
Housing Construction and Mortgage Lending in the Slovak Republic

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Abstract

The subject of research of the presented article is the issue of housing, housing construction and its financing in the Slovak Republic. Housing is one of the key factors in combating social exclusion and unemployment. In the introduction we start with the theoretical background of housing. Based on the work of Slovak and foreign authors, we provide an overview of the state of the housing construction in the Slovak Republic and outline the reasons for its development in view of the changes in housing policy in the Slovak Republic after 1990. By analysing the development of selected indicators, we approximate the impacts of housing financing through mortgage loans.

The findings showed that lowering interest rates on mortgage loans, increased indebtedness of households, housing prices and the risk of financial crisis.

Keywords: Housing, housing policy, household indebtedness, loans, mortgage lending

Introduction

Socio-economic importance of housing after filling its basic function is to create conditions for the development of human potential, creative abilities and social activities of man. Housing is implemented in a residential environment that has a social component (social groups and relations between them), material (apartments and special equipment infrastructure) and the nature. From a sociological point of view live also means to live in a particular community, have a sense of belonging, confidence and safety. Housing can be seen as an evolving social process that has its own laws. It is a vast and varied set of basic and higher personal and social, spiritual and changing needs. The housing needs are constantly evolving and differentiated global development of the housing and interrelated, because the process of satisfying the needs of housing is conditioned by socio-economic development, on which feeds back and applies to all people and the whole area.

Each country has to address the problems related to the housing uses its own housing policy, extending from the social and historical conditions. Historical attitudes toward addressing a housing issues in the past many times have changed, had also an influence to the development of social theory, which was not easy because the development in each country was affected by social change, world wars and economic crises.

Literature review

Housing is a fundamental right, directly affecting the lives of citizens and restricting their opportunities for social inclusion as well as their choice in the field of study, education and professional development.

The issue of housing is the subject of the research of several authors and everyone perceives it in the context of their own realities. Stanek considers housing as one of the key factors in combating social exclusion and unemployment, thanks to him, our towns, cities, rural areas and regions more comfortable to live and work [18]. Housing promotes consistency between the communities and the work environment enables the achievement of sustainable development objectives. By Labaj is a residential set of human activities in the home and residential environments [14]. Right it cannot be construed as legal right to provide dwellings. The legal context is necessary to protect the dwelling as a private sector, protection against illegal eviction and protection against discrimination of any kind. The right to housing is inelible and unenforceable, its implementation is an expression of accountability of governments for the welfare of the population. For Fahrenberg, Myrtek, Schumacher and Brähler housing is one of the areas, whereby it is possible to evaluate satisfaction with past and present conditions of life and the future life prospects [6]. Housing was one of the first nationwide research indicators of quality of life in the 70s in the USA [2]. Marans and Rodgers build a model that is given to the relationship between the factors that affect quality of life [16]. Just level to meet the needs of individuals to live according one of the most important and is one of the key indicators affecting the development of the region [15]. Housing and its right quality are becoming a major component, the living conditions for the development of human potential, human resources. Ira base on the quality and level of housing assess the quality of life [11].

According to Tremblay and Dillman housing affect people's preferences [25]. People's preferences for housing will vary depending on the population and the interest. It is therefore important that these preferences are considered if we are to meet the needs in providing housing [15], [8]. Preferences of people depend on their current locations they inhabit, type of housing, dwelling area and also by social class and living conditions. The result is that users of different types to meet different environments. The current housing needs can affect housing preferences [1], [4], [5], [14].

Listokin *et al.*, defines housing as a permanent structure of human settlement [13]. It also refers to him as houses, buildings with flats or structures that consist of dwellings or places for human habitation. The term "house" includes many kinds of dwellings, from primitive huts of nomadic tribes to free standing places. It has a profound impact on the health, performance, social behaviour, satisfaction, productivity and general well-being of individuals and communities. It reflects the social, cultural and economic value of such it seems the best physical and historical evidence of civilization in the country and reliable measure or indicator of economic development [12].

Williams in turn refers to the tabernacle built as a home for one or more persons [25]. Omoniyi and Jiboye considered for housing a kind of permanent shelter for the man who gives identity Godwin defines it as "space", which we can call our "self", which gives us privacy and shelter protecting us from the weather and intrusion "undesirable persons" [8]. Housing is more than just shelter. It also includes all social services [20].

Housing policy in the Slovak Republic

Ensuring the long-term availability of housing for all social groups of the population is a key criterion for the success of housing policy, as at the present stage of the country's development only some are able to pay the costs of the new construction from their own resources.

The construction of dwellings has significantly diminished with the change of the transfer of responsibility for housing from the state to the household in 1990. It was therefore a reason, as construction depends on many factors, particularly household savings, and since these were not enough to make the state conditional at least for the partial support of households in financing housing. By changing the housing policy, the structure of the housing stock has changed and at present 95% of the dwellings are owned by households and only 5% are owned by the state and other organizations. This has an impact on the development of the housing market, the banking market and efficiency. [11], [19]. Before we focus on financing housing, we focus on housing construction analysis.

Development of Housing Construction in the Slovak Republic

Changing the perception of housing policy was reflected in the initiating of housing construction as a number of apartments declined. In 1994, Slovakia began to build less, only 3,809 apartments.

In 1995 it completed only 6,157 flats. Housing recovery crucially conditioned gradually adopted and legislated supporting economic instruments of the state, namely the introduction of support through building savings, loans granted to meet the needs live from the State Housing Development Fund. After 1998 and the start of reformist governments are due to efforts to stabilize the economy also reflected in the construction industry and even decline in the number of dwellings started and completed. Two years of stabilization measures, with quite good results, began to express the number of started flats in 2000. In 2001 it increased considerably the number of completed flats. Since then, despite a slight decrease, never drop below the 12,000 completed dwellings per year (this figure was only achieved once before in other cases was considerably lower). In 2003, the share of completed dwellings in municipal ownership reach 28.4%. In 2004, the share of completed dwellings in municipal ownership level to 12.1%, in 2005 to 13.7% and in 2006 to 14.8% of the total number of completed apartments. In 2006, in the Slovak Republic, began construction of 20,592 apartments (building permission issued), it has completed 14 444 dwellings (approval decisions issued) and under construction at year-end was 54,086 apartments (registration difference between commenced and completed dwellings). Of the total number of completed apartments was built in 7657 detached houses, representing 53.01%. Of the existing housing stock in 2006 shrunk 1,442 apartments, of which 1,187 due to sanitation (82.32%). Compared to 2005, when it began the construction of 19,796 flats, the number of started dwellings increased by 796 flats, means by 4.02% and represents most of started flats in 16 years (since 1991). Compared to 2005, however, reduced the number of completed dwellings and the value of 14,863 flats to 14,444 flats, a decrease of 419 dwellings, e.g. about 2.82%. Despite this slight decrease in the number of completed apartments is the second highest value for the last 14 years (since 1993). Compared to 2005 the total number of completed dwellings decreased representation of dwellings in family houses by 5.57%, and this trend has continued since 2004, when the completed dwellings in family houses accounted for only 68.07% of the total number of completed apartments. In 2007 this figure rose to 19.1% in 2008 decreased to 15.3% and in 2009 to 12.2%. In 2010, the share was at the level of 14.8% and in 2011 at the level of 10.8%. In 2011, the share of completed public housing its

lowest level since 2003, and to 10.1%. In family houses accounted for the largest share of four-room flats (42.9%) and five- and more rooms (30.0%). Of the completed apartments in apartment buildings, the highest two-room (39.6%) and three-room (30.9%).

In 2013, the number of started flats was 14,758, which is compared to 2012 (13,090 flats) an increase of 1,668 apartments, representing 12.74%. Number of completed dwellings (15,100) in 2013 compared to 2012 (15,255 flats) lower 155 flats, which is a decrease by 1.02%. Likewise, in 2013 was a fall in the number of apartments under construction on 1,401 apartments compared to 2012 (62,783 flats). From 2012 to 2016 the number of dwellings started to increase significantly, the number of completed dwellings is rising very slowly.

During the first half of 2017, 9300 dwellings were started and 7,102 dwellings were completed.

Compared to the first half of 2016, the number of dwellings started decreasing by 0.4%, the number of completed dwellings increased by 13.5%. In housing construction, the year-on-year growth of the number of dwellings started in the second quarter of 2017. The total number of dwellings started increased by 7.8% to 5113 dwellings compared to the second quarter of 2016 (by 7.4% in the private sector, by 32.9% in the public sector). The total number of completed dwellings decreased by 0.1% and reached 3155 dwellings (in the public sector it was lower by 65.2%, in the private sector it was higher by 1.4%) base on the information of the Statistical Office (SO) of the Slovak Republic. As of 30 June 2017, 74,188 flats were built. Compared to the same period of 2016, their number increased by 5293 dwellings (by 7.7%). Similarly, the construction of family houses increased, increasing by 2,321 dwellings (by 5.5%) to 44,708 dwellings. In the private sector, 72,659 dwellings were built (7.7% year-on-year) and 1529 dwellings in the public sector (7% growth). Most apartments were completed in Bratislava region (27.7%) and Trnava region (17.6%), at least in the Banská Bystrica region (4.1%). Compared to the second quarter of 2016, the number of completed dwellings in Žilina region (9.6%), Trnava region (by 8.2%) and the Bratislava region (5.7%) increased [28].

Financing Housing in the Slovak Republic Through Mortgage Loans

Mortgage lending is a worldwide tool used to finance housing. The need to improve the aging housing stock and the improving economic situation predict the positive development of the mortgage lending market in Slovakia as well [1].

At present, mortgage lending is the most widespread tool for housing development. The decisive moment of the beginning of mortgage banking in Slovakia was the adoption of the amendment to Act no. 21/1992 Coll. about banks in the form of Act No. 58/1990 Coll., Which entered into force in March 1996 [26].

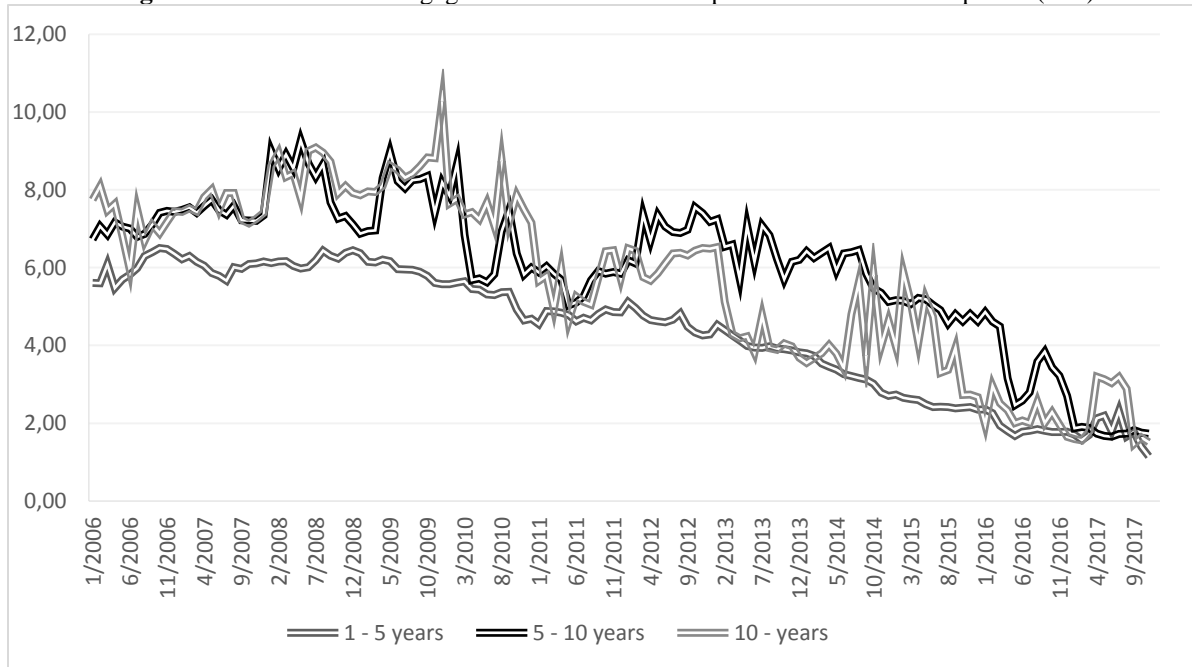
An important year for the development of mortgage banking in Slovakia was 1999. This was mainly due to the introduction of direct and indirect state support [23]. Indirect state support from 1 April 1999, which exempts interest income from mortgage bonds from income tax. The first issued by mortgage bonds was only the Všeobecná úverová banka, a. s. In the course of 1999, the first two issues of mortgage bonds issued a total volume of 200 mil. Slovak koruna (6.67 mil. €).

Through emissions and subsequent sales of VUB, and. s., acquired resources to provide new mortgage loans. Gradually, mortgage loans were provided by other banks in Slovakia. A stronger competitive environment among credit institutions has improved on the one hand the offer of mortgage loans but also on the other hand the conditions for those interested in mortgage loans.

Banks shifted the required margin to clients, making mortgages more affordable for clients who would not, under standard terms, meet the criteria for mortgage credit approval. Thanks to this,

Slovakia has experienced a dramatic increase in the volume of mortgage loans since 2005. The entry of Slovakia into the euro area as of 1 January 2009 was associated with a reduction in the basic interest rate. In Slovak commercial banks, the transition to the common currency was reflected in the gradual reduction of the interest rate on housing loans. Even in spite of the economic crisis that hit the Slovak economy, there was a slight increase in the volume of loans in 2009. In Figure 1 we can see the development of interest rates on mortgage loans according to the fixation period. The highest interest rate in the reference period in 2009, 10.61% for loans with a fixation for more than 10 years, this decreases gradually and in 2017 was at the level of 51.5% [27].

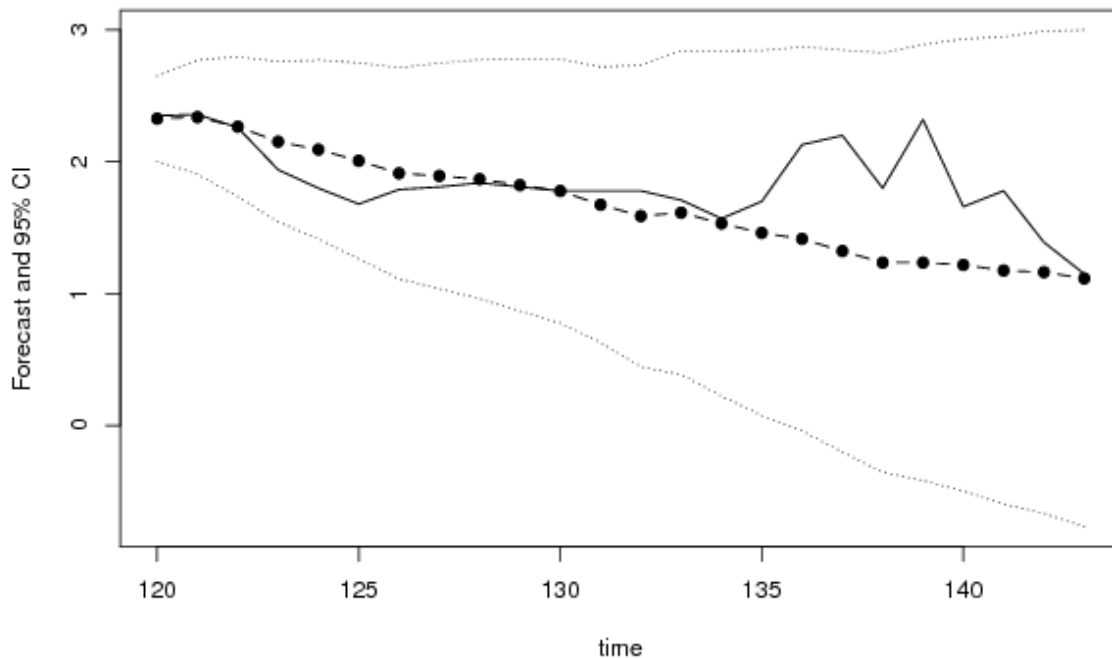
Fig. 1. Interest rates on mortgage loans and their development in the Slovak Republic (v %)



Source: database of data www.nbs.sk

For example, in 2011, interest rates on mortgage loans with a fixed rate of more than 10 years for an annual interest rate of 5.2%. For a 30-year mortgage loan of € 100,000, a monthly instalment of € 549 was granted, and in 2017 an identical mortgage loan was granted at an annual rate of 1.2 percent, which reduced the monthly instalment to € 331. At low interest rates on mortgage loans, the investment activity of households increases, while real estate investment is increasing.

Considering the strength of the domestic economy, the Slovaks are the most indebted ones in Central and Eastern Europe. The indebtedness of Slovak households is currently twice as high as before 2008. The share of household credit in gross domestic product (GDP) in Slovakia reached 40% of the annual output of the whole economy during 2017. Only in the last year household debt grew by CZK 3.54 billion. €. An increase in this indicator is also the highest in the euro area and within Central and Eastern European countries. In October 2016, household debt was 28.73 billion € and by October 2017 the debt increased to 32.27 billion. € [27]. The most significant risk stemming from the rapid rise in household indebtedness is the increase in their sensitivity to the possible deterioration in economic development. Figure 2 provides a prediction of interest rate developments modelled on the basis of the monthly interest rate fixations of up to one year for a period of 24 months, which confirms the downward trend, while maintaining the policy of the European Central Bank and the process of raising the interest rate.

Fig. 2. Forecast of the development of interest rates on mortgage loans in the Slovak Republic (24 months)

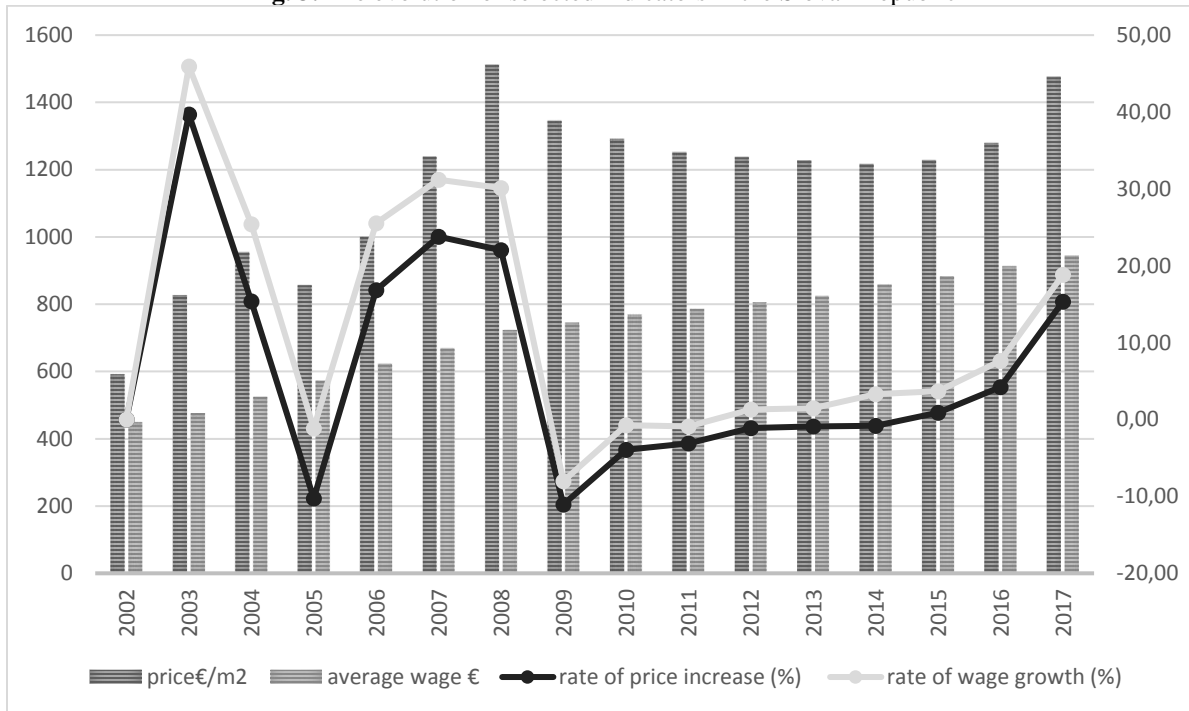
Source: own figure

The indebtedness of Slovak households is currently twice as high as before the previous crisis.

Several empirical studies confirm that excessive debt growth increases the likelihood of financial crises. In terms of wages, however, these Slovak wages grow most slowly in the V4 region. Only three times faster wage growth was in the Republic of Hungary, where wages increased by 12.5% in the first half of 2017, in the Czech Republic increased by 6.5% and in Poland by 4.6%. In Slovakia wages increased by 4.1% and the main reason for the slowest growth is still the highest unemployment in the region, which results in an increase in the number of non-performing loans.

Interaction of Economic Development and Housing Construction in the Slovak Republic

Housing construction depends on many factors, from the price of foreign sources, from the amount of savings of households or businesses, the money supply of banks, asset prices, and willingness of households or individuals to obtain housing. In the last years in Slovakia we are experiencing a period of interest rate cuts on mortgage loans, which results in a high rise in real estate prices. This fact has raised a number of questions about whether fluctuations in real estate prices have an impact on the real economy, or whether the impact of rising real estate prices on consumer real estate prices has affected. From a theoretical point of view, the links between real estate prices and multi-faceted macroeconomics are [17], [18]. Chart 3 shows the development of average real estate prices in m²/EUR, average wages as well as the development of the growth rate of real estate prices in m²/EUR and the growth rate of average wages in the Slovak Republic. It is evident that average wages also increase with average real estate prices, which confirms that with the rise in money supply, demand for loans is rising, which subsequently influences the rise in real estate prices.

Fig. 3. The evolution of selected indicators in the Slovak Republic

Source: own figure

The change in the price of real estate changes the value of the stock of the housing stock, which we see is the demand for money assets [9]. The relationship between lending and real estate prices is reflected in the level of housing wealth, loan demand and real estate supply. The existence of a multidimensional relationship between savings, loans, real estate prices and GDP in the Slovak Republic, we have made correlations between the selected indicators. The results of the analysis are presented in the following text.

Based on the analysis of the development trends of selected indicators (started dwellings, average price in €, average wage in €, volume of housing loans (mil. €), volume of housing loans and volume of GDP (mil. €) and we created a pair of variables. In the next part we present the results of the correlation analysis between the studied indicators. In the survey conducted according to the degree of dependence we find a strong indirect dependence - 0.99 between the indicator number of m² purchased per year and the length of saving in years. A strong dependence of 0.90 can also be found between the indicators of the unfolded flats total and the average flat price of 68m², the unfolded flats total and the gross domestic product of 0.86. Dependency of 0.75 is between the total of the dwelling and the saving period (in years), the completed dwellings total and the average price of the dwelling 68m², the unfolded dwellings total and completed dwellings altogether. Dependence is also on the indicators of the volume of loans for housing and unfurnished dwellings totalling 0.64 and the volume of loans for housing and gross domestic product 0.60. The assumption that the number of dwellings started and the gross domestic product depended on each other was not confirmed, as between the pointer and the gross domestic product indicator is a weak indirect correlation - 0.23.

By analysing the development of individual indicators, we find that their values have an increasing tendency, but this is not, in any case, very positive, because since 2004 the average price per m² of dwelling is growing faster than the average wage. This means that the rate of growth of

annual income for the purchase of own housing is slowing down and the saving time to acquire housing is prolonged since 2008. We also note a decline in interest rates on loans that are the lowest in history and growth in the volume of loans, with claims by Di Pasquale and Fallis that, at low interest rates, the household is trying to acquire housing, which has an impact on rising housing prices [3].

Very strong mutual collinearity (values between 0.8 and 0.99) between the average wage in the national economy and the volume of housing loans, 0.95, as well as the average wage in the national economy and the GDP growth of 0.98. At the same time there is a strong inter-collinearity between the development of GDP and the average price of the flat as well as the volume of provided loans for housing. This is related to the provision of support for people under the age of 36 with a monthly income lower than 3.5 times the subsistence minimum, contributions to mortgage loans, a state premium for building savings.

By examining the dependence of the indicators of the started flats and the average wage in the national economy, we find that since the growth of the average wage in the national economy, the number of started flats is not dependent. The development is asymmetrical, and the curve of the number of homes started reflects economic developments over the last decade, where the crisis is clearly evident in the development of the construction sector. By 2008, the correlation between the indicators examined was evident and since 2008 the correlation has been distorted.

Conclusions

The relationship to living reflects the relationship to life itself. Ensuring adequate and affordable housing is a key priority for all governments. Housing construction as part of a market-based economic system is designed to meet the need to live and to participate in it, households, businesses, government, and financial institutions. The assessment of the housing situation is carried out by evaluating the housing stock by means of several indicators we have analysed in the scientific paper.

By analysing housing construction in the Slovak Republic, we find that its intensity increased with good conditions in the mortgage credit market. Low interest rates support an increase in ownership, which currently accounts for 95%. It has a significant impact on labour mobility, increasing household indebtedness, since rental housing is basically non-existent. In conclusion, the availability of mortgage loans subsequently increases the demand for dwellings, and construction companies respond to this by raising real estate prices. If the situation continues to persist and property prices continue to rise, there is a risk of a real estate bubble.

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REFERENCES

1. Barr, N. A. (1993). *The Economics of the Welfare State*. New York: Oxford University Press.
2. Campbell *et al.*, (1976). *The Quality of American Life*.
3. DiPasquale, D., Wheaton, W. C. (1994). Housing Market Dynamics and the Future of Housing Prices. *Journal of Urban Economics*, vol. 35(1), pp. 1-27.
4. Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95/1984. Pp. 542-575.
5. Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press. 1990.

6. Fahrenberg, J., Myrtek, M., Schumacher, J., Brähler, E. (2000). Fragebogen zur Lebenszufriedenheit (FLZ). Handanweisung. Goettingen: Hogrefe. 2000.
7. Fallis, G. (1985). *Housing Economics*. Toronto: Butterworths.
8. Godwin, D. D. (1998). Household Debt Quintiles: Explaining Changes 1983-1989. *Journal of Consumer Affairs*. Volume 32, Issue 2, pp. 183-444
9. Greiber, C., Setzer, R. (2007). Money and Housing – Evidence for the Euro Area and the US; Deutsche Bundesbank Discussion Paper, Series 1: Economic Studies, No. 12/2007.
10. Golej, J. (2008). Vývoj hypotekárneho trhu na Slovensku, In: *Nehnutelnosti a bývanie*: Bratislava, roč. 3, č. 2, 2008.
11. Ira, V. (2003). Rural space in Slovakia: changes of spatial structures and spatial behavioural patterns. *Acta Universitatis Carolinae, Geographica*, 38, pp. 119-129. ISBN 80-246-0981-9, ISSN 0300-5402.
12. Jiboye, A. D. (2009). The challenges of sustainable housing and urban development in Nigeria. *Journal of Environmental Research and Policies*. 4(3), pp. 23-27.
13. Listokin, D., Burchill, R. W. (2007). *Housing (Shelter) Microsoft Student (DVD) Redmond*. W. A. Microsoft Corporation.
14. Labaj, J. (1993). *Byty, bývanie a bytová politika v trhovom hospodárstve*. Bratislava, Elita 1993. ISBN 80-85323-28-1
15. Marans, R. W. (2002). Understanding environmental quality through quality of life studies: The 2001 DAS and its use of subjective and objective indicators. *Landscape and Urban Planning*. 99(1), pp. 1-11.
16. Marans, R.W., Rodgers, W. (1975). Towards an understanding of community satisfaction. In: A. Hawley & V. Rock (Eds.), *Metropolitan America in contemporary perspective*. pp. 299-352. New York: Halsted Press.
17. Meltzer, A. (1995). Monetary, credit and (other) transmission processes: A monetarist perspective. *Journal of Economic Perspectives*, 9, pp. 49-72.
18. Nelson, E. (2003). The future of monetary aggregates in monetary policy analysis, *Journal of Monetary Economics*, 50, pp. 1029-1099.
19. Stanek, V. *et al.*, (2006). *Sociálna politika*. Bratislava: SPRINT VFRA, 2006. ISBN 80-89085-66-0
20. Omoniyi, O., Jiboye, A. D. (2009). Effective housing policy and sustainable development in Nigeria. *Proceedings of International Conference on Research and Development*. Cotonou, Benin. 2(15), pp. 87-93. November 24-27.
21. Ortalo-Magné, F., Rady, S. (2002). Home Ownership: Volatile Housing Prices, Low Labour Mobility and High-Income Dispersion. National Bureau of Economic Research, <http://www.nber.org>
22. Ortalo-Magne, F., Rady, S. (2006). Housing Market Dynamics: On the Contribution of Income Shocks and Credit Constraints, *Review of Economic Studies*, Vol. 73, No. 2, pp. 459-85.
23. Rybník, J. (2016). Hypotekárny boom. Banky prvýkrát rozdali miliardu. <http://finweb.hnonline.sk/spravy-zo-sveta-financii/787810-hypotekarny-boom-banky-prvykrat-rozdali-miliardu>.
24. Tremblay, K., Dillman, A. (1980). *Beyond the American Housing Dream: Accommodation to the 1980s*. University Press of America. 1983. ISBN 0-8191-3479-1.
25. Williams, P. (2007). *House (Architecture)*. Microsoft Encarta Corporation. (April 15, 2007).
26. Žuffová, A. (2014). O alternatívnych formách financovania bývania v SR. *Odborný mesačník pre financie a investovanie*: Bratislava, ISSN 1339-5416, 11.
27. www.nbs.sk
28. www.statistics.sk