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VGTU LEIDYKLA TECHNIKA

AN ANALYSIS OF DWELLING MARKET IN VILNIUS, LITHUANIA

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ABSTRACT. The current situation in the real estate market in Lithuania is favourable for real estate developers. Dwelling prices in Vilnius are much lower than those in other EU member-states. However, the rate of their increase is one of the highest in the European Union. At the end of 2003, one of the causes of the purchasing boom was the anticipated rise in real estate prices, when Lithuania was gradually integrating into the European Union. The growing income of the real estate sector and high profit attracted more and more companies to real estate market. But the situation in the real estate market has changed. Therefore, to protect the investments in real estate, customers should carefully select the investment projects, paying special attention to reliability and competence of project developers. The analysis of financial indicators of six specially selected project developers made by the authors allowed them to state that not all real estate developers in the market are reliable and able to satisfy liability claims because they may face solvency problems. In some cases, indicators even warn about a threat of bankruptcy for a company. In addition to objective factors influencing the market, such as the conditions of crediting, the economic development of the state, standard of living of the population, migration, etc., some negative effects play an important role in the process of price rising. Authors analyzed the difference in price between the cheapest and most expensive dwellings in different segments of real estate market in Vilnius, Lithuania.

KEYWORDS: Dwelling market; Real estate developers; Dwelling prices

1. INTRODUCTION

Every day one can read in newspapers or magazines about the problems associated with the development of real estate market. Some articles write about constantly growing property value, others describe a vicious policy of the state, hampering the development of construction and real estate market. Some call this price rise a bubble or nonsense, while others provide weighty arguments trying to explain price variation.

A sharp rise in dwelling prices can be observed in the most of rapidly developing countries (Hui and Yue, 2006). Their markets are very attractive to investors. When dwelling

prices sharply rise, investors start fixing the profit, the offer is growing and this can lead to market stagnation or even recession. Not only the developing countries, but a number of highly developed countries, such as Japan (Kim and Suh, 1993; Hirayama, 2005), Sweden (Turner, 1997), Finland (Doling and Ruonavaara, 1996), Spain (Fernández-Kranz and Hon, 2006), the USA (Mueller, 2002; Belke and Wiedmann, 2005) and others, experienced a sharp rise of dwelling prices and the subsequent market recession. This may be associated with globalization of financial markets which strongly affects real estate market, causing its cycling fluctuations (Renaud, 1997; Wilson et al., 2007; Tasan-Kok, 2007; Galinienė, et al., 2006). It can be expected that processes, currently taking place in the real estate market of the Baltic States, will soon proceed in rapidly developing Balkan, Caspian Sea region and Latin American countries. Dwelling prices in Vilnius have been rising since 2001 (Raslanas, 2004). The last drop in prices was caused by the Russian crisis. Naturally, when the prices are rising, more and more companies, having nothing in common with real estate market, start developing housing projects because they see that a market imbalance is favourable for property owners and sellers. Sometimes, such companies even discontinue their former activities to concentrate on the development of housing projects. In some cases, housing projects are being developed without licences or when master or detail plans have not been approved and the projects have not been discussed with residents. This causes a lot of problems. Besides, not all companies are financially stable to undertake such projects, and the problem of their reliability arises. To assess the financial state and reliability of companies, their financial indices, reflecting the actual situation, are determined (Hsieh and Wang, 2001). The timely analysis of the financial indices can reveal the financial difficulties of a company and even the threat of bankruptcy (Pindado and Rodrigues, 2004; Beaver et al., 2005).

When dwelling prices are growing, newly-built dwellings become too expensive for most of residents, therefore, renovation of old dwelling blocks becomes an attractive alternative (Zavadskas et al., 2003 and 2004; Yetgin and Lepkova, 2007; Andruškevičius, 2005). The most influencing quantitative criteria, determining property value, are as follows: location and type of dwelling building, year of construction and the condition of dwelling (Raslanas et. al., 2006). Therefore, in the analysis of dwelling prices in Vilnius, the prices of the renovated dwellings are considered along with the prices of old and new dwellings.

Great interest of the society in the state of real estate market, the problems arising and the importance of the ongoing processes and problems stimulate the investigation of the dynamical real estate market.

2. BRIEF OVERVIEW OF DEVELOPMENT OF HOUSING MARKET

It can be stated that during the last seven years great qualitative changes have taken place in the market of dwelling buildings (see Table 1) and single-family houses (see Table 2). In 1998–2000, there was a shortage of dwelling in the newly-built houses. The dwellings there were affordable only for a small group of purchasers. Now, the situation has changed, and the dwellings in old large panel houses are mostly occupied by low income residents, while people with higher income (especially, young generation) prefer flats in newly-built houses.

The dwellings in houses built in 1996 and later are considered to be new. In 1996, the construction of multistorey buildings was resumed in Vilnius. When Lithuania separated from the Soviet Union, the construction of such houses was suspended for some reasons for the

period from 1990 to 1995. Until the end of 1998, the construction of new multi-storey residential houses was very slow: only one or two buildings were constructed annually.

However, the situation dramatically changed at the end of 1998 and at the beginning of 1999, when unprecedented boom in dwelling purchasing took place in Lithuanian real estate market. The demand for housing and price of dwellings had considerably increased (at that time, the demand for small dwellings was almost twice as large as the offer), and this demand had to be satisfied. Therefore, a new stage of Vilnius dwelling market development has started since the end of 1998, when a competition between old and newly-built dwelling began. Since then the offer of new dwellings has been constantly growing. The demand has also been growing because a crediting system in Lithuania has made great progress. Now, it seems unbelievable that interest rate of bank credits reached 14–15%, while banks financed only 70% of the mortgaged dwellings seven years ago. For this reason, the operations of purchasing-selling of new dwellings made only about 10% of all deals in real estate market in 1998. The difference between the prices of old and new housing units has also been increasing.

A comparative analysis of old and newly-built dwellings shows that the prices of old dwellings are less dependent on the district where they are located than the prices of newly-built dwellings. Even the prices of dwell-

Table 1. Dwellings built in 1995–2006

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006*
Dwellings	3368	3281	3173	2160	2580	2559	1987	2563	2535	3920	3250	4512
Per 1000 inhabitants	1.5	1.6	1.6	1.2	1.2	1.3	1.1	1.3	1.3	2	1.7	2.1
Useful floor space of dwellings, thous. m^2	207	209	210	167	225.9	185.5	129.5	182.3	179.7	256.4	651.6	770.8
Average floor space per dwelling, m^2	62	64	66	77	87.6	72.5	65.2	71.1	70.9	65.4	72.2	68.5

* Unofficial
Source: Statistics Lithuania (2007)

Table 2. Single-family houses built in 1995–2006

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006*
Houses	2232	2343	2389	1890	1674	1904	1798	1999	2093	2884	2683	7292
Useful floor space of houses, thous. m^2	358	422	397	325	292.3	321.1	255.8	277.8	311.7	442.7	416.8	462
Average floor space per house, m^2	160	180	166	172	174.6	168.6	142.3	139	148.9	153.5	155.4	166.2

* Unofficial
Source: Statistics Lithuania (2007)

ings in large-panel houses built in 1960–1980 in prestigious districts (Antakalnis, Žvėrynas) do not differ considerably from those in the so-called "bedroom" districts, such as Šeškinė or Justiniškės. This market situation may be accounted for by the fact that one of the key criteria determining dwelling price, along with the location of a dwelling block, is comfort. Dwelling buildings (especially, large-panel houses) built many years ago have poor thermal and sound insulation (between rooms and adjacent flats) and lay-out. If such houses have not been renovated, their engineering equipment (pipelines, heating systems, etc.) as well as roofs and staircases are in a poor state. Moreover, heating expenses of an old dwelling of the same floor space as a newly-built dwelling are much higher.

A view formed that the autumn of 1998 was the most favourable time for purchasing a dwelling gradually led to the greatest boom in real estate purchasing which Vilnius had not seen since the end of 1998 – the beginning of 1999, when the trade became more brisk due to the Russian crisis and award of the first housing credits (supported by Vilnius municipality). By the way, the interest rates for commercial bank credits in 1998 – 1999 were not less than 10% either in Litas or foreign currency. In the third and fourth quarters of 2003 the interest rate for credits taken in Litas ranged from 4.5% to 4.8%, while ranging from 3.6 to 4.2% for credits in Euro. In addition to objective factors influencing the market, such as the conditions of crediting, the economic development of the state, standard of living of the population, migration, etc., some subjective factors also had a great influence on the situation. At the end of 1998, one of the key factors influencing market activities (in addition to the improved crediting conditions) was the fear of the possible failure of the financial system in Lithuania and the consequent loss of money kept in the banks. At the end of 2003, one of the causes of the purchasing boom was the anticipated rise in real estate prices, when Lithuania was gradually integrating into the European Union. By comparison, the prices of average and higher grade dwellings in the capitals of West European and Scandinavian countries were not lower than 1750–2900 Euro/m^2, while the price of the highest grade dwellings located in the central districts of some cities reached 5800–8700 Euro/m^2 (Vienna, Dublin, London, Paris). However, it is hardly fair to compare only the prices of dwelling. The payment and social security systems are also very important. The salaries and wages of the residents of Western countries are 5–6 times those of Vilnius residents, while their social security and taxation systems are more advanced. Quite a few housing units (dwellings, single-family houses, plots for housing) are bought with the aim of profitably selling them when the prices rise. This causes an imbalance of the market. Price rise which is not economically grounded (especially, when a considerable part of constructed buildings are kept for profiteering) often leads to stagnation or recession. State authorities and municipalities should encourage the development of housing units rather than their delay. For example, in many countries, the time of building construction or reconstruction is legally regulated.

It should also be noted that dwellings in low-rise dwelling houses and semi-detached houses located in not so densely built-up areas or near green zones, ponds or lakes, oriented to higher quality of life of residents rather than to building up the area as densely as possible, are in great demand and have a great potential for price rising (Stankevičius, 2005).

The advantages and disadvantages of living in a single-family house and in a dwelling are given in Table 3.

There are some rich people who do not like living in a single-family house, while others take bank loans to build it. Now it is cheaper to buy a small frame single-family house than

a dwelling in the city centre. Recently, many plots around Vilnius have been returned to their former owners. Quite a few detail plans are being prepared to change the status of agricultural areas to the sites for housing. Moreover, the construction of single-family house is likely to grow because banks are crediting not only the purchasing of single-family houses under construction or already completed buildings but also support purchasing of the plot. Families of people about 30–50 years of age are mostly interested in the projects of semi-detached houses. Recently, the demand for semi-detached houses constructed in the less noisy suburbs of Vilnius has increased. This is the best solution for people with more than average income who still cannot afford to buy a single-family house.

In 1990–1993, businessmen, who got rich very quickly, built a lot of large single-family houses of 500–1000 m^2, which were not economical and had no distinctive architectural style in such districts as Zujūnai, Pavilnys, Bukčiai, Tarandė, Kairėnai. At that time they could hardly believe that energy resources would not be cheap forever, while their luck in business would be short-lived. Therefore, now there are quire a few of these 'monsters' which have never been completed and nobody is interested in purchasing them. A decade ago, considerably decreased income, increased costs of building materials, electric power, and, particularly, costs of public utilities, as well as not fulfilled promises of the authorities, put an end to the dreams of some compatriots filled with gigantomania to build single-family houses-castles.

In 1999–2001, the single-family houses of 250–350 m^2 of floor space with basements built in good districts of the city were most popular. Now the tendency of building smaller single-family houses without basements and garages can be observed.

Table 3. Advantages and disadvantages of living in a single-family house and in a dwelling

	Living in a single-family house	Living in a dwelling in the city
Transport	Problems of transportation, higher transport expenses than in the city.	Smaller transport expenses, available public transport.
Infrastructure	Usually, underdeveloped infrastructure: it is difficult to get to entertainment and health care institutions, shops, libraries, schools, kindergartens, etc. which are far away.	Usually, highly developed infrastructure: it is easy to get to the city centre, entertainment and health care institutions, schools, kindergartens, etc. which are not far away.
Air pollution	Natural and healthy environment.	Unhealthy environment.
Noise level	Low.	High.
Safety	Children can safely play in the court-yard without supervision of grown-up family members.	It is not safe to leave children alone to play in the court-yard.
Relations with neighbours	Few neighbours, stresses, conflicts, etc.	The more neighbours, the higher estrangement; the larger house, the more difficult it is to maintain order in it.
Maintenance costs of dwelling	Relatively high maintenance costs.	Lower maintenance costs.
Looking after the territory and plants	More problems with keeping the territory clean and taking care of plants (to some people it is an advantage).	Less problems with keeping the territory clean and taking care of plants, but additional expenses on country-cottages, gardens, garages, and going out of town.
Psychological satisfaction	A sense of real home, private territory, space and freedom; good conditions for being creative.	No sense of real home, no aesthetical satisfaction.

3. THE ANALYSIS OF REAL ESTATE DEVELOPERS

3.1. The activities of real estate developers

The current situation in the real estate market is favourable for real estate developers because dwelling prices are growing and the demand is great, though some signs of recession in trade can be observed in this sector.

It is quite natural that, when dwelling prices are rising, the income is also increasing (see Table 4).

The growing income of the real estate sector and high profit attract more and more companies to real estate market (Figure 1).

Companies engaged in other activities are also attracted (see Table 5) to this profitable business. In this case, they start housing construction as additional or even main activities. Moreover, companies which own valuable plots are often privatized and their profile is changed to housing construction (Stankevičius, 2005).

3.2. The financial indicators of real estate developers

The financial indicators (presented below) of the following real estate developers were determined based on their financial account for 2005 obtained from the State Enterprise Centre of Registers (2007): 'Hanner', 'Eika', 'YIT Kausta Būstas', 'Junesta', 'Luidas', 'Mabilta'. The values obtained were compared (see Table 6).

Note: 1 Euro = 3.4528 Litas (LTL).

Index value:

- *Total profitability.* The index value ranges from 10–35%. The data obtained

Table 4. The income of real estate sector in Lithuania in the period of 1998–2005

Type of business	Income, million Euro							
	1998	1999	2000	2001	2002	2003	2004	2005
Real estate operations	156.4	199.4	207.5	306.9	356.5	359.5	418.0	616.1

Source: Statistics Lithuania (2007)

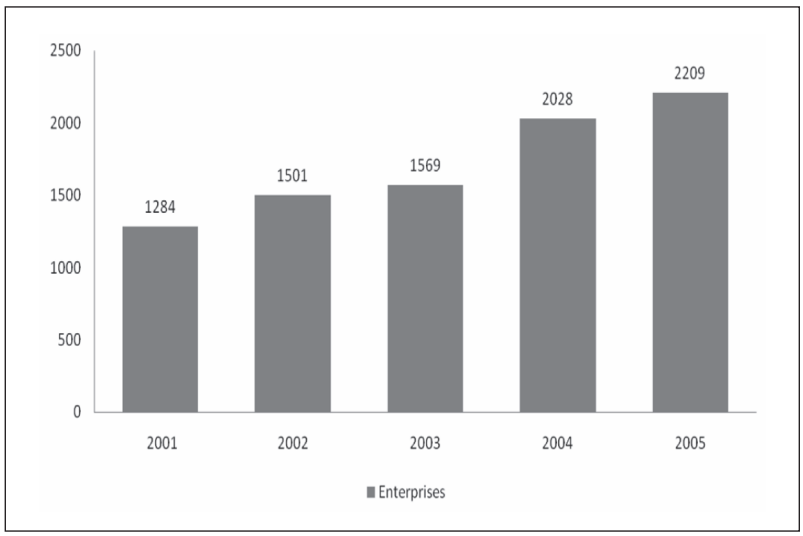

Figure 1. Companies engaged in real estate operations
Source: Statistics Lithuania (2007)

show that all companies (except for 'Mabilta') are within this range, while 'Hanner' even exceeds the maximum index value. A small value of this index in 'Mabilta' indicates that it has some problems with bearing of charges.

- *Profitability of typical business activities.* The index value shows total profitability, with business expenses taken into account. Hanner's value is the highest again. The value of this index at 'Mabilta' is negative because of large business expenses.
- *Profitability of usual business activities.* The index value denotes total profitability, with business expenses and income obtained from investments and other activities taken into account. Nearly all companies considered had losses in their financial and investment activities. This can be accounted for by the fact that most housing projects are being developed for loans, and interest payments greatly affect the value of the profit (loss) in the account records. The company 'Hanner' gets high profit from the financial and investment operations, and, therefore, the considered index value of this company is positive.
- *Net profitability.* The index value under highly developed market conditions is in the range of 10–25%. Only the company's 'Eika' index is in this range, while Hanner's index exceeds the above

Table 5. Assessing real estate market according to SWOT

Strengths	**Weaknesses**
• The economic growth of the state leads to the increase of real estate. • Banks credit dwelling purchasing on favourable conditions. • Rapid development of chains of building materials stores and tough competition provide customers with a wide choice of goods at low cost. • Investment in real estate is safe and reliable. • There is a considerable number of construction companies in Lithuania which can build high-quality houses according to the complicated projects provided by customers.	• Inconsistent taxation policy of the state. • No clear vision of urban development. • The law of territory planning in Lithuania is imperfect. • There is a lack of by-pass highways around the cities, therefore there are jams on urban motorways. • Some projects are being developed without licences, which causes corruption. • The process of returning plots of land to their lawful owners exceeded the time limit. • Due to emigration of qualified construction workers, there is a lack of labour force for building, renovation and repairs.
Opportunities	**Threats**
• Such indicator as floor space per head in Lithuania is much lower than in other EU member-states (23 m^2 in Lithuania and ~ 57.5 m^2 in EU) (Andruškevičius, 2005), therefore it can be increased. • New construction projects can be developed in smaller towns and regions of Lithuania. • More residents will move to suburbs because of improving transport services, changing attitudes to the distance from home to work or city centre as well as their need for healthier environment. • Lithuanians who earned money abroad often invest it in real estate in their own country. • The problem of the growing unemployment in the state regions caused by population migration to large cities is being solved by the authorities. • Old dwelling houses are being renovated which can reduce their maintenance costs and ensure energy saving.	• Lots of bureaucratic procedures may cause the present investors in housing projects to leave and to scare away new investors. • Cities are being built up too densely which leads to disappearance of green zones and causes more jams trafic. • The continuous price rise can cause 'overheating' of the real estate market. • High dwelling prices do not allow many people to buy dwellings. • Banks striving to slow down the price rise of dwellings and single-family houses will limit their crediting. • The tax for real property of physical persons can be introduced. • Real property tax for juridical persons can be increased.

Table 6. The selected financial indicators of real estate developers

		Hanner	Eika	YIT Kausta Būstas	Junesta	Luidas	Mabilta
Total profitability, %	(*Total profit / Net sales income*) × 100%	43.60	29.09	15.74	13.57	15.05	3.50
Profitability of typical business activities, %	(*Profit from typical business activity / Net sales income*) × 100%	41.68	18.44	10.09	4.38	6.17	-5.17
Profitability of usual business activities, %	(*Profit from usual business activity / Net sales income*) × 100%	50.62	13.75	4.17	2.28	5.99	-5.15
Net profitability, %	(*Net profit / Net sales income*) × 100%	42.55	10.83	2.89	1.88	5.27	-5.15
Cost-effectiveness of business activities, %	(*Profit before tax /Total expenses*) × 100%	73.69	18.21	4.96	2.44	6.40	-4.92
Net capital profitability, %	(*Net profit / Average material wealth value*) × 100%	7.10	3.06	1.17	1.31	2.65	-4.98
The ratio of current assets to current liabilities	*Short-term assets / Short-term liabilities*	1.1606	1.9008	2.1219	1.5718	0.9453	2.4824
The ratio of equity to liabilities	*Own capital / Total liabilities*	0.5501	0.2395	0.0140	0.2315	0.1610	0.2217
The ratio of current assets minus stock to current liabilities	(*Short-term assets – Stocks*) / *Short-term liabilities*	0.9902	0.3865	1.2257	0.5916	0.8927	0.8186
Net working (floating) capital, million LTL	(*Short-term assets*) – (*Short-term liabilities*)	21,713	59,601	52,415	7,107	-428	25,765
Net working capital ratio, %	*Net working* (*floating*) *capital / Assets*	3.54	31.31	50.44	33.34	-1.50	33.79
The ratio of assets to liabilities, %	(*Total liabilities / Assets*) × 100%	64.51	80.68	98.62	81.20	86.13	81.85
The ratio of floating debt to net worth, %	(*Short-term liabilities / Assets*) × 100%	22.07	34.76	44.95	58.31	27.41	22.79
Golden balance rule, %	*Long-term assets* / (*Own capital* + *Long term liabilities*) × 100%	0.9545	0.5200	0.0838	0.2001	1.0206	0.5624
Own capital return	*Net profit / Own capital*	0.2002	0.1582	0.8437	0.0695	0.1913	-0.2746
Return of long-term assets	*Net profit / Long-term assets*	0.0955	0.0901	0.2532	0.1566	0.0358	-0.1148
Return of short-term assets	*Net profit / Short-term assets*	0.2774	0.0462	0.0122	0.0143	0.1024	-0.0881
Own capital turnover	*Net sale income / Average own capital*	0.4705	1.4605	29.1511	3.6987	3.6296	5.3320
Fixed assets turnover	*Net sale income / Average value of long-term assets*	0.2245	0.8317	8.7492	8.3338	0.6795	2.2288
Short-term assets turnover	*Net sale income / Average short-term assets*	0.6520	0.4270	0.4228	0.7586	1.9423	1.7103

values. The low values of the considered index for the companies 'YIT Kausta Būstas', 'Junesta' and 'Luidas' can be explained by their high expenses on financial and investment activities. A low value of the above index at 'Mabilta' can be accounted for by high business expenses.

- *Cost-effectiveness of business activities.* The index value lower than 5% is unsatisfactory. For the companies 'Hanner', 'Eika' and 'Luidas' the values exceed 5% limit, which indicates that company executives can control business expenses. In the companies 'YIT Kausta Būstas' 'Junesta' and 'Mabilta' the index values are low because of large business expenses.
- *Net capital profitability.* The state of the company is very good if the value of this index is more than 20%, it is good if it makes more than 15% and satisfactory if it is more than 8%. The values of the above index are lower than satisfactory for all companies, implying that their own and loan capital is not effectively used to get profit. This could be explained by relatively low profit and rapidly increasing costs of construction, strongly affecting incomplete projects.
- *The ratio of current assets to current liabilities.* The ratio exceeding unity means that a company is solvent but the situation is risky. A safe value is 1.5. The companies 'Eika', 'YIT Kausta Būstas', 'Junesta' and 'Mabilta' have values higher than that while Hanner's ratio is only higher than unity, but not reaching 1.5. This indicates that its solvency is at risk. In 'Luidas' the value of the considered index is lower than unity, implying that there is a threat that the company can fail to meet its short-term commitments.
- *The ratio of equity to liabilities*. The higher the above ratio, the higher the liquidity level, the lower the financial risk and threat of bankruptcy. All the companies have the index values lower than two considered to be satisfactory. This shows that their liabilities exceed their equity many times. For the company 'YIT Kausta Būstas' liabilities exceed the authorized capital 100 times! This is because their authorized capital is small.
- *The ratio of current assets minus stock to current liabilities*. If the ratio is equal to unity, it means that a company can meet its current commitments very quickly. This index value was found only in the company 'YIT Kausta Būstas'. The companies 'Hanner', 'Junesta', 'Luidas' and 'Mabilta' have index values higher than 0.5, which is considered to be satisfactory. Lower than satisfactory index value of 'Eika' and its high current liquidity indicate that the company has large stocks and much of its working capital is frozen.
- *Net working (floating) capital*. The value of this index should be positive. The higher the value, the higher the company liquidity. According to this value, the companies are rated in the descending order as follows: 'Eika', 'YIT Kausta Būstas', 'Mabilta', 'Hanner' and 'Junesta'. A negative index value of 'Luidas' shows that the company can fail to meet its short-term commitments.
- *Net working capital ratio*. A higher ratio indicates higher company liquidity. According to this index, 'YIT Kausta Būstas' has the highest liquidity, which is followed by 'Hanner', 'Mabilta', 'Junesta' and 'Eika'. A negative index value of 'Luidas' shows a threat of bankruptcy to this company.
- *The ratio of assets to liabilities.* The ratio of 30% is considered to be very good. The highest admissible value can be 70%. If the value is above 100%, a company is considered to be insolvent

according to the law of bankruptcy of Lithuanian Republic. 'Hanner' is the only company which does not exceed the specified limit. Other companies have the index values in the range of 80.68–86.13%, indicating that they use too much of the loan capital. The value of this index for 'YIT Kausta Būstas' (98.62%) is approaching 100%, which means the insolvency risk.

- *The ratio of floating debt to net worth*. The ratio of 20–40% is considered to be good. The companies 'YIT Kausta Būstas' and 'Junesta' exceed the specified limit, which means that they can fail to meet the short-term commitments. The index values of other companies are within the limits.
- *Golden balance rule*. The value of unity or lower is considered to be satisfactory. The companies' 'Eika', 'YIT Kausta Būstas', 'Junesta' and 'Mabilta' values are smaller than unity. The values of 'Luidas' and 'Hanner', which are respectively higher and above unity, show that their long-term investments are financed at the expense of short-term liabilities.
- *Own capital return*. This index shows own capital profitability, i.e. a profit share per one Litas of the company's own capital. According to this index, the company 'YIT Kausta Būstas' is the best, with its 0.84 LTL per 1 LTL. However, in this case, high profitability is attained because of small fixed capital and a big share of loan capital of the company. One Litas of 'Hanner' generates 0.2 LTL, of 'Eika' – 0.16 LTL, of 'Junesta' – 0.07 LTL and of 'Luidas' – 0.19 LTL. One Litas of 'Mabilta' own capital brings 0.27 LTL of losses.
- *Return of long-term assets*. This index shows profitability of long-term assets, i.e. a profit share per one Litas of long-term assets. The highest value of 0.25 LTL is found at the company 'YIT Kausta Būstas'. This can be explained by the fact that the company's long-term assets are scarce. Long-term assets of 'Mabilta' bring 0.11 LTL of losses.
- *Return of short-term assets*. The index refers to profitability of short-term assets, i.e. a share of profit per one Litas of short-term assets. According to this index, the company 'Hanner' is the best, with its 0.28 LTL return per one Litas of short-term assets. The company 'YIT Kausta Būstas', having high return of its own capital and long-term assets, is the second with 0.01 LTL profit. Long-term assets of 'Mabilta' bring 0.09 LTL of losses.
- *Own capital turnover*. The index shows the income brought in by one Litas of the company's own capital. The higher the index value, the higher the efficiency. 'YIT Kausta Būstas' is the best according to this index because one Litas of its own capital brings in 29.15 LTL. However, this high level is achieved because the company's nominal capital is small, while the share of loan capital is big. The index value of 'Mabilta' is 5.33 LTL, the values of 'Junesta' and 'Luidas' are more than 3 LTL, while the index values of 'Eika' and 'Hanner' are 1.46 LTL and 0.47 LTL, respectively. Own capital of the last two companies is very large.
- *Fixed assets turnover*. The index shows the income per one Litas of fixed (long-term) assets. The higher the index value, the higher the efficiency of a company. An optimal value is about 10. The values of 'YIT Kausta Būstas' and 'Junesta', which are 8.75 LTL and 8.33 LTL, respectively, are the highest. Fixed assets of other companies do not bring in high income.
- *Short-term assets turnover*. The index

shows the number of complete assets cycles per year. According to this index, short-term assets are most effectively used by the companies 'Luidas' and 'Mabilta'.

4. THE ANALYSIS OF DWELLING PRICES IN VILNIUS

4.1. Trends of dwelling prices

Now, a tendency of sharp rise in prices of newly-built dwellings and those located in prestigious districts, the city centre and the Old Town can be observed, while the prices of old dwellings in remote districts remain unchanged and can gradually decrease (Figure 2).

High demand for dwelling houses, a limited choice of plots, rapidly growing land prices (during a year the prices of plots suitable for housing rose by about 100%) make the construction companies, which purchase plots, assume that they will sell the constructed dwellings at a higher price than their current market value. The cost of construction based on this assumption implies that most of construction companies are going to compete in the market not by price, but by other marketing tools (because price rise is often provided for in their business plans). Therefore, it may be concluded that great changes (e.g. sharp decrease of prices) in dwelling market can hardly be expected in the near future. However, we can expect at least a slower rise and stabilization of dwelling prices in the near and more distant future (Ober-Haus, 2005).

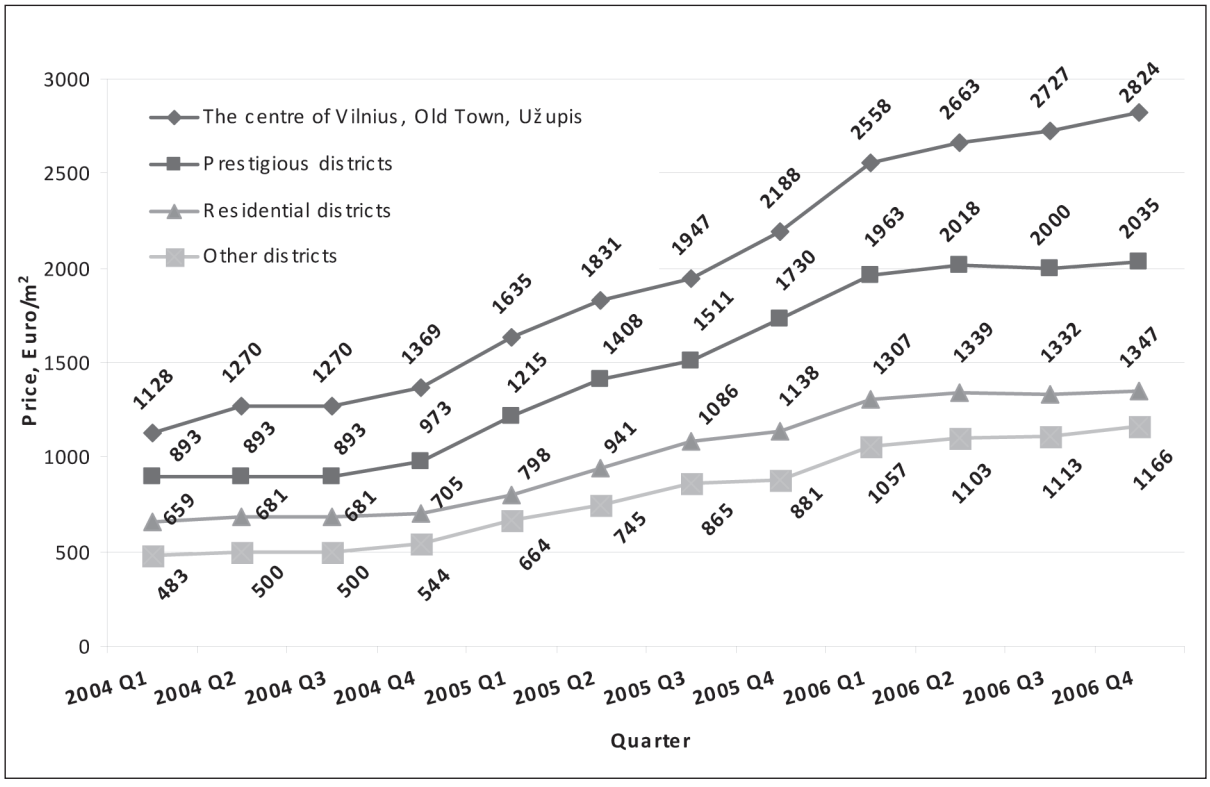

Figure 2. The dynamics of dwelling prices in 2004–2006

4.2. Differentiation of dwelling prices

A new trend observed in dwelling market development is associated with its stratification.

The difference in price between the cheapest and most expensive dwellings is growing, reaching now 4–5 times compared with 3 times in the previous years. In the member-states of the European Union the average value is about 6. In order to describe price differentiation of Vilnius dwellings more precisely, they are classified according to their type, location, district and condition.

Average monthly prices of dwelling are calculated based on the criteria described above and the monthly price lists found in Ober-Haus (2005) tables. In this way, the differences between the dwellings having a different number of rooms and different market values was eliminated. Then, the average prices were calculated for the quarters of the year and graphs demonstrating price differences were plotted. In Table 8, price variation in per cent is shown from various perspectives: by comparing the prices in the 4th quarter of the year with the prices of the same period of the previous year as well as by comparing the 4th quarter prices of the years 2006 and 2004 and the prices of the 4th and the 1st quarters of the same year.

As shown in Figure 3, at the beginning of the period considered the difference between newly-built and renovated dwellings in the centre of Vilnius was insignificant, however, in the 2nd quarter of 2004, it grew up to 290 Euro/m^2 and made 1070 Euro/m^2 in the 4th quarter of 2006. The price of newly-built dwellings in the same period of 2004–2006 increased considerably, reaching in the 4th quarter of 2005 the value of 2627 Euro/m^2. The price of renovated dwellings also increased and reached 2154 Euro/m^2 at the end of 2005. The price of non-renovated dwellings rose slightly in 2004–2006. This may be accounted for by the fact that rich customers purchasing prestigious dwellings want something special and their requirements can be more easily satisfied by constructing a new dwelling than by reconstructing an old one.

In prestigious districts the price rise of dwellings was different. Since the 1st quarter of 2004 till the 1st quarter of 2005, the most

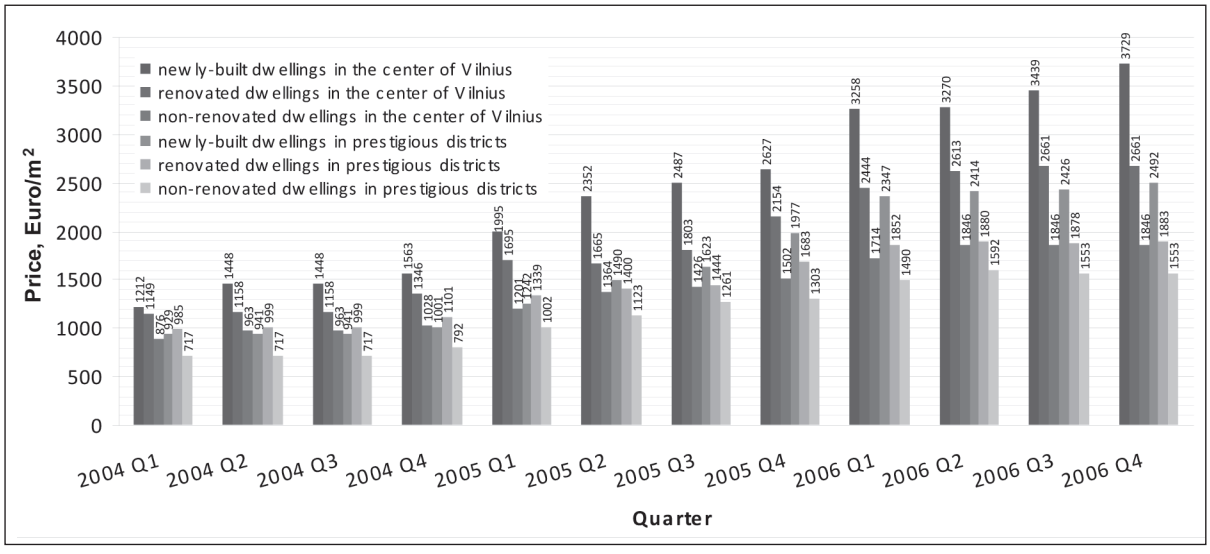

Figure 3. Differentiation of dwelling prices in the centre of the city and in the prestigious districts

expensive dwellings were those in renovated houses and only in the 2nd quarter of 2005 the newly-built dwellings became more expensive (1490 Euro/m^2), while the price of renovated dwellings reached about 1400 Euro/m^2. This was because old houses are often located in very good places and renovation increases their value, while it is getting more difficult to find a good site for building a new dwelling house. Since the 2nd quarter of 2005 till the 4th quarter of 2006, the difference in price had been growing and reached 609 Euro/m^2 at the end of the period. In the same way, the continuous price rise of non-renovated dwellings can be explained by their advantageous position and possibilities to renovate them at any time.

A survey of dwelling price variation (expressed as a percentage) in the city centre and prestigious districts in 2004–2006 has shown the highest price rise of newly-built dwellings. A comparative analysis of dwelling price rise in the 1st–4th quarters of 2004, 2005 and 2006 revealed that the rapid increase in prices characteristic of the years 2004–2005 had considerably slowed down in 2006.

As shown in Figure 4, price variation in remote and other districts is more balanced. The price rise of dwellings in large-panel, brick and newly-built houses was smooth. Dwelling prices in brick houses were higher than those in large-panel houses. It can be seen that in the 2nd quarter of 2005 the prices of dwellings in brick houses do not differ much from the dwelling prices in newly-built houses. This is because there are not so many brick houses in Vilnius. Moreover, due to a shortage of newly-built dwellings, the prices of dwellings in brick houses have increased considerably. A deficiency of new dwellings at that time also caused a price rise of dwellings in large-panel buildings.

The analysis of dwelling price variation in 2004–2006 expressed as a percentage has shown that the highest price rise can be observed in the value of panel house dwellings of old construction (Table 7). The same actually refers to the dwellings in old brick houses. However, the price rise of newly-built dwellings was not so high. In 2006, the tendency of dwelling price rise in large-panel houses, observed in 2005, gave way to the reduction of

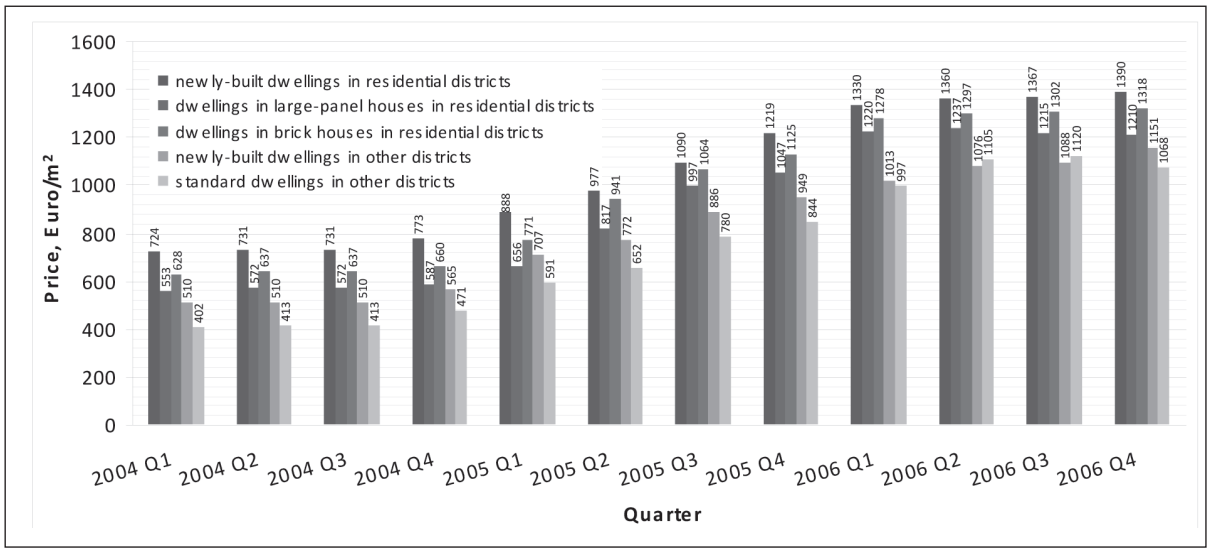

Figure 4. Differentiation of dwelling prices in residential and other districts

Table 7. The variation of dwelling prices in 2004–2006

	2004 Q1 – 2004 Q4	2005 Q1 – 2005 Q4	2006 Q1 – 2006 Q4	2004 Q4 – 2006 Q4
The centre of Vilnius, Old Town and Užupis				
newly-built dwellings	28.98%	31.70%	14.44%	138.61%
renovated dwellings	17.12%	27.05%	8.89%	97.76%
non-renovated dwellings	17.36%	25.13%	7.75%	79.58%
Prestigious districts				
newly-built dwellings	7.73%	59.18%	6.17%	148.95%
renovated dwellings	11.76%	25.68%	1.63%	71.05%
non-renovated dwellings	10.44%	30.12%	4.21%	96.19%
Residential districts				
newly-built dwellings	6.75%	37.23%	4.54%	79.86%
dwellings in large-panel houses	6.08%	59.56%	-0.79%	106.17%
dwellings in brick houses	5.11%	45.85%	3.12%	99.63%
Other districts				
newly-built dwellings	10.64%	34.24%	13.64%	103.85%
standard dwellings	17.12%	42.65%	7.14%	126.92%

prices in this sector. Thus, a negative change in dwelling prices is recorded in the 1st–4th quarters of 2006.

4.3. A comparative analysis of dwelling prices in Vilnius and the capitals of other EU member-states

According to the data provided by the association of European developers, the highest growth of real estate prices last year can be observed in the developing economies. In the developed EU economies the price rise was insignificant and even a certain reduction of dwelling values could be observed. CEPI (Council of European Real Estate Professions) experts recorded the highest rise of price during the last year in Latvia, Romania and Turkey. The prices of single-family houses and dwellings rose by about 30% in these countries. Lithuania and Poland came next. By comparison, the price of single-family houses dropped by 1.4% and the price of flats – by 2.2% in Germany, while in Austria the price of dwellings decreased by about 2.4%.

The average prices of dwellings (Euro/m^2) in the capitals of the EU member-states based on the data provided in 2004 by CEPI (European Council of Real Estate Professions: CEPI, 2004) and Ober-Haus (2005) are given in Figure 5.

It is evident that the average price of 1 m^2 of the dwelling floor space in Vilnius, the capital of Lithuania, is much lower than that in other European capitals. For example, the average price of 1 m^2 of floor space in Vilnius is by 8.9 times lower than the price in Paris and by about 8 times lower than in Barcelona or Vienna. In fact, dwelling prices in Vilnius make one-fourth of the average European prices. They are lower than the prices both in the old EU member-states and the capitals of the Baltic Sea states. Dwelling prices in Vilnius are by about 38% lower than the respective prices in Riga, by 72% lower than in Warsaw and make half of the price in Tallinn. Only in the capital of one new EU member-state Ljubljana of Slovenia the real estate prices are higher than those in the capitals of old EU member-states, such as Berlin in Germany, and Brussels in Belgium.

In Figure 6, the variation of dwelling prices

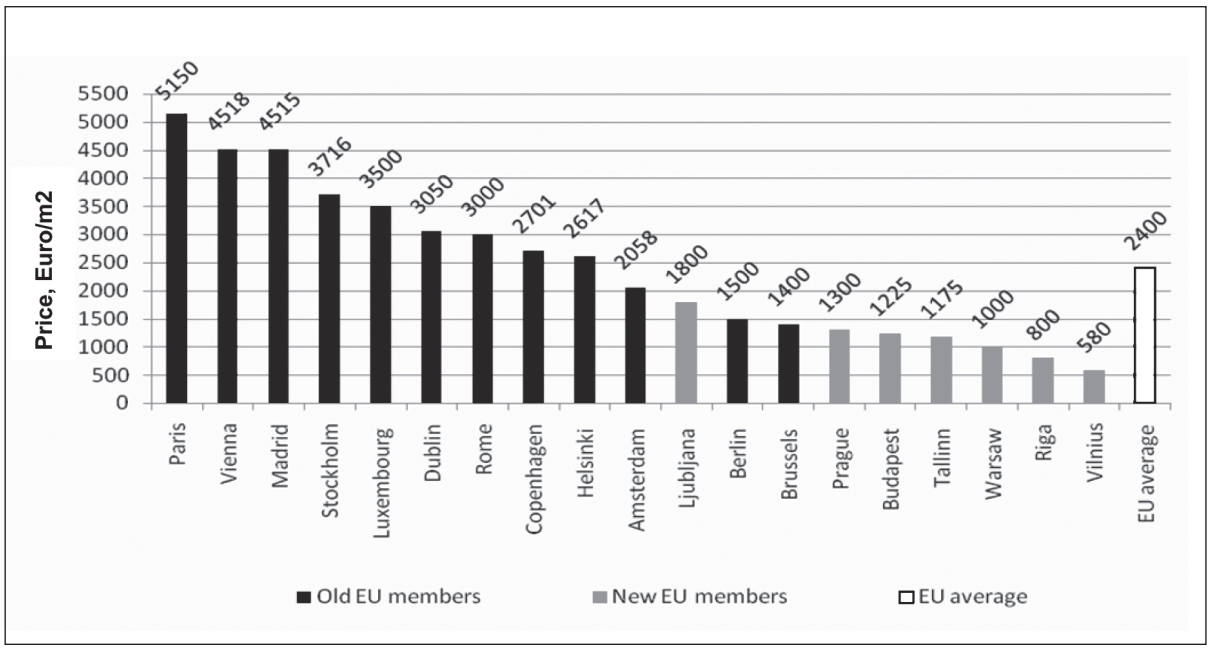

Figure 5. Average dwelling prices in the capitals of the EU member-states

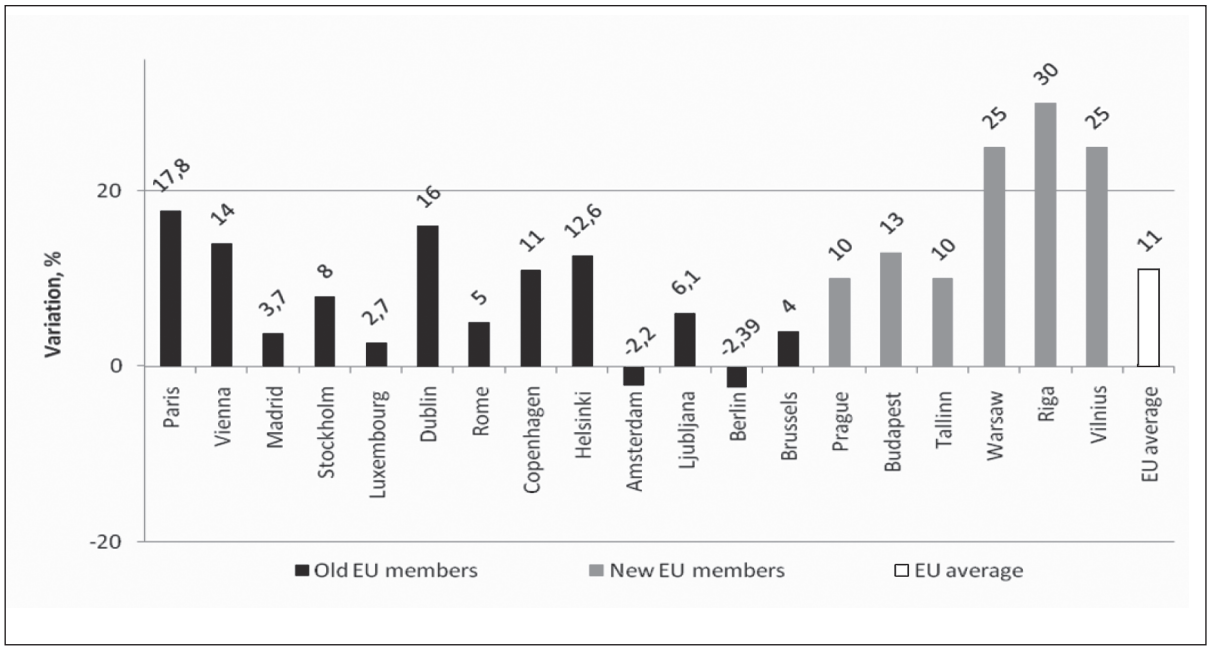

Figure 6. The variation of dwelling prices in the capitals of the EU member-states in 2003–2004

in the capitals of the EU member-states in 2003–2004 is demonstrated. The highest price rise can be observed in the Baltic Sea region. The prices in Vilnius and Tallinn increased by 25% and in Riga by 30%. However, it can be seen that dwelling prices also increased in the capitals of old EU member-states, such as Paris, Barcelona, Luxembourg, Copenhagen and Stockholm.

4.4. Forecasts of dwelling price variation

It is evident that dwelling prices in Vilnius are much lower than those in other EU member-states. However, the rate of their increase is one of the highest in the European Union.

In Figure 7, forecasts of dwelling price variation in Vilnius and the capitals of the EU member-states are presented. It can be assumed that the growth rate both in Vilnius (25%) and in other European capitals (11%) will remain unchanged.

Then, the average dwelling price of the EU member-states could be achieved by 2017. However, the authors think that this is not the goal that Lithuania should seek to attain trying to reach the level of other EU countries.

A continuous growth of dwelling prices makes it difficult to predict what market prices will be in the near future. Though the price rise in this segment is associated with the improving economic situation in Lithuania, the growing income and more favourable conditions for getting loans for dwelling purchasing, these factors are not sufficient to explain this rise. There are also some negative effects which play an important role in the process of price rising. These are imperfect construction regulating laws, the delayed return of land to legal owners, the flow of 'shadow economy' money to real estate market and, in particu-

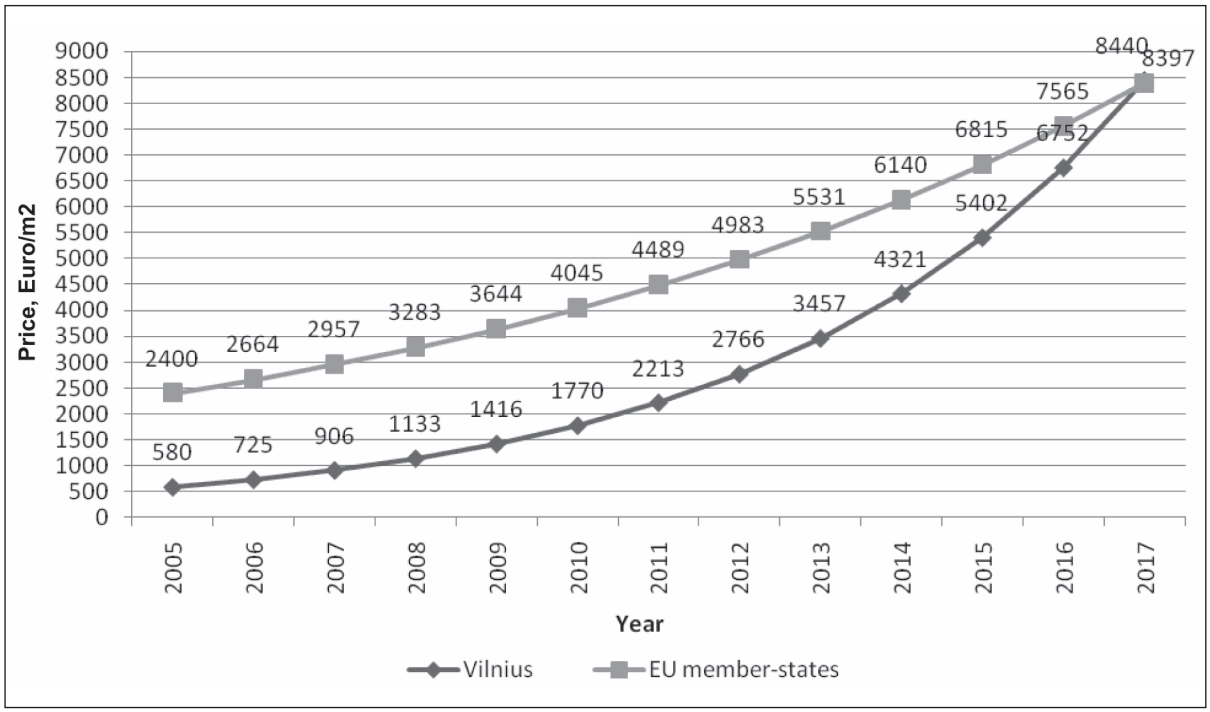

Figure 7. Dwelling prices in Vilnius and capitals of the EU member-states

lar, profiteering in the market, causing a sharp rise in dwelling prices.

Since the real estate market is highly dynamical and indeterminate, forecasts of dwelling prices are made only until the 1st and 2nd quarters of 2007. The forecasts are based on trend equations of price variation curves.

In Table 8 and Figure 8, the forecasts of dwelling prices in the centre of Vilnius, Old Town, Užupis, prestigious and other districts are presented. Given the data on twelve quarters, we can try to predict the average dwelling prices for two other quarters (in general, 14 periods) and substitute 13 for the variable x in the equation to obtain a forecast for the 1st quarter of 2007. By substituting 14 for the variable x, we get a forecast for the 2nd quarter of 2007. The data obtained are rounded off accurate to one Euro.

5. CONCLUSIONS

In 2006, the tendency of high rise of dwelling prices, prevailing in 2004–2005, gave way to a moderate increase of prices and even to their reduction in some segments. The differences in prices of newly-built, old and renovated dwellings became more appreciable. The same refers to dwelling prices in various districts of Vilnius. The analysis of percentage variation of dwelling prices from various perspectives has shown that, in 2006, the highest growth was characteristic of dwellings located in the centre of Vilnius and in prestigious districts. According to the short-term forecasts made, high price rise can be expected in the same districts in the near future. The price of old houses in remote districts was reducing (taking into account the inflation of 3.7%), while the market value of newly-built dwellings remained unchanged.

It is clear that the situation in the real estate market has changed. Therefore, to protect the investments in dwellings, customers should carefully select the investment projects, paying special attention to reliability and competence of project developers. The analysis of financial indices of six specially selected project developers made by the authors allowed them to state that not all real estate developers in the market are reliable and able to satisfy liability claims because they may face solvency problems. In some cases, indices even warn about a threat of bankruptcy for a company.

Table 8. A forecast of dwelling prices in the centre of Vilnius and prestigious districts

Type of dwelling	Equation	Forecast	
		2007 Q1	2007 Q2
Newly-built dwellings in the center of Vilnius	$y = 240.8\,x + 836.9$	2294	2534
Renovated dwellings in the center of Vilnius	$y = 165.5\,x + 799.7$	2951	3117
Non-renovated dwellings in the center of Vilnius	$y = 102.1\,x + 717.6$	2045	2147
Newly-built dwellings in prestigious districts	$y = 174.5\,x + 517.2$	2786	2960
Renovated dwellings in prestigious districts	$y = 100.6\,x + 799.4$	2107	2208
Non-renovated dwellings in prestigious districts	$y = 95.75\,x + 529.2$	1774	1870
Newly-built dwellings in residential districts	$y = 142.2\,x + 0.1$	1849	1991
Dwellings in large-panel houses in residential districts	$y = 77.57\,x + 386.1$	1395	1472
Dwellings in brick houses in residential districts	$y = 78.55\,x + 460.9$	1482	1561
Newly-built dwellings in other districts	$y = 67.46\,x + 373$	1252	1320
Newly-built dwellings in residential districts	$y = 77.11\,x + 236.5$	1239	1316

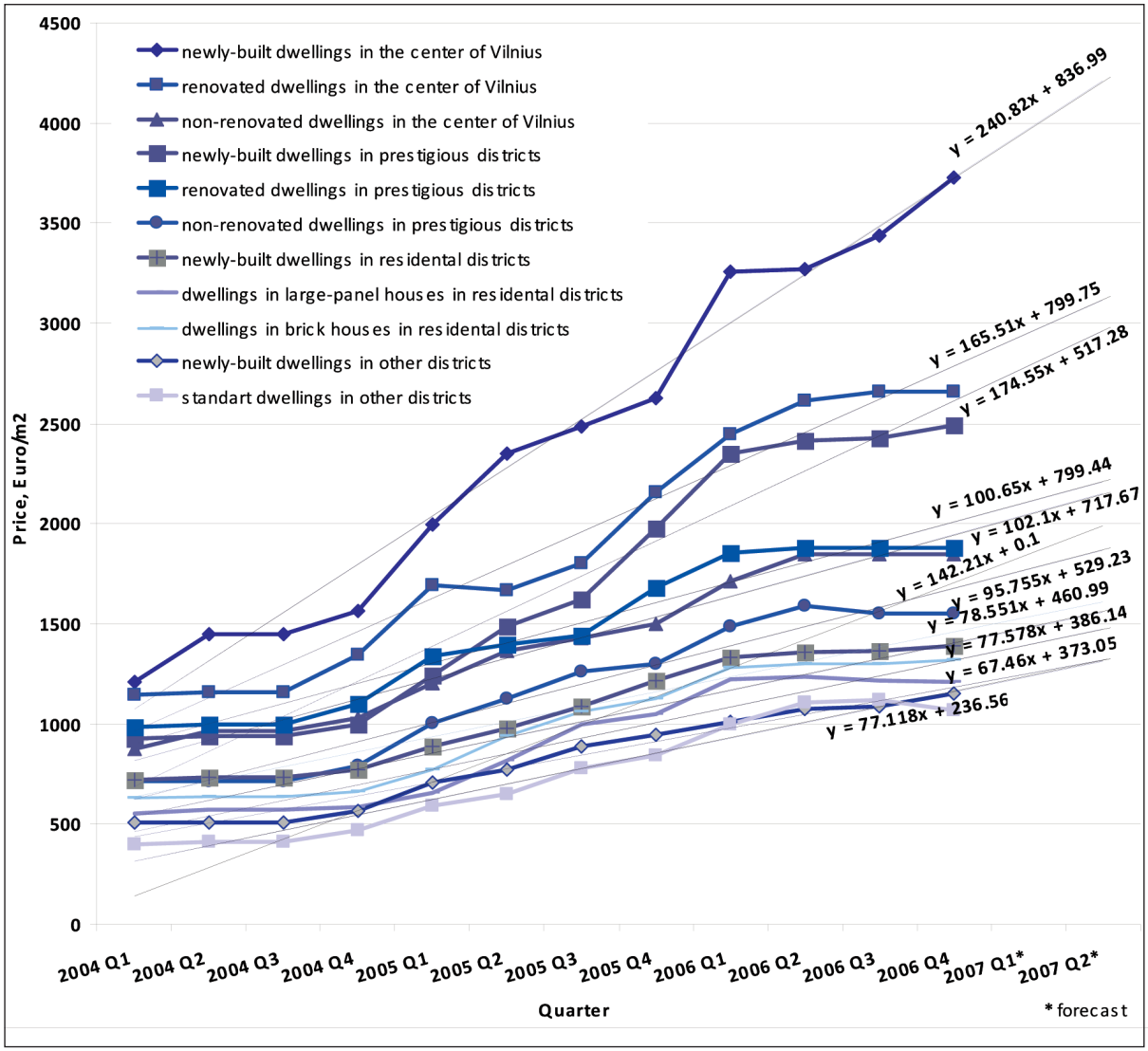

Figure 8. A forecast of dwelling prices in Vilnius

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SANTRAUKA

BŪSTO RINKOS ANALIZĖ VILNIUJE

Gintautas AMBRASAS, Danielius STANKEVIČIUS

Dabartinė situacija nekilnojamojo turto rinkoje yra palanki nekilnojamojo turto įmonėms – nekilnojamojo turto rinkos dalyvėms. Būsto kainos Vilniuje yra gerokai žemesnės nei analogiško būsto kainos senosiose Europos Sąjungos šalyse narėse, o pastaraisiais metais kainų augimas – vienas sparčiausių lyginant su ES. 2003 m. kainų augimo bumas netgi buvo siejamas su įstojimo į Europos Sąjungą lūkesčiais. Augančios nekilnojamojo turto rinkos pajamos ir didelis pelnas į nekilnojamojo turto rinką pritraukia vis daugiau naujų įmonių. Kad apsaugotų savo investicijas į nekilnojamąjį turtą, pirkėjai turi atidžiai rinktis investicinius projektus, ypatingą dėmesį skirdami projekto plėtotojų kompetencijai. Autorių atlikta šešių pasirinktų įmonių, investuojančių į Vilniaus nekilnojamojo turto rinką, lyginimas leidžia teigti, kad toli gražu ne visos analizuotos įmonės pajėgios įvykdyti savo prisiimtus sutartinius įsipareigojimus. Atskiri rodikliai tam tikra prasme gali byloti ir apie įmonės bankroto pavojų. Be objektyvių veiksnių, darančių įtaką nekilnojamojo turto rinkai (tokių kaip kreditavimo sąlygos, šalies ekonomikos plėtra, visuomenės gyvenimo būdo standartai, migracija ir pan.), įvairūs nepalankūs veiksniai taip pat daro nemažą įtaką kainų augimui rinkoje, todėl autoriai analizuoja skirtingų būsto segmentų kainų skirtumus Vilniaus nekilnojamojo turto rinkoje, jų kitimui darančius įtaką veiksnius ir tendencijas.