

THE REAL ESTATE MARKET IN THE CZECH REPUBLIC

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Abstract: *This article deals with the real estate market under the current market conditions in the Czech Republic. The main objective of this article is to verify the stated hypothesis focused on the assessment of its own assets, quality of service and prioritization of some real estate agents, based on previous personal experience of the respondent through the use of a marketing survey. The problem encountered on this market is the lack of professionalism and the use of unfair practices by real estate agents, which leads to the dissatisfaction of clients as well as investors considering investing into the real estate market. Another problem in this area is that several authors divide financial markets into cash, equity, commodity and currency, but many fail to mention the real estate market or real estate assets. Nevertheless, most of the adult population in the Czech Republic has used, uses or is considering to use the real estate market in the future for their personal use. Even though a considerable amount of money is invested into the real estate market by clients and investors, it is not given as much attention as e.g. the stock market, while a number of buyers purchase housing for themselves using a mortgage, which has a maturity of tens of years.*

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JEL Classification: *G10, M31.*

Introduction

The real estate market has several distinctive attributes compared to other markets. One of the main features is that many people are able to furnish and present a property without much hesitation. Most of them have personal experience with the real estate market, both as an owner for personal use or from the position of a lessors or an investor in speculation and investment opportunities.

The main problem in the Czech market environment is the lack of professionalism on the part of real estate agents, as well as an absence of clear rules laid down for professional real estate brokers providing services to clients. Inadequate staffing on the real estate market leads to a reduction in the quality of services offered and the development of unfair practices, which is reflected in the behavior of potential clients who solve this situation by buying or selling real estate without their involvement. The aim of the article is to test three set hypotheses focused on the assessment of its own assets, quality of service and prioritization of some real estate agents, based on previous personal experience through the use of marketing research in the Pardubice region.

This market does have as many publications as for example securities markets. Yet it is an area where considerable amounts of money are invested by developers, intermediaries, monetary institutions, buyers, sellers and investors. This market caused the worldwide financial crisis in 2008 and underestimating it may lead to the same or similar problems. This is reflected in the opinions of several experts, who draw attention to the current high

prices of real estate related to the easing of the policy of monetary institutions in providing borrows with funds for housing.

1 Theoretical background – formulation of the issue

The main and most important asset for every adult male is his own home, which is then usually followed by other investments. For most people the real estate market is the first major step towards the realization of a large investment, because it often leads to debt for several years. Most people do not have the finances to pay in cash for a transaction of this kind, so they make use of a variety of loan products in order to transfer a property into private ownership.

A comparison of the cost of loan and mortgage repayments is often used to purchase a home, but this is the simplest form of comparison. According to Lux (2006: 89-90), it is better to use a concept called *the user cost of home ownership, by which we add all the financial benefits and costs associated with owning a home*. These costs consist of: *property tax, depreciation, expected price appreciation of the real estate in the future, and interest on a mortgage*. Potential buyers should compare the operational costs with the net rental cost, whereby they should come to a decision which of the options is better for them at the given time.

One of the major advantages that the real estate market provides participants and investors is the *great importance of confidential information*. (Kohout, 2008: 181) This is mainly due the fact that people involved in this area in the form of brokers, experts and specialists can provide better and more valuable advice in comparison to financial analysts involved in the area of securities. The real estate market is characterized by low liquidity and therefore there arises a time for negotiating and bargaining between the broker and the potential bidder, e.g. about the price. Another advantage following from the current market conditions on the real estate market is the possibility of leveraging of mortgage loan revenues, thanks to extremely low interest rates.

An investor can invest in tangible assets on the real estate market, which means they will buy, sell and rent real estate, but also in paper or dematerialized products in the form of funds, equities and trusts. The main objective of real estate funds is to invest into large-scale development and construction projects. (Janda, 2011) This deals in essence with equity funds because shares are bought in companies conducting business on the real estate market. According to Syrový and Tyl (2014: 109), the latest type of investment on the real estate market, which is not so well known by Czech investors, is *purchasing real estate trusts* that can be traded on exchanges. These trusts, often referred to by the acronym REITS (Real Estate Investment Trust), are popular in the following countries: *Japan, Hong Kong, Australia, France and have also been introduced on the German and British real estate market*. (Mellon, Chalabi, 2008: 45) This expands the investment opportunities of investors who prefer the real estate market. The advantage of this investment instrument is the tax benefits it provides to both amateurs as well as professional investors, in order to encourage investment in real estate.

Real estate investments are also associated with certain negative elements that arise from the nature of the investment. Investors should become acquainted with these negative elements, which include low liquidity accompanied by a period during which the seller and the buyer execute the transaction as well as the associated transaction costs, before launching any investment project on this market. (Veselá, 2007) The number of participants

who are interested in a particular area is limited, as is the amount of published market information, which also has a completely different explanatory power between regions and localities, e.g. a daily exchange list is published for shares but the real estate market does not offer this option. Properties are hardly purchased for speculative purposes, which means to buy now and to sell as soon as possible, but it is quite common for the stock market. Then, there are the additional costs associated with the upkeep of the real estate in the form of repairs and housing or tenant insurance.

As in other areas of investment, real estate markets are not immune to speculative bubbles. This market caused the recent worldwide financial crisis, which escalated in 2008. In the last century price bubbles were associated with the real estate market as outlined by Jílek (2009: 555-556). *There were real estate bubbles in the UK and Japan in the late 1980s*. The issue of speculative real estate bubbles is dealt with by a number of authors, such as Brueckener et al. (2012), Shiller (2008), Glaeser et al. (2008), Coleman et al. (2008), Hunter et al. (2003).

The development of a speculative bubble should be taken into account both by those considering buying a property for their own use and also investors. According to Shiller (2010: 34) extreme growth in the real estate market is *just as mysterious and elusive as a stock market boom*. Therefore, the emergence of a bubble cannot be underestimated in the Czech market environment, given that interest rates are very low and are on average less than 2%. (Hypoindex, 2016a) Cheap mortgages increase the accessibility of housing to people who under stricter conditions and at higher interest rates would not obtain credit. Of course, this condition is supplemented by growth in property prices, and certainly does not last forever. The ČNB (2016) has also reacted to the situation by reducing the ratio of loan amount to property value from 100% to 95% in its recommendations from October 2016 and from April 2017 to 90%, in addition to other measures. This reaction by the ČNB can be considered to be well founded. In the event of a rise in interest rates, some people will not have the funds to cover their repayments. A large number of non-performing loans leads to real estate sales, with some of them surely burdened by foreclosures. Subsequently, prices will be significantly overvalued with no real explanation why; the price bubble will burst, which will have a negative impact on many people and on the economy as a whole.

Possible fears of further price bubbles or potential repayment problems are evidenced by the following statistics related to the Czech real estate market. Prices of flats of older properties increased year on year by 9.1% in the second quarter of 2016. The growth pace has been still increasing and prices have risen even by 18% from the lowest level, which was reached in the fourth quarter of 2013. That is supported by the following figures of May 2016 when the rate reached an average of 1.89%, 10 831 new mortgage loans totaling 20.702 billion were concluded and the average amount of a mortgage loan reached to 1 911 376 Czech crowns. Another factor supporting the current situation is the fact that it is possible to get a loan without any proof of income. This was offered by four banks to 5. 10. 2016. (Hypoindex, 2016c) Construction of commercial and administrative centers by multinational corporations is very popular as well; 145.6 billion Czech crowns was invested into constructions of shopping centers between the years 2006-2012. (Realcity, 2015)

There is an interest on the real estate market, according to Stavební Fórum (2016), in other countries like Poland, where more than 1,5 billion euros was invested in the second quarter of 2016. In relative terms, it makes 59% of all investments on the real estate market leading into the commercial properties of the Central European. After Poland the Czech

Republic is now second favorite real estate market, where 0,5 billion euros was invested for the same period of the same year. Another country with an interest in the properties is South Africa. The interest comes especially from foreign investors from the USA and Germany.

The Czech economy goes well and a positive prediction speaks well for the real estate market for 2017 because it is in the growth phase. That is underlined by a specialist's opinion in the field of real estate (Hypoindex, 2016b), who recommends to buy a property until 2017 because prices will continue to rise. It is also caused by the fact that this is positively reflected in other economic areas complemented by growth in average salaries and wages, low unemployment included. That is negatively reflected in shortage of skilled workers not only in construction industry. Another difficulty for investors is limitation of 100% mortgage loans since April 2017. That may lead to reduction or stagnation of interest from loan applicants but not to a sudden drop of real estate prices because there are not yet known any preconditions for any crisis that should be a cause. On the other hand, nothing grows to infinity and that applies to real estate market as well. Therefore, investors should follow the main factors that affect the price of real estate. That is the only way how to refine future predictions. Crude oil belongs among these key factors because when the price of this commodity grows, it also affects the real estate market generally by stagnation or slight prices decrease. Other factors that are good to be followed on the real estate market are e.g. availability of credit, legislation, taxation, political situation.

2 Methods

One of the main methods applied in the article is an analysis of the available literature and internet resources. This was followed by a synthesis, which led to a summary of the findings from the analysis of the available resources, f.e. advantages and disadvantages related to investment into real estates. A questionnaire survey was carried out to provide the necessary data and information on the current state of the real estate market with the help of marketing research, which focused on respondents who have had at least some personal experience with real estate agents, see Chapter 3. The data were statistically analyzed using assumptions about the relative frequency. Anyway, for accurate interpretation of the results the confidence interval was also calculated. The principles of logic and logical thinking were also used, particularly in the application and evaluation of statistical methods, which build on each other.

3 Analysis of the issue

This article deals with the quality of services provided by real estate agents using real estate brokers.

3.1 Characteristics and determination of a representative sample of respondents

Benchmarks were established before starting the marketing survey, which best characterize the researched issue. The required criteria were: the territory of the Czech Republic, permanent resident in the Pardubice region, time segment of data collection, age of respondent older than 18 years, personal experience with the sale, purchase or lease of real estate using the services of a real estate broker. The respondents were selected randomly.

A representative sample of respondents was determined according to the formula for the unknown composition of the people surveyed according to Kozel (2006).

$$n \geq \frac{(z^2 * p * q)}{\Delta^2} \quad (1)$$

where:

n is the minimum number of respondents,

p, q is the percentage of respondents knowledgeable in the issue, or bias towards the first option (p) and not knowledgeable or bias towards the second option (q), if these numbers are not known exactly, a product of max. $p \times q$ has to be created, i.e. 50 % x 50 %,

Δ is our established maximum permissible error,

z is the critical value of standard normal distribution at a selected significance level.

A reliability of 95% and tolerable error of 10% were selected to calculate the minimum sample size. The selected quantile of normal distribution is 1.645. (Hindls, 2007) The following result was calculated based on these data:

$$n \geq \frac{(1.645^2 * 0.5 * 0.5)}{0.1^2} \quad (2)$$

$$n \geq 67.7$$

The result shows that in order for the questionnaire survey to be representative for the selected region and for the specified data to be met, at least 68 respondents must take part.

The questionnaire survey took place in the Pardubice region of the Czech Republic between the 1st of December 2015 and the 29th of February 2016. A total of 68 completed questionnaires were obtained, which in relative terms means that 27% of the questionnaires met the required criteria. Overall, 254 questionnaires were received; however, most were excluded due to not meeting the criteria. The main reasons for their exclusion were that the respondent was from another region, the questions were only partially completed, or the respondent had no personal experience with real estate agents etc. The data were collected online through the portal www.survio.cz as well as through personal inquiries.

The questionnaire contained a total of 16 research questions and was divided into two main parts. The first part focused on the satisfaction and quality of services provided by real estate agents. It contained 13 questions but with respect to the article extent only those related to the set hypotheses were evaluated. Further research questions that were not evaluated included, e.g. “Which real estate agency did you work with?”; “What key factors played the main role in the selection of the real estate agency”; or “Can you comment on the requirements placed on brokers by current legislation”. The main research questions leading to a determination of the current situation in terms of not only the quality of services provided in the real estate market in the Czech Republic are statistically evaluated in Subsection 3.2

The second part dealt with demographic data of respondents, which included three questions. The first one is related to the gender of respondents, whereby 32 were male (47%) and 36 were female (53%). The second question related to the age of the respondents, which was divided into four groups. In the first age group 18-29 years old there were 28 (41%) respondents, in the second age group 30-39 years old there were 18 (26%), in the third age group 40-54 years of age 14 (21%) respondents correctly filled out the questionnaire, and in the last age group 55 and over the least number of questionnaires were

received i.e. 8 (12%). The last question concerning the demographics of the respondents related to education, and was divided into five levels according to their educational attainment. No respondents with a primary education participated in the questionnaire survey, there were 8 (12%) respondents with a secondary vocational education without graduating the final leaving examination, 23 (34%) with secondary vocational education graduating the final leaving examination, 4 (6%) with a higher professional education and 33 (49%) with a university education.

3.2 Evaluation of the hypotheses

Three hypotheses were set before the survey focusing on housing, satisfaction from services offered and the preference for real estate agents on the basis of previous business transactions. The hypotheses should confirm or reject the researched facts related to the provision of services on the real estate market in the Czech market environment of the Pardubice region. All of the tested hypotheses were evaluated by the same test, the relative frequency of the hypotheses had a significance level of alpha of 0.05. The aim was to determine whether the relative frequency is greater than 0.5. (Hindls, 2007)

$$H_0 : \pi = \pi_0$$

$$H_1 : \pi > \pi_0 , \text{ where } \pi_0 = 0,5.$$

Test variable:

$$U = \frac{p - \pi_0}{\sqrt{\frac{\pi_0 * (1 - \pi_0)}{n}}} \quad (3)$$

where: n is the standardized normal distribution

p is the determined relative frequency from the selection

W is the critical region (for $\alpha = 0,05$): $U \geq 1,645$

The confidence interval for the parameter π of alternative distribution for the stated hypotheses was calculated according to Hátle and Likeš (1972) in order to provide a more accurate estimate of where we can expect the relative frequency with the selected probability.

$$p - u_{1-\alpha/2} \sqrt{\frac{p(1-p)}{n-1}} < \pi < p + u_{1-\alpha/2} \sqrt{\frac{p(1-p)}{n-1}} \quad (4)$$

where: p is the determined proportion,

$u_{1-\alpha/2}$ for $\alpha=0.05$ is equal to 1.96,

n is the size of the sample,

π is a parameter of alternative distribution

Hypothesis 1

“The majority of clients use the Czech real estate market mainly to acquire their own housing.”

The first hypothesis was confirmed or rejected during the questionnaire survey by asking the following research question: “Do you use the real estate market to evaluate your own

assets?" Respondents were given four choices of answers to this question, which are listed in Table 1.

Tab. 1: Own housing

Possible answers	Absolute No.	Relative No. (%)
Yes, I'm buying another property in order to rent it out.	15	23
Yes, I'm buying another property for speculation.	1	1
Yes, I use other investment products linked to the real estate market e.g. shares, funds.	5	8
No, I do not invest into the real estate market to make a profit.	47	68
Total	68	100

Source: Author's own work

$$U = \frac{0.68 - 0.5}{\sqrt{\frac{0.5 * (1 - 0.5)}{68}}} = 2.97 \quad (5)$$

For the first question, the test variable U is greater than 1.645, therefore we reject H₀ and accept H₁, since the majority of respondents use the real estate market to acquire their own housing and not for the appreciation of their own assets. For clarification, was calculated the confidence interval.

$$0.68 - (1.96) \sqrt{\frac{0.68(1 - 0.68)}{68 - 1}} < \pi < 0.68 + (1.96) \sqrt{\frac{0.68(1 - 0.68)}{68 - 1}}$$

$$0.61 < \pi < 0.75$$

$$(61 \% ; 75 \%) \quad (6)$$

With a 5% risk, we can say that the property market is dominated by personal housing in the interval from 61% to 75% over investments, which this market offers to non-professional as well as professional investors.

Hypothesis 2

"More than half of the respondents were satisfied with the services provided by real estate agents during a business transaction."

The second hypothesis was confirmed or rejected during the questionnaire survey by asking the following research question: "How are you satisfied with the services of real estate agents?". Respondents were given the following choices of answers to this question, which are listed in Table 2.

Tab. 2: Satisfaction with the services of y real estate agents

Possible answers	Absolute No.	Relative No. (%)
Services were provided on a professional level without any reservations.	19	28
Services were provided on a good level with minor comments.	36	53
Services were rather poor e.g. with several serious facts that I was acquainted with just before signing the contract.	11	16
Services were very poor, we did not make the investment with the selected agent e.g. due to concealment of certain facts (seizure).	2	3
Total	68	100

Source: Author's own work

$$U = \frac{0.81 - 0.5}{\sqrt{\frac{0.5 * (1 - 0.5)}{68}}} = 5.11 \quad (7)$$

For the second question, the test variable U is greater than 1.645, therefore we reject H_0 and accept H_2 , since more than half of the respondents were satisfied with the services they were provided by a real estate agent with the help of a broker. For a more accurate estimate and interpretation of results, the confidence interval of this hypothesis was also calculated.

$$0.81 - (1.96) \sqrt{\frac{0.81(1 - 0.81)}{68 - 1}} < \pi < 0.81 + (1.96) \sqrt{\frac{0.81(1 - 0.81)}{68 - 1}} \quad (8)$$

$$0.75 < \pi < 0.87$$

(75 %; 87 %)

Based on the results of the confidence interval for the parameter π we can say with a 5% risk that 75% to 87% of clients are satisfied with the offered services related to the real estate environment in the Czech Republic.

Hypothesis 3

“Most clients would use the same real estate agent for another transaction on the real estate market.”

The third hypothesis was confirmed or rejected during the questionnaire survey by asking the following research question: “If you made another transaction on the real estate market would you use the services of a real estate agent again?” Respondents were given the following choices of answers to this question, which are listed in Table 3.

Tab. 3: Preference of the same real estate agent

Possible answers	Absolute No.	Relative No. (%)
Yes, I would use the same real estate agent.	21	31
Yes, but I would use another real estate agent this time.	6	9
No, I will make the next transaction on the real estate market on my own.	9	13
I will definitely be independent regardless of previous experiences (it depends on the offer).	32	47
Total	68	100

Source: Author's own work

$$U = \frac{0.31 - 0.5}{\sqrt{\frac{0.5 * (1 - 0.5)}{68}}} = -3.13 \quad (9)$$

For the last question, the test variable U is less than 1.645, therefore we do not reject H₀. We failed to demonstrate that clients would prefer the same real estate agent for future business transactions. The hypothesis was therefore not confirmed. As with the previous hypotheses, we calculated the confidence interval, which is used to make the formulation of the research question more accurate.

$$0.31 - (1.96) \sqrt{\frac{0.31(1 - 0.31)}{68 - 1}} < \pi < 0.31 + (1.96) \sqrt{\frac{0.31(1 - 0.31)}{68 - 1}} \quad (10)$$
$$0.23 < \pi < 0.38$$
$$(23 \% ; 38 \%)$$

We can state with a 5% risk that 23% to 38% of those surveyed would use the real estate agent with whom they have good previous experience for further commercial activities on the real estate market.

4 Discussion

The real estate market in the Czech Republic is very popular at the moment. Its popularity stems from the favorable conditions offered by monetary institutions for providing funds to people in order to purchase their own home. This was underlined by a survey conducted in the Pardubice Region, where demand dominates over supply on the Czech real estate market, which makes the buyer accept and tolerate some deficiencies following from a real estate condition or from real estate agencies. This is evident from the results obtained from the survey on the basis of the hypotheses. The evaluation showed that the respondents were satisfied with the services provided, as was reflected in the calculated confidence intervals for hypothesis 2, where 75-87% of respondents were satisfied with the services provided. The main reasons for satisfaction are the positively set conditions for people to obtain a mortgage for their own housing, which is a priority impetus for transactions on the property market, as confirmed by the first

hypothesis. These facts suitably complement some statistic data following from Czech real estate environment mentioned on Chapter 1 proceeding from current market conditions.

Conclusion

The survey conducted on the real estate market in the Czech Republic brought new knowledge about this sector, which confirmed or rejected the determination and evaluated hypotheses. The main finding obtained from the survey is that the majority of respondents have a positive experience with the services provided by real estate brokers. These facts will be further verified and investigated in other parts of the Czech Republic to demonstrate greater objectivity of the findings with regard to the limitations of the survey in the selected area. Nevertheless, a sample of 68 respondents is considered representative because it was verified by calculation for an unknown composition of respondents.

The issue of real estate markets certainly deserves more attention both in theory and also in practice, in view of existing conditions that can lead to the formation of speculative bubbles on the Czech real estate market. The investment potential that this market offers to the investing public should further be developed. Most people buy a property for their own use, but do not solve the investment opportunities arising from the real estate market. This is a major shortcoming of the Czech investment community, which lacks a greater sense of investment projects on the financial markets. This condition is underlined by improper knowledge of some real estate agents both in theoretical and mainly practical areas, including a lack of education in the field.

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Reference

- Brueckener, J., K., Calem, P., S., Nakamura, L., I. (2012). *Subprime mortgages and the housing bubble*. Journal of Urban Economics, Vol. 71, No. 2, p. 230-243. DOI 10.1016/j.jue.2011.09.002
- Coleman, M., LaCour-Little, M., Vandell, K., D. (2008). *Subprime lending and the housing bubble: Tail wags dog?* Journal of Housing Economics, Vol. 17, No. 4, p. 272-290. DOI 10.1016/j.jhe.2008.09.001
- ČNB. (2016). *U hypoték chceme zavést limity, kolik bude možné půjčit klientovi vzhledem k jeho příjmům*. [online] Česká národní banka. Available at: http://www.cnb.cz/cs/verejnost/pro_media/clanky_rozhovory/media_2016/cl_16_160615_tomsik_hn.html [cit. 2016-06-15].
- Glaeser, E., L., Gyourko, J., Saiz A. (2008). *Housing supply and housing bubbles*. Journal of Urban Economics, 2008, Vol. 64, No. 2, p. 198-217. DOI 10.1016/j.jue.2008.07.007
- Hátle, J., Likeš, J. (1972). *Základy počtu pravděpodobnosti a matematické statistiky*. 1st edition. Praha, Bratislava: Státní nakladatelství technické literatury Alfa.
- Hindls, R. et al. (2007). *Statistika pro ekonomy*. 8th edition. Praha: Professional Publishing.
- Hunter, C., W, Kaufman, G., G., Pomerleano, M. (2003). *Asset price bubbles implications for monetary, regulatory, and international policies*. 1st edition. Cambridge: MIT Press.
- HYOINDEX. (2016). *Ceny bytů rostou... je konec krize, nebo začíná další?* [online] Hypoindex. Available at: <http://www.hypoindex.cz/ceny-bytu-rostou-je-konec-krize-nebo-zacina-dalsi/> [cit. 2016-05-23].
- HYOINDEX. (2016). *Nemovitost kupte do roku 2017, pak už budou ceny vysoké*. [online] Hypoindex. Available at: <http://www.hypoindex.cz/clanky/kotula-nemovitost-kupte-do-roku-2017-pak-uz-budou-ceny-vysoke/> [cit. 2016-02-04].

- HYPOINDEX. (2016). *Zájem o hypotéky je obrovský. Rekordní objemy přes 20 mld. Kč.* [online] Hypoindex. Available at: <http://www.hypoindex.cz/fincentrum-hypoindex-kveten-2016-zajem-o-hypoteky-je-obrovsky-rekordni-objemy-pres-20-mld-kc/> [cit. 2016-06-22].
- Janda, J. (2011). *Spořit nebo investovat?* 1st edition. Praha: Grada.
- Jílek, J. (2009). *Akciové trhy a investování.* 1st edition. Praha: Grada.
- Kohout, P. (2008). *Investiční strategie pro třetí tisíciletí.* 5th edition. Praha: Grada.
- Kozel, R. et al. (2006). *Moderní marketingový výzkum: nové trendy, kvantitativní a kvalitativní metody a techniky, průběh a organizace, aplikace v praxi, přínosy a možnosti.* 1st edition. Praha: Grada.
- Lux, M. et al. (2006). *Jak dobře investovat do bydlení.* 1st edition. Praha: Sociologické nakladatelství.
- Mellon, J., Chalabi, A. (2008). *10 nejlepších investic na příštích 10 let: [spořte, investujte, prosperujte].* 1st edition. Brno: Computer Press.
- REALCITY. (2015) *Komerční výstavba v ČR: jak se jí dařilo a prognózy do budoucna.* [online] Realcity. Available at: <http://www.realcity.cz/magazin/8519/komercni-vystavba-v-cr-se-darilo-a-prognozy-budoucna/> [cit. 2015-04-09].
- Shiller, J., R. (2010). *Investiční horečka: iracionální nadšení na kapitálových trzích.* 1st edition. Praha: Grada.
- Shiller, J., R. (2008). *The subprime solution how today's global financial crisis happened, and what to do about it.* Oxford: Princeton University Press.
- STAVEBNÍ FÓRUM. (2016). *Zájem o nemovitosti ve střední Evropě je stále silný.* [online] Stavebni-forum. Available at: <http://www.stavebni-forum.cz/cs/article/24958/zajem-o-nemovitosti-ve-stredni-evrope-je-stale-silny/> [cit. 2016-12-07].
- Syrový, P., Tyl, T. (2014). *Osobní finance: řízení financí pro každého.* 2nd edition. Praha: Grada.
- Veselá, J. (2007). *Investování na kapitálových trzích.* 1st edition. Praha: ASPI.

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