

# **Baltic Real Estate Markets' Dynamics**

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When analyzing real estate markets' functioning and forecasting future trends, it is not always relevant to compare West European real estate markets with the Baltic states' market first of all because they have formed under different conditions and currently represent different levels of maturity.

*Key words: real estate, real estate market dynamics, functioning, market mechanism.*

## **Introduction**

Real estate market is usually being analyzed in terms of supply and demand factors in a chosen geographical area at a certain period of time. Moreover, local real estate markets are often being compared with markets in other countries. Market activity, price levels and dynamics are traditionally key factors for real estate market research while maturity of the markets sometimes is being dismissive. The latter aspect of research prompts to raise a question - is it always relevant to compare differently matured markets which most often are only similar in size or geographical area? Number of the markets usually used for comparison (in most cases Scandinavian markets) have formed significantly earlier than the Baltic real estate market and, moreover, operate under different conditions over long period of time if compare with the whole existence of the Baltic states. Therefore, it is relevant to analyze the Baltic real estate market dynamics and make forecasts taking into consideration fundamental differences of markets, formed mainly due to different surrounding (economic) systems. This could help to reduce inaccuracy of forecast important for market participants' expectations and decisions.

## **Research object**

The object of this paper is to identify major differences of fundamental market elements comparing the Baltic commercial real estate market functioning with matured markets.

## **Problem**

Which fundamental elements shall be taken into account when analyzing real estate markets with different levels of maturity?

## **Purpose**

The purpose of this paper is to analyze the impact of economic system's transformation on real estate market functioning and identify major differences of fundamental elements in the Baltic real estate market and matured European countries' real estate markets.

## **Methodology**

Theoretical consideration on real estate market functioning in this paper is based on qualitative research and systematic approach; a comparative literature review was conducted to summarize various findings on factors influencing real estate market dynamics in different countries.

## **Originality/value**

The paper summarizes that it is relevant to analyze the Baltic real estate market dynamics when comparing with real estate markets in other countries (usually similar in size) and make forecasts taking into consideration fundamental differences of markets, formed mainly due to different surrounding (economic) systems. This could help reducing inaccuracy of forecast important for market participants' expectations and decisions.

## **Research limitations/implications**

This theoretical research is limited to the Baltic commercial real estate market.

### **1. Real estate market functioning mechanism**

Dictionary of Real Estate Terms (Friedman, 1987) describes real estate market as “the potential buyers and sellers of real estate at a current time, and the current transaction activity for real estate.” Due to specifics of real estate there is no exact location to exchange money for estate rights, and the property itself always remains in its prime location, only rights of ownership are transferred to the new owner (Dasso, 1989). Real estate market can therefore be described as business activity the outcome of which a transfer of estate rights is being exercised in exchange of agreed amount of money or any other cash equivalent. In order to analyze real estate market functioning mechanism, it is worth to concentrate on the major activities being performed in relation to market functioning. In this case, actions (Kondratjev, 1991), which are dedicated to meet the needs for real estate (living space, working space, etc.) as well as conditions necessary to achieve above mentioned needs may be described as activities in real estate market.

The real estate market's primary function is the exchange of space for money. Other real estate market functions are (Dasso et al., 1995):

- 1) Existing space is reallocated to alternative users based on their needs and relative ability to pay. In free market property sales occurs only when they are mutually advantageous to both parties – buyer and seller. Real estate market reallocates property rights based on the needs and financial abilities of market participants.
- 2) The quality and quantity of space is continuously adjusted to meet changing conditions. Owners decide how property is used as they respond to market pressures and opportunities.
- 3) Land-use patterns are determined. Land-use activities differ in profitability and in turn in their ability to pay for space. As location greatly affects the ability to pay for space, various uses compete for the best sites. The expectation is that the highest and best use for each site will win the competition.
- 4) Price and value information is generated for the use of market participants in subsequent decisions. All market participants, including developers, brokers, investors, buyers and others, need market information to make certain decisions. Price and value information are, therefore, important to the continuing operation and stability of real estate market.

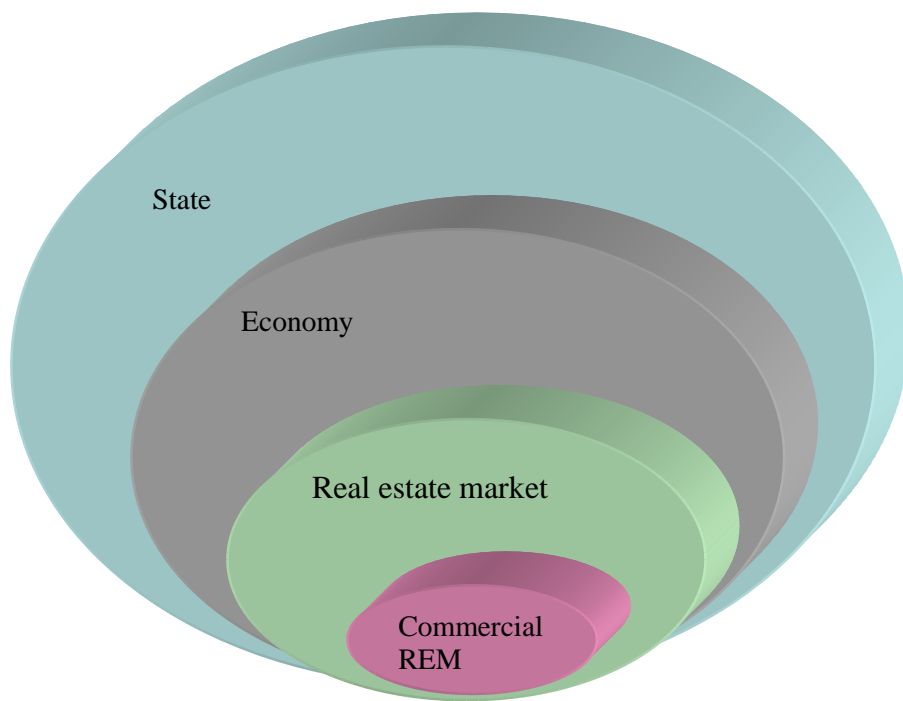
All above mentioned functions of real estate market, including its primary function to reallocate demandable good, are dedicated to balance major market parameters – supply and demand. Real estate

market functions effectively when major goal to exchange space for money and reallocate demandable goods is achieved as well as balance between supply and demand is recorded. In any other case the market is not functioning effectively. In order to analyse real estate market functioning, it is worth to apply systematic approach.

## 2. Surrounding system’s impact to real estate market functioning effectiveness

As real estate market represents interrelations and actions of its participants in the respective market mechanisms, we may view it as a system. Traditionally system is defined as a sum of interrelated elements (Simanuskas, 1997; Rapoport, 1969 et al.). Alteration of any of the elements has an impact to possible changes in other elements and the system itself. Every element of the systems has certain function and common characteristics to other elements. Interdependence between elements and dependence on the whole totality is usually called connections or relations and is important aspect of systems functioning.

Analysing real estate market as a system, we can not disregard economic system as external environment of real estate market. Functional systems analysis concept tells (Lydeka, 1999) that system is open to surrounding environment impact. The relationship between system and external environment determines forms of systems existence. When analysing real estate market, it becomes evident that external environment (as a macro system of real estate market, which can be called subsystem accordingly) impacts real estate prices, values and activity of market participants. External, surrounding system defines activity of the whole real estate market. Economic system is a subsystem of more sophisticated system – state (Lydeka, 1999).



1 picture. Real estate market as a subsystem of macro-system

Taking into account specific characteristics of real estate and real estate market (immobility of real estate and locality of the market in particular), it is evident that market's functioning area is limited geographically, and market is always related to some area with certain features.

From the first glance it seems worth analyzing neighbouring environment, however, being a part of macro-system (1 picture), real estate market is affected by changes in macro-system too. National or world economy, political situation, climate change, and demographic dynamics – all this has an impact for real estate markets in any given area. The essential difference is *time*, during which it takes to show up for the impact, and *volume* of impact. The further is surrounding system from the estate market, the more time is needed while appropriate effect is realized in the market. Global financial crisis came from the US, and had an impact for our local the Baltic real estate market, however, it took sometime to realize and feel the outcomes, it took much longer if something happened in neighbouring country's economy or politics. Real estate crisis in the US transformed into global financial crisis and transferred to other national markets. Deeply interrelated international financial markets were the first to feel the outcomes of the process. Global capital movement was suspended; the lack of capital has blocked most countries economic growth and had a great influence for unemployment level growth too. Devaluation of savings, growing inflation and unemployment significantly reduced purchasing power of population and as a consequence – effective demand. On the other hand, problems in the financial markets lowered banks' lending abilities, as a result of which cost of financing increased dramatically. All this has a huge impact for demand for real estate – possibilities to take a mortgage loan (or repaid a taken one) decreased or even disappeared from the market. While some of the markets (consumer goods, for example) can expect for quicker recovery after recession, specific characteristics of real estate, such as immobility, durability of investment, limits our expectations for fast recovery. “An examination of the aftermath of severe financial crises shows deep and lasting effects on asset prices”, states Reinhart and Rogoff (2009), it takes reasonable time to regain the position in terms of price levels and constructions volumes. Alterations in surrounding system have a direct impact to real estate market and its functioning. Decreased demand for real estate first of all reflects in the diminishing estate values and prices, supply subsequently declines – volume of new construction sinks, majority of projects are cancelled or frozen. Developers incur losses; part of them is close to go bankrupt, declining demand has an affect on growing vacancies and decreasing rents.

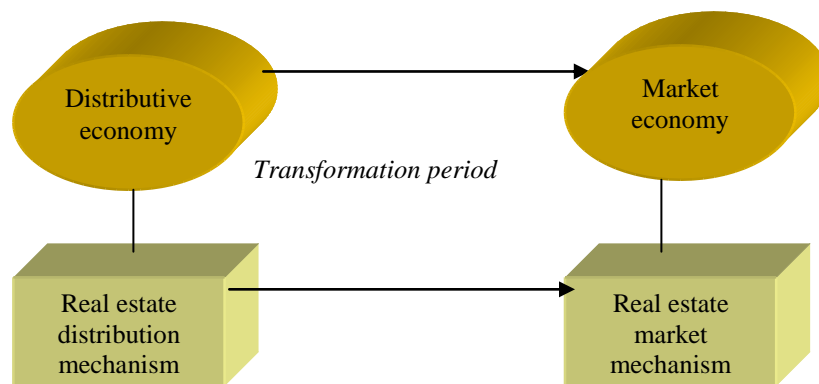
The other aspect of impact is its volume or significance over time – some changes in the macro environment (global changes of climate, demographic shifts) may be reflected in the long-term impacts for estate market, while experienced indirectly, with certain delay or lag, gradually new customs, preferences, attitudes of market participants are being formed over time. Short-term impacts (overheating of economy in the region) have more direct influence (increased unemployment encourages saving, purchasing power is declining, lack of mortgage finance limits ability to chose the most desirable estate) and the delays are much shorter. In any case, changes in one or another macro environment always has an impact to real estate market functioning. Continual monitoring of macro environment dynamics and analysis of the feedback could help avoiding or at least minimizing negative impact of changes to estate market functioning. Observation, interpretation, and reaction to a received feedback via corrective action are among major elements of systematic approach. Constant monitoring of systematic changes (occurring due to both internal participants, or mechanisms, dynamics and external forces) and their impact to estate

market analysis would help the participants of the market better adjust to changing conditions (and as a result to start or to cancel new projects, flexibly adjust rental levels, increase or decrease sales prices, change or determine the highest and best use of any estate, propose adopted concept of premises, based on the new needs and preferences of market participants, etc.).

Having in mind the surrounding environment impact on market functioning, it is worth to analyze what was the impact of economic system to the Baltic real estate market functioning over its formation and early stage of development.

### 3. Distributive economy and market economy – fundamental differences in real estate market dynamics

If real estate market is described as a system, a deterministic research approach can be applied based on which system is being analyzed as a complex developing object (Kondratjev, 1991). Supporters of deterministic concept (Lydeka, 1999) have a notion that history of economic system development helps to predict its future trends and logics. In terms of real estate markets in West European countries, they function under market economy condition over a long period of time, usually more than one hundred years. Analyzing the Baltic (as well as any other East and Middle European countries) real estate market's dynamics and its development conditions, its „prehistoric“ state, which has existed under distributive market, shall be taken into account. This „prehistoric“ state has determined current real estate market structure and functioning logics.



**2 picture. Real estate distribution mechanism's transformation into real estate market mechanism stipulated by transformation of economic systems**

When analyzing real estate market, it is relevant to discuss different segments separately, first of all, due to different demand drivers and also due to different levels of activity in the segments. The most active segments in the Baltic states are residential and commercial ones. The major drivers for demand in residential market is population, income level and interests rates, while commercial property development is driven first of all by economic situation in the area, then by population, demographic structure, effective income, state control, and other unique factors, important to various businesses (McKenzie et al., 2008).

Commercial property can be classified as offices, retail, hotels and industrial (Friedman, 1987). Every group is unique and differently active; however, office and retail property usually is among the most active in terms of development and use.

It is relevant to analyse commercial property market, as a part of real estate market, applying systematic approach and identifying its:

- object,
- participants,
- price determination mechanism,
- surrounding environment.

Moreover, commercial real estate market may be analysed (Ball et al., 2007) in terms of:

- user market,
- development market,
- financial asset market and

- land market. When user market exists, business forms demand for premises needed for economic activity and pays rent. Rental levels inform developers about demand for certain type of real estate and competition over best land lots starts between developers. On the other hand, rental income represents cash flow for investors, investing into real estate.

When analyzing the Baltic commercial real estate market functioning, it is worth to have in mind that it started to develop when distributive economy has been transforming into market economy. It shall be noted that in distributive economy commercial property has been developed and used as operational property, as part of company's resources/assets needed in operation. In the market economy, successful development of commercial property is related to tenants' or users' business success. (Wiegand, Sreckovic, 2009). Further we are going to analyze commercial property market in the Baltics based on four aspects (Ball, 2007) as well as major functions real estate market represents.

**1 table. Commercial real estate market's fundamental elements comparison in distributive and market economy**

	<i>Distributive economy</i>	<i>Matured market</i>
<b>Object</b>	<ul style="list-style-type: none"> <li>- All commercial property belonged to the state; private ownership was limited by the laws.</li> <li>- The most popular type of construction was „cheap, typical units“, low variety of objects.</li> </ul>	<ul style="list-style-type: none"> <li>- Most of commercial property belongs to business institutions and private persons; only minor part belongs to the state.</li> <li>-Modern, high quality objects are being developed and delivered, high variety.</li> </ul>
<b>Participants</b>	<ul style="list-style-type: none"> <li>- State was the major player in the market. Developers, users and owners – state companies.</li> <li>- No need for certain participants (brokers, financial consultants), most of the decisions (planning, organization, control) were taken by political structures.</li> </ul>	<ul style="list-style-type: none"> <li>- Various participants are active in the market: state, privately owned developers, users, etc.</li> <li>-Decisions are taken based on professional advices and market situation.</li> </ul>

	<ul style="list-style-type: none"> <li>- Market participants had no options to choose real estate size, quality or location – usually it was done by political structures.</li> <li>-There were no investors into real estate, as it belonged to the state and was not for sale to any other third party.</li> </ul>	<ul style="list-style-type: none"> <li>- Tenants and users may choose real estate object based on their preferences and abilities.</li> <li>-Investors represent important force in terms of development, activity of the market, qualitative and quantitative parameters of real estate.</li> </ul>
<b>Price mechanism</b>	<ul style="list-style-type: none"> <li>- Real estate distribution was based on political decisions.</li> <li>- Real estate price and rental fees were defined taking into consideration size and quality. Location and other aspects were not considered.</li> </ul>	<ul style="list-style-type: none"> <li>- Real estate is being sold/rent to the highest price (or other optimal conditions) offering buyer.</li> <li>- Price and rental fees are determined by situation in the market. Location, year of construction, size, concept, economic situation – all have an impact to the price determination.</li> </ul>
<b>Surrounding environment</b>	<ul style="list-style-type: none"> <li>-State’s role is essential.</li> <li>-Low sensitivity to external environment (global factors).</li> </ul>	<ul style="list-style-type: none"> <li>-State’s role is related to property use, development, intensity and construction control, urban planning, real estate taxes.</li> <li>High sensitivity to external factors (financial crisis impact, etc.)</li> </ul>
<b>User market</b>	<ul style="list-style-type: none"> <li>-User – state. Operational property – developed for certain activity.</li> </ul>	<ul style="list-style-type: none"> <li>-Real estate may be: <ul style="list-style-type: none"> <li>a) operational</li> <li>b) as an investment– income generating asset.</li> </ul> </li> </ul>
<b>Land market</b>	<ul style="list-style-type: none"> <li>-Land belongs to the state, very passive market.</li> </ul>	<ul style="list-style-type: none"> <li>-Land belongs to both state and private owners. Active competition for the best lots for development.</li> </ul>
<b>Development market</b>	<ul style="list-style-type: none"> <li>-Development is based on planning economy priorities and principles.</li> </ul>	<ul style="list-style-type: none"> <li>-Development is based on the highest and best use principle.</li> </ul>
<b>Financial assets market</b>	<ul style="list-style-type: none"> <li>- No functioning financing mechanism as well as no demand for it.</li> <li>-Financial market has not existed.</li> </ul>	<ul style="list-style-type: none"> <li>- Effective financing mechanism encourages development and investments into real estate.</li> <li>-Active alternative for those who invest in financial markets.</li> <li>-Active institutional investors as well as foreign investors, various investment derivatives.</li> </ul>

Further analysis of the Baltic real estate market functioning will be based on the above-mentioned fundamental elements analysis.

#### **4. Baltic commercial real estate market formation peculiarities**

*Commercial real estate market object.* After gaining independence, real estate questions were among the most actively discussed in the Baltic states. Real estate market started functioning when part of the state property was privatized. Initially, some residential market objects were converted into commercial use due to limited supply of the later. Gradually, space distribution, demand driven supply and other aspects of market economy started being applied in the former Soviet republics' property markets.

*Commercial real estate market participants.* In the distributive market majority of decisions (planning, organizing, control) were made by political bureaucratic structures. Currently, professional participants are actively operating in the Baltic commercial property market. As a result of economic system transformation demand for new market functions and participants is being created, existing structures are meeting new challenges and responsibilities. In terms of market participants the Baltic market meets matured market criteria.

*Price mechanism.* In the market economy, major goal of market is to distribute demandable good in the certain area with the help of price mechanism (Larsen, Carey, Carey, 2007), in the distributive market real estate price and rental levels were estimated taking into account property size and state, while location, age of property, economic situation has not analysed. Moreover, property with highest demand has been distributed using political power and instruments. In the market economy, real estate price represents result of demand and supply interaction (Friedman, Harris, Lindeman, 1987). In the distributive market, real estate utilities and exploitation costs were partly subsidized by the state, currently the above mentioned costs are estimated by real costs incurred and are fully covered by the users of real estate in the Baltic states. In terms of price mechanism, the Baltic real estate market is functioning according to market economy criteria.

*Surrounding environment.* State's role in the distributive market has been essential. In the market economy, state is usually responsible for zoning, development, intensity regulation, construction control, taxation, etc. In the distributive market, real estate market has been operating in a certain "vacuum", closed system, without direct interaction with surrounding environment. Currently, the Baltic real estate market is very sensitive to processes in the surrounding environment. As it was discussed above, real estate market in general represent a subsystem of economic and state systems, and processes in one subsystem have an impact to all other related systems. Increase in vacancy, decline of rental levels, yield curve growth and zero transactions since 2008 – this is a reaction of the Baltic real estate market to the global financial crisis. This shows that in terms of surrounding environment, the Baltic real estate market has reached the qualitative level of matured markets.

*Commercial property market in terms of user market.* In the distributive economy, commercial real estate has been developed and used in a certain activity (manufacturing, education, administration, etc.). Commercial property represented a part of company's assets dedicated for general goals of the company; property purpose was exceptionally operational. In the market economy, successful development of commercial property is closely related to tenants' or users' business success (Wiegand, Sreckovic, 2009), property development in most of the cases depends in the economic situation. Real estate may be classified into two types: a) operational – developed for a specific activity, operations, and b) investment property – income generating commercial property. Currently, majority initial owners



(usually developers) of commercial real estate in the Baltic states are already replaced by local and international investment funds and trusts, investing into income generating commercial property.

***Commercial property market in terms of land market.*** In distributive market, land belonged to the state, the state was a developer and user as well, consequently there has been no competition among developers for the best land lot, highest and best use principle has not been applied in the market and lots of industrial purpose buildings were build in the central parts of the cities, no clusters, which form value added for neighbouring properties, were common to the distributive real estate market. Currently, the Baltic real estate market is partly representing matured market economy level, especially in the new construction projects, however, old construction industrial and other purpose property is still often been used ineffectively, especially in the secondary cities, where market activity and competition among developers is significantly lower than in the capital cities. In terms of land market, the Baltic commercial real estate market has partly reached matured market level.

***Commercial property in terms of development market.*** In the distributive economy, all construction has been financed by the state. As traditionally no care has been taken in terms of user tastes and preferences, the most popular construction type has been standardized. Today the Baltic property market represents modern, high quality property, meets users' tastes and preferences, new construction reflects current demand in the market (open space for flexible office use, large regional shopping centres, etc.). In terms of development market, it is evident that the Baltic commercial real estate meets matured markets' criteria.

***Commercial property market in terms of financial market.*** In the distributive economy, financing mechanism has not existed, however, demand for such a mechanism hasn't existed either. There has been only one major player in the market – the state, which has been financing, developing and using real estate itself. In the market economy, financial mechanism not only encourages development of real estate, but also attracts investments into income generating property. Supply of financing through bank loans (depending on financial terms, interest rates, loan-to-value ratio, etc.) has a significant impact on effective demand for real estate. Moreover, real estate creates an alternative for investors investing in the financial markets. In the matured markets active institutional and foreign investors prevail, variety of investment derivatives are being offered to the investors. In terms of financial market, the Baltic commercial real estate market meets matured markets' criteria only partly. Small size of the Baltic region, unstable economic situation, constantly changing political situation (and fiscal policy fluctuations as a result), interdependence from other countries, limited supply of prime properties (property for sale often is too small in terms of investment volume, while supply of portfolios is rather limited) and all this form low interest from institutional investors. Unprecedented rental fees renegotiation or even breach of lease conditions (when economic situation changed, majority of the tenants either renegotiated, or broke lease agreements; this had a significant impact on decreased rental income and values of property in general) make the Baltic commercial property market less attractive for investors as well. All the above-mentioned determines low liquidity of commercial real estate market in the Baltic states. Having in mind, that traditionally real estate is less liquid than securities, liquidity in the Baltic states it is even lower, moreover, the region is small and open, therefore, is highly dependable from surrounding environment. Since 2008, there has been no significant commercial property transaction in the Baltics, and today it is hard to discuss current yields and risk premiums in the region. Therefore, it may be concluded, that in

terms of financial markets, the Baltic commercial property market has not reached the matured real estate markets yet.

## **5. Baltic commercial real estate market functioning peculiarities**

Based on the analysis of the Baltic commercial real estate market parameters, current functioning peculiarities may be described as:

### ***1. Commercial property market objects:***

- Majority of commercial property objects belongs to business or private owners.
- Part of the commercial property objects (built until 1992) is physically depreciated and morally obsolete, however, property representing new construction is comparable with matured markets objects in terms of qualitative characteristics.
- Physical characteristics of real estate have changed essentially over the last ten years: construction of high quality commercial property prevails; size, interior planning and finishing, technical characteristics meet current demand of users.

### ***2. Commercial property market subjects:***

- Various participants are actively operating in the market; decisions are based on real estate market situation.
- Users are free to choose real estate size, location and other characteristics based on their needs and abilities.
- Major drivers of demand for commercial property in the Baltics are common to market economy drivers –economic situation, population, global financial market health, and unique factors representing particular business.

### ***3. Commercial property market functioning peculiarities:***

Currently supply of commercial property exceeds demand for real estate in the Baltic countries. High level of vacancy, nearly twice lower rental levels to compare with 2007, growing yield level, while no transactions are being made in the market, frozen construction in the pipeline and cancelled projects, limited financing of real estate (in most cases dedicated to finalize unfinished projects) are common to the Baltic states as well as matured markets. However, very low market liquidity, lack of attractive investment products (in terms of quantity and quality), low transparency of the market (traditionally, only some investment transactions' terms are being disclosed to other market participants), lack of ethical behaviour and respect to legal norms (change or breach of lease agreement terms), developers and tenants' indifference to reputation and long term obligations make the Baltic commercial property market less attractive for investors. It shall be stated, that in twenty years of functioning and development the Baltic states commercial real estate market has partly reached matured real estate market in terms of quality and quantity, however, in some aspects it still does not meet matured markets' criteria.

## **Conclusions**

The analysis of fundamental market parameters provided several conclusions:

- Real estate market represents interrelations and actions of its participants in the certain market mechanisms, which take part in achieving the major goal of market – allocation of demandable good in the certain geographical area. Mechanism constitutes various structures and forms of activities, relating real estate market participants and their actions dedicated to achieving set goals. Every real estate market activity is related to some mechanism; therefore, we can define property creation, financing, acquisition, management and other mechanisms.
- Interrelations and actions of the market participants directly depend on surrounding, or larger systems' impact. Taking into account specific characteristics of real estate and real estate market (immobility of real estate and locality of the market in particular), it is evident that market's functioning area is limited geographically, and market is always related to some area with certain features.
- Is it relevant to analyze the commercial property market applying systematic approach (identifying market object, participants, interrelations, and surrounding environment), also in terms of users, development, land and financial markets.
- In almost twenty years of development and functioning the Baltic commercial real estate market has developed fast; real estate distribution mechanism has improved significantly and currently matches characteristics of market economy distribution mechanism.
- Currently, first of all, due to global economic recession, real estate developer has no possibilities to offer new objects to the market (in the short-run demand for any objects is limited, oversupply of real estate prevails), moreover, it is hard to accomplish projects in the pipeline. Effective demand currently is very low and has a significant impact on commercial property market functioning in all segments; therefore, mismatch between supply and demand exists. Effective functioning of financial intermediation is prerequisite of the whole market mechanism functioning.
- Due to limited market size, low liquidity and market transparency, the Baltic commercial property market at the moment is not very interesting to investors.
- Complicated economic situation and weak abilities of the state to support business by stimulating need for new projects (educational/social purpose and residential property renovation, infrastructural projects, industrial parks promotion through tax initiatives and infrastructural support, new business stimulation, attracting of FDI, etc.) limits creation of new working places, increase consumption and growing activity of commercial property market in general. Other countries, where state budget and financial abilities are much stronger, it real estate market renaissance is more evident in the near future.
- Despite the Baltic commercial property market meets the matured market criteria in terms of distribution mechanism, user, development, and land market; it still differs in terms of financial markets and state role. Therefore, currently it is irrelevant to compare homologous different markets, which have formed in different economic systems and were functioning under different conditions. All of the above suggests applying different patterns for prognosis when several different markets are being compared. It is advisable to take the above conclusions into consideration when several markets are being compared and forecasts regarding their further functioning are being made.

## REFERENCES

1. Ball, M., Lizieri, C., MacGregor, B.D. (2007). *The Economics of Commercial Estate Markets*. Routledge.
2. McKenzie, D.J., Betts, R.M. (2008). *Essentials of Real Estate Economics*: Cengage Learning.
3. Reinhart, Carmen M., Rogoff, Kenneth S.(2009) *The Aftermath of Financial Crises*. Paper from American Economic Association meeting “International Aspects of Financial Market Imperfections”.
4. Wiegand, D., Sreckovic, M. (2009). *Development of Managed Real Estate – International Case Studies on Principals and Success Factors*. ERES 2009, Stockholm.
5. Larsen J. E., Carey B, Carey Ch. H (2007). *Pathways in Real Estate*: Wiley.
6. Dasso, J., Ring, A. A. (1989). *Real Estate Principles and Practices*. New Jersey: Prentice-Hall.
7. Diamond, D.B., Lea, M. J. (1992). *Housing Finance in Developed Countries*. *Journal of Housing Research*, Vol. 3.
8. Friedman, J. P., Harris, J. C., Lindeman, J.B. (1987). *Dictionary of Real Estate Terms*. – New York: Barron’s Educational Series, Ltd.
9. Jaffee, D., Renaud, B. (1995). *Securitization in European Mortgage Markets*. Stockholm: First International Real Estate Conference.
10. Kvedaravičienė, I. (2009). Lietuvos nekilnojamojo turto rinka – ekonominės sistemos raidos išdava // Organizacijų vadyba: sisteminiai tyrimai Nr. 50.
11. Kvedaravičienė, I. (2008). Būsto ūkio funkcionavimas sisteminiu požiūriu // Organizacijų vadyba: sisteminiai tyrimai Nr. 46.
12. Lydeka, Z. (1999). *Ekonominių sistemų gyvavimo procesų teorinis modeliavimas*. Habilitacinio darbo santrauka. – Kaunas: VDU.
13. Lydeka, Z., Kvedaravičienė, I. (1997). Lietuvos rinkos transformaciniai pokyčiai: gyvenamojo NT rinka ir formavimosi prielaidos. – Vilnius: *Ekonomika. Mokslo darbai*, Nr. 42.
14. Simanauskas, L. (1997). *Informacinių sistemų analizė*. – Vilnius: VU leidykla.
15. Кондратьев Н. Д. (1991). *Основные проблемы экономической статики и динамики. Предварительный эскиз*. – Москва: Наука.

## **About the author**

Ieva Kvedaravičienė has 12 year experience in real estate. In 2000, doctoral thesis (social sciences, management) „Residential estate financing mechanism and its effectiveness” provided theoretical basis for further real estate market (RE) research. RE project management in international audit and consulting company Arthur Andersen was first step in RE practice. Since 2002, Ieva Kvedaravičienė worked as a senior consultant in international real estate company Koba, being responsible for investment projects and market research. Establishment and coordination of RE research divisions in the company’s branches (Lithuania, Latvia, Ukraine, Poland and Denmark) formed broad experience of different RE markets. Since 2008, Ieva Kvedaravičienė is teaching Real Estate Economics at ISM University of Management and Economics. Ieva Kvedaravičienė is MRICS (Baltic Board member), LTVA, and ICSC member.

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