problems are however typical also for some older EU countries and not only for CEE region.

6. Registration of property

One the most important prerequisites for efficiently functioning housing markets is an appropriate legal and regulatory framework with a functioning enforcement system (Hegedus & Struyk, *Housing Finance New and Old Models in Central Europe, Russia, and Kazakhstan. Local Government and Public Service Reform Initiatives*, 2005). Some countries, such as for instance Hungary, the Czech Republic, and Slovakia inherited a workable system of land registry and basic banking laws for foreclosure and other procedures. However, in the socialist period the legal framework was "not in proper use," i.e., the land register had not been kept up-to-date; actual banking practices were not consistent with a market

economy, and foreclosure procedures were hardly used. The necessary changes regarding the registration of property in such countries, as Russia, Albania, and Ukraine often lag after the Central European countries.

Lengthy procedures for obtaining building permits and a lack of complete and transparent land registers have been the main obstacles to expansion in construction activity at the regional level (*Residential Real Estate in CEE: Clear Driver for Sustainability*, 2008). In many countries, the ownership of land was very often split into long and narrow parcels with relevant records available in two or more registers (like in the case of Kazakhstan, Ukraine).

Process of establishment of title on property is sometimes hampered for the historical reasons. Such situation is typical for instance in Slovakia. Although the land registration exists in Slovakia for more than 200 years, some of the titles were lost during the Second World War. Moreover the land could have been inherited by all children of the owner, which led to the extensive land fragmentation. As the result of it, the surface of Slovakia representing 49,000 km² was divided into 12.5 million parcels. One piece of land is often subject to rights of a high number of co-owners with very small shares in it. It is not unusual for a co-owner to have a share of 1 m² of land. Such situation was partly a consequence of the Hungarian probate law applicable until 1951 in Slovakia, which had no restrictions as to the division of inherited land. (Compare with Lazur, 2005; Machajdikova, Spirkova, & Babelova, 2011). Thanks to the land consolidation, the number of parcels was reduced in the last years. Unfortunately the consolidation is costly process funded by government from the limited budgetary sources, and we may hardly expect that it will be finished in the near future.

7. The impact of the crisis on the residential markets

The Central and Eastern European region is very heterogeneous (Central Europe, Europe, South East and the Balkans, Commonwealth of Independent States) and the impact of the global crisis differs in the different countries. The reforms realized after the year 1989 enabled to transform the former centrally planned economies into market economies. The difficulties of the first decade of transition were translated into CEE's GDP contraction by 26.6% between 1989 and 1999 in real terms, as unprofitable state-owned enterprises collapsed and unemployment has grown.

The rapid economic growth during the boom period in the last decade preceding the crisis was to a large extent funded by foreign direct investments, cross-border loans from Western European parent banks to their CEE affiliates. The large inflows created macroeconomic and financial sector vulnerabilities – larger current account deficits, rapid credit growth, worsened fiscal positions, and heavier indebtedness (often in foreign currencies) of households in a large part of the region.

When the subprime crisis started in US, most of the analysts believed that the Central and Eastern European (CEE) countries will not be affected by it. In reality, the crisis hit CEE countries very strongly in the second half of 2008. Some analysts even feared that CEE countries were hurtling toward a regional crash similar to

the East Asian crisis of the late 1990s. Fortunately by the end of 2009 CEE export began to grow gradually, and in 2010 the economic growth was resumed albeit not in all countries and in a much lesser scale than before 2008.

The demand for housing units during the boom period was driven not only from local population, but also by foreign speculators and in many cases it did not match the real needs of the population. It also acted as the conduit for the contagion for the crisis from abroad. The credit crunch thus had much more severe effect on transition CEE economies than on other emerging countries, which on average had positive current account positions in the period prior to the crisis. Not surprisingly, transition countries were disproportionately represented in the list of recipients of financial assistance by the IMF (Brezigar-Masten, Coricelli, & Masten, 2009).

The other serious problems were generated by the provision of FX mortgages. Nearly 90% of Hungarian mortgages were denominated in Swiss francs since 2006 and the total mass of loans in Swiss francs from Switzerland is estimated at 500 billion Euros (Samary, 2011). 45% of the total market for home loans and 40% of all consumer loans of Hungary are expressed in Swiss francs rather than in the domestic forint - which has become a trap when interest rates on Swiss francs and capital flight has caused the drop of the Hungarian forint. Such mortgages were originated also in Baltic states, Romania and Bulgaria, and to lesser extend in Poland. In all of these countries they are source of repayment troubles.

The very serious problems have occurred in Baltic States where the housing prices during the boom period had grown very rapidly. At the same time, too many new homes were being built and the global crisis meant a loss of demand for exports. The combination of large current account deficits, excessive credit growth, and mounting housing bubbles had led to an economic crash. With the recession, capital flowed out of the region and the Baltic banks and governments had a hard time to finance themselves. The outcome was that the economies shrank; Latvia had a 25% smaller economy at the beginning of 2010 according to IMF, who had to bail out the country in 2008. In order to stabilize the situation the strong austerity measures have been introduced afterwards.

Russia and Ukraine are the two largest and most populous countries in Central and Eastern Europe. Market reforms were slower and less comprehensive in Russia, Belarus, Ukraine, and other ex-Soviet members of the Commonwealth of Independent States (CIS) in comparison with Central European countries and Baltic states that joined European Union. The political instability in Ukraine in last years and distrust of the population to the political leadership slowed down the transformation of the country and was one of the sources of the economic problems. On the other hand Russia has benefited from the high prices of the oil and gas, which was the main source of its rising prosperity during the boom period.

Ukraine's property market has been in crisis since 2008. GDP collapsed in 2009, falling 14%, and the country has suffered a fiscal crisis, somewhat relieved by a massive IMF bailout. Transactions have plunged; construction activities almost stopped. This led to bursting of housing bubble in Kiev (Guide, Global Property, 2010), which was not a really surprise taking into account the fact that from 2002 to 2007, the house prices in Kiev skyrocketed attaining 562% (peak average

price attained \$533 per square meter, the housing price growth from 2005 till 2008 was 50%, 51%, 44%, and 17.6% respectively). Ukraine's housing boom was fueled partly by foreign buyers, but also by strong economic growth (7% GDP growth per annum 2002-2007) and interest rate differentials. As a result of the crisis Ukraine scored among the countries with the sharpest price decline, according to the latest Global Housing Price Index, which is published by Knight Frank (Knight Frank Global House Price Index, 2011).

The crisis in CEE has reduced the land and housing prices. Although the crisis decelerated the new development, nevertheless it did not stop it completely. Increasing and then rapidly decreasing property prices around the world are often cited as the initial trigger of the on-going global recession. This raises the question of whether current real estate prices correspond to economic fundamentals and if not, how much (more) they are likely to fall. This question is highly relevant for the housing markets in Central and Eastern Europe (CEE), which have experienced a recent boom of the credit markets (Egert & Mihaljek, 2007). Property prices more than doubled between 2003 and 2008 in majority of countries in this region.

8. The lessons from the crisis

The crisis brought the cleaning of the market, so that rather more knowledgeable and financially strong companies survived. Moreover the crisis accelerated the rise of the quality of the real estate broker profession. Thus the real estate sector in CEE is becoming more competent. The crisis stopped many products that would be possible to sell in the market and provided the time for the reflections both for developers, banking sector and the public administration that face the pressures from public, because the building permits in past were provided to number of projects that were not positively evaluated by urban population.

The tougher conditions in the residential markets raise the demand for better market analysis. The banks have to study the situation on real estate markets in order to minimize the risk of losses. Also the developers must elaborate more serious marketing studies if they want to convince the banks to provide them the credits and make the projects more viable. Thus the value of high quality residential market information is becoming more important in the Central and Eastern Europe.

After the recent turmoil in financial markets the Basle Committee and European Commission through changing its relevant Directives are placing even greater emphasis on the creation of standardized and transparent credit processes. However, in spite of fact that the last financial crisis discovered serious weaknesses of Basel 2, (legally introduced in 2008) one of the positive sides of this regulation is that in addition to its intent to motivate banks to apply more sophisticated approaches for capital requirements calculation in Pillar 1, regulators also "legally" forced financial institutions to develop and introduce a comprehensive risk management system (or enterprise risk management system) through ICAAP (Internal Capital Adequacy Assessment Process) implementation as a Pillar 2 component. This system, if is fully developed and implemented, creates a reasonable frame-

work for assessment, evaluation, and mitigation of the bank risk position commonly expressed through economic capital requirements during a crisis period, too. (Pilkova & Kralik, 2011). However, also due to shortage of time for complete introduction of these regulations because of financial crisis arose the new Basel III regulation has started to be implemented. Basle III key focus is on strengthening of bank capital requirements and introduction of new regulatory requirements on bank liquidity and bank leverage. One of the reaction on these agreements will be further strengthening of the risk management by providing additional information necessary of the LTV ratios, and on residential market per se (Dokad zmierzaja rynek mieszkaniowy w Europie?, 2011).

9. Conclusions

The CEE economies have undergone the major institutional changes after 1989. Gradually the residential markets and institutions were formed, albeit in different speed in the CEE region. Although these economies formerly belonged to the Soviet bloc, they are quite heterogeneous, have the different economic history and they have more or less successfully introduced the market reforms. After the first difficult transition decade, they experienced fast development in 21 century, until the crisis reversed their fortune. They are now introducing the new austerity measures and they are changing some elements of the fiscal systems. This will certainly influence the business environment, in which the residential sector will operate in near future.

The development of the residential market triggered the necessity to collect more comprehensive data in the housing sector. Also the accession of some of the countries to European Union had the consequence for further development of the housing statistics. The penetration of internet, and the development of real estate databases enabled to augment the availability of information on residential markets in the regions. This was furthermore strengthened by the presence of international property consulting companies, banks, development and brokerage companies in the CEE region with the considerable market based know-how. The evolving markets and the information technologies opened the ways to higher transparency of the residential markets. In spite of these achievements the problems with the low comparability of data based on the different methodologies persist. Although the data are numerous they are not necessarily available and sufficient for the complex analyses of the housing markets and elaboration of the sound housing policies. We may expect that the growing maturity of residential markets will necessarily bring further positive development in the sector driven by the needs of customers, investors and banks (that have to implement the requirements of Basle II and Basle III agreements). Moreover since, the financial situation in the residential sector may have the serious consequences for the macroeconomic situation, it should be in the interest of CEE governments to have available the better residential sector analyses based on the reliable and comprehensive data. Based on such knowledge, the sound policy measures for the residential sector could be prepared.

Bibliography

- Brezigar-Masten A., Coricelli F., & Masten I. (2009). *Financial integration and financial development in transition economies: What happens during the financial crisis*. Working Paper No. 7/2009, Vo. XVIII, Institute of Macroeconomic Development and Analysis, Ljubljana.
- Car M. (2011). O cenach domov a bytov. (About the building and house prices) *Trend* (26), 66.
- Clancy R. (2011, April 5). *New resource for property investors in CEE markets*. Retrieved September 9, 2011, from PropertyCommunity.com: <http://www.propertycommunity.com/emerging-property-markets/new-resource-for-property-investors-in-cee-markets.html>
- D'Arcy E. (2009). The evolution of institutional arrangements to support the internationalisation of real estate involvements. Some evidence from Europe. *JERER*, 281-293.
- De Vries P., & Faber R. (2009). Towards a Real Estate Monitoring Information System in Romania. *The Romanian Economic Journal*, XII (32 (2)).
- Dokad zmierza rynek mieszkaniowy w Europie? (Where is the residential market heading?) (2011, 5. 12). Retrieved August. 24, 2011, from Gazeta Wyborcza. Wszystko o nieruchomościach: <http://mieszkaniowy.blox.pl/2011/05/Dokad-zmierza-rynek-mieszkaniowy-w-Europie.html>
- Egert B., & Mihajek D. (2007). *Determinants of House Price Dynamics in Central and Eastern Europe*. Bank for International Settlements.
- Guide Global Property. (2010, June 10). *Troubled Ukraine Real Estate Market Shows No Signs Of Recovery*. Retrieved October 4, 2010, from NuWire Investor.
- Hegedus J., & Struyk R. J. (2005). *Housing Finance New and Old Models in Central Europe, Russia, and Kazakhstan. Local Government and Public Service Reform Initiatives*. Budapest: Open Society Institute, Budapest.
- Hegedus J., Tosics I., & Mayo S. K. (1996). Transition of the housing sector in the East Central European countries. *Review of Urban & Regional Development Studies* (8), 101-136.
- Hilbers P., Hoffmaister A., Banerji A., & Haiyan S. (2008). *House Price Developments in Europe: A Comparison*. International Monetary Fund.
- Knight Frank Global House Price Index. (2011). Retrieved July, 9, 2011, from Knight Frank: <http://www.knightfrank.com>
- Lazur R. (2005). Slovakia Case Study / Land Consolidation. *FAO workshop paper*. Bratislava: Soil Science and Conservation Research Institute.
- Machajdikova J., Spirkova D., & Babelova J. (2011). *The Historical Development Of Land Registration And Its Impact On Real Estate Development In The Central Europe With The Emphasis On Slovakia*. (P. R. Conference, Ed.) Retrieved May 6, 2011, from Proceedings from the Seventeenth PRRES Conference in Gold Coast, Australia: <http://www.prres.net/>
- Palacin J., & Shelburne R. (2005). *The private housing market in Eastern Europe and CIS*. Geneva, Switzerland: United Nations Economic Commission for Europe.
- Pilková A., Kralik P. (2011). *ICAAP - challenges and opportunities for Slovak commercial banks*. In: *Balancing Corporate Success & Social Good: Building Capabilities for Sustainable Global Business*. 12th intern. Conference, July 21.-23., Singapore: Singapore Management University, 2011. - ISBN 978-0-9837898-02. Vol. II, pp. 1304-1313
- Residential Real Estate in CEE: Clear Driver for Sustainability*. (2008, May). Retrieved 8 25, 2011, from UniCredit: http://www.yapikredi.com.tr/en-US/macroeconomic_research/pdf/UniCreditGroupCEEOccasionalReport/RealEstateReport.pdf
- Samary C. (2011, April 7). *Eastern Europe faced with the crisis of the system*. Retrieved September 5, 2011, from Committee for abolition of the third world debt: <http://www.cadtm.org/Eastern-Europe-faced-with-the>
- Tsenkova S. (2008). *Provision of affordable housing in Europe, North America and Central Asia: policies and practices*. University of Calgary.