INVESTMENTS IN HOUSING CONSTRUCTION: FEATURES AND MODERN TRENDS

Wladimir Gottmann
General Manager, Gottmann Estate Development GmbH, Germany
e-mail: w.gottmann@yahoo.de, orcid.org/0000-0002-5719-9853

Summary

The relevance of the topic of the article is due to the importance of the problems of investing in housing construction for the economy of any country. Mechanisms for financing housing construction are very diverse and are constantly evolving under the influence of many factors: geopolitical, economic (stability of the credit and financial, insurance and stock markets, national currency exchange rate, inflation rate, solvency of the population, etc.), technological (introduction of information technologies) and etc. The traditional methods of financing housing construction are: self-financing, budget financing, credit financing, mixed financing (equity financing (equity), public-private partnership, etc.). An urgent task is to search for new mechanisms for financing housing construction, which would allow expanding the possibilities of attracting funds from the population, potential buyers, businesses, and financial intermediaries. At the same time, it is important not only to expand the possibilities of attracting additional financial resources, but also to find mechanisms to ease the financial burden of payments for investors, reduce and distribute investment risks. Modern information and communication technologies create new opportunities for technical implementation and acceleration of investment processes, contribute to the emergence of radically new mechanisms that allow diversifying risks, expanding the number of investors, easing the debt burden for potential borrowers, etc.

Key words: housing market, leasing, mortgage lending, equity financing, digitalization, crowdfunding

DOI https://doi.org/10.23856/5833

1. Introduction

Investment problems are always relevant, both in economic theory and practice. Since it is investments, their dynamics and trends that determine the state and vector of development of the entire economy. Of course, an important part of this problem is investment in housing construction. The relevance of studying the features of investment processes in the field of housing construction is due to the importance of housing in the life of the population. Regardless of the level of development of the country, the state of the economic situation, housing construction is an indispensable part of any economy.

That is why the sphere of housing construction is very attractive for investment. At the same time, the scale and dynamics of the development of the housing construction sector are influenced by the state of the economic situation (phases and cycles of economic crises), the COVID-19 pandemic, the war in Europe, etc. This sector is dynamically developing and transforming under the influence of the turbulent processes of our time: globalization, digitalization, platformization, ecologization, etc. Under the influence of the negative trends of the global economic crisis, there is a slowdown in economic growth, a decline in production, an aggravation of inflationary processes, and a market capital crisis. This, of course, has an impact on the sphere of investment in housing construction, since during a crisis people are less inclined to buy property, preferring to wait until better times.

2. Features of the housing construction market

The housing construction investment market is generally characterized by high profitability, liquidity, investment reliability, and a relatively low level of risk. It also has significant variability. The variability is manifested, first of all, in the fact that not only the resources of business and professional investors are involved in investment, but also the funds of the population and state funds (due to the need to perform a social function). As a result, there are many options for mixed (joint) forms of investment. And the practice of such co-financing continues to develop and take on new forms in all countries. In addition, the goals of investment are also variable. In its intended purpose, housing satisfies vital and important needs in human life: security, place of residence, recreation, communication, entertainment, etc. In addition, housing can become a source of income when it is rented out.

In general, housing as a commodity has certain characteristics. First of all, this product refers to real estate that cannot be physically moved. Therefore, the process of its purchase and sale is a separate area of economic and legal services. Although housing is a commodity of prime necessity, it is still quite an expensive commodity. This means that, on the one hand, access to it is limited by effective demand and the income level of the population. On the other hand, there are opportunities for investment and development of its various forms and mechanisms.

Thus, housing is an investment good, and the way it is acquired is an investment process. The receipt of this product by the owner in the future can bring income to its owner or – satisfaction of the need for housing. Also, the housing market has an investment character, since it is able to have a significant effect on the economy. Production – housing construction – involves the involvement of significant volumes of other goods and employed workers. Also, the operation of housing by its owner requires a significant amount of other goods (furniture, household appliances, utilities – the so-called complementary goods). Therefore, in fact, the development of the housing market contributes to the development of many other markets, and thus it is able to initiate macroeconomic growth through multiplier effects.

The investment process in housing construction is a set of successively implemented processes of accumulating monetary resources from different sources, investing them in projects for the construction of residential buildings and / or integrated development of territories in order to receive investment income from their implementation and subsequent reinvestment of the income received in new investment projects of housing construction.

Thus, the 2020 World Bank report *(Housing…)* notes that housing plays a key socio-economic role and represents the main wealth in most developing countries. The UN estimates that the world population will reach 8.5 billion by 2030, with almost 60% of the population living in urban centers. By 2030, 3 billion people will need new housing and basic urban infrastructure. With rapid urbanization putting pressure on housing systems, many urban dwellers will not be able to afford formal housing without proper housing finance solutions.

This actualizes the need to search for innovative forms and methods of investment processes in the field of housing construction. That being said, it should be kept in mind that housing finance is also an important component in the process of deepening financial markets through sophisticated capital market products and links to a local and global institutional investor base. In this regard, the applied literature argues for the development of new financing schemes, which include access to long-term financing through capital market instruments, such as liquidity facilities and mortgage-backed bonds, as well as improved systems to stimulate long-term savings.

Investing in housing construction is an urgent problem of modern economic science and practice. Among the influential authors who develop the problems of investment in housing construction, can single out Agrawal A.K., Catalini C., Goldfarb A. *(Agrawal, 2013)*, Ahlers G., Cumming D., Günther Ch., Schweizer D., *(Ahlers, 2015)*, Firek A.M. *(Firek, 2017)*, Gostkowska-Drzewicka, M. *(Gostkowska-Drzewicka, 2016)*, V. Kuppuswamy, Lehner O.M. *(Lehner, 2013)*, Mollick, E. *(Mollick, 2014)*, P. Belleflamme, L. Hornuf, A. F. Gallego *(Gallego, 2011)*, Schweizer D., Zhou T. *(Schweizer, 2016)*, Jeff Howe *(Howe J., 2012)*, Schwienbacher A. *(Schwienbacher, 2010)*, Vogel, J.H., Moll, B.S. *(Vogel, 2014).* Despite the wide representation in the scientific literature, the search for new forms of investment or lending to housing that would make it more affordable and at the same time alleviate (as much as possible) the financial burden for borrowers remains relevant.

Traditionally, housing construction is financed through the use of household savings or funds accumulated by legal entities. At the same time, for investing in housing construction, borrowed funds from investors are most often used – through the issue of bonds, investment contributions, contributions from investment funds, trust companies or housing construction cooperatives. Also, the purchase of housing can be carried out through mixed sources of financing (savings of individuals and legal entities, attraction of public funds to partially offset the payment of interest (social housing) or pay part of the cost of housing). Investments in housing construction are understood as investments in the form of capital, direct, long-term investments of any form of investor ownership (state, private, mixed, foreign, general) for the purpose of creating, expanding, renovating and acquiring housing stock. The purpose of investing in construction is to receive a certain amount of income from investing all types of resources, property, values as a result of the process of investing in construction investment projects, programs and integrated solutions.

3. Housing finance forms

Each country has a different balance between the public and private share of total funding provision. Currently, in the field of housing construction, there is a combination of various methods, organizational forms and financing mechanisms. The main source of financing for housing construction in developed countries are private investments of individuals with the attraction of bank loans. At the same time, construction companies use external financial resources, including: attracted funds from investors – legal entities (partners); attracted funds of equity participants (individuals and legal entities); borrowed funds of financial and credit institutions; issue of securities. Consequently, it is possible to allocate budgetary and extra-budgetary funds as the main sources of housing construction financing (internal: profit, depreciation; external: bank loan, housing certificate, equity participation, mortgage loan); private investments (funds of individuals and legal entities, companies, non-profit organizations, associations, which may consist of own and borrowed funds); state funds (funds of different levels of the budget of the authorities, invested in order to provide citizens with housing); mixed investments (funds of investors of various groups, public-private partnership); foreign investments (funds of foreign companies).

Analysis of modern economic literature *(Mortgages ...; Daniel, 2008; etc)* made it possible to systematize the methods of financing housing construction, taking into account the organizational forms of financing and its instruments. The traditional methods of financing housing construction are:

- self-financing – when the recipient of housing independently pays for the purchase of all necessary construction goods and services at all stages of the investment process;
- budget financing – direct allocation of public funds to certain categories of housing recipients, banks, developers, etc.;
- credit financing – a system of various forms of lending for recipients, developers and other subjects of housing construction;
- shared financing – equity financing (joint-stock), public-private partnership, etc.

Self-financing is the use of profits, depreciation, redistribution of cash flows between investment objects. Shared financing of housing construction is a form of construction in which the company receives money from the buyer, and in return undertakes to provide him with an apartment of the parameters agreed in the contract. This method of financing is associated with the division of the right to own an enterprise and is used in such organizational and legal forms of entrepreneurial activity as partnerships and joint-stock companies in their various modifications. Shareholders can be both legal (organizations) and individuals. Initially, the investor, as a rule, assumes the obligation to invest in the construction and ensure that the construction is completed by a certain date. In turn, the shareholder (subinvestor) undertakes to invest in construction by depositing funds (or in any other way). Payment is made in stages, in installments, the apartment is redeemed before the end of construction.

This method of financing is associated with the division of the right to own an enterprise and is used in such organizational and legal forms of entrepreneurial activity as partnerships and joint-stock companies in their various modifications. Shareholders can be both legal (organizations) and individuals. Initially, the investor, as a rule, assumes the obligation to invest in the construction and ensure that the construction is completed by a certain date. In turn, the equity holder (subinvestor) undertakes to invest in construction by depositing funds (or in any other way). Payment is made in stages, in installments, the apartment is redeemed before the end of construction.

Participants in shared construction are the customer (legal or natural person acquiring the right to development in accordance with applicable rules); general contractor (construction company that carries out general construction management); subcontractor (a company engaged by the general contractor to perform certain works and services or supply materials); investor (legal or natural person attracted to finance the construction).

The advantages of shared construction compared to the direct purchase of housing in the primary real estate market are phased payment; indexing only the residual cost of construction under the contract; the cost of purchasing housing in shared construction, which, as a rule, is 10–20% lower than the market value of housing. When attracting funds from equity holders, several options for equity participation are used: equity participation with a 100% lump-sum payment; equity participation with staged payment; equity participation with offset of available housing.

Credit financing of developers and buyers involves the use of investment loans as organizational forms; project financing; mortgage loans; bond and bill loans; housing leasing; housing savings cooperatives. Currently, new financial and credit mechanisms for housing construction are being actively developed, new forms of attracting extrabudgetary sources of financing are emerging. Financing of housing construction objects with the use of non-state funds raised from individuals and legal entities, including those transferred for management, is becoming quite in demand. This can be done through construction financing funds, real estate transaction funds, joint investment institutions, as well as through the issue of target bonds of enterprises, the fulfillment of obligations for which is carried out by transferring a housing construction object (part of the object).

Currently, mortgage housing lending dominates in the area of housing acquisition, through which in developed countries up to 80-90% or more of all housing purchased in ownership is financed. Mortgages have four main characteristics [Daniel, 2008]: loan amount (principal amount); duration (or term) of the loan; loan repayment schedule (monthly payments or lump sum) and interest rate. So, a mortgage with a fixed interest rate is a mortgage loan in which the interest rate does not change during the entire term of the loan. Adjustable rate – the mortgage interest rate is linked to the underlying index; at agreed intervals, as the index adjusts, as do the interest rate and monthly payments. For example, in the US, the most common type of mortgage is the 30-year, self-absorbing, fixed-rate mortgage, where each payment is the same amount and pays a portion of the interest. and part of the principal until the loan is repaid.

In recent decades, the housing leasing market has been developing quite actively, which provides for the financing of housing construction carried out by leasing companies, which, by purchasing housing from construction organizations at the request of the lessee and renting it out, simultaneously lend to the lessee. As one of the significant advantages of housing leasing, one should consider the absence of the need for mandatory registration of a pledge for the purchased housing. Legally, a leasing company enters into a leasing agreement with an individual, according to which it pays the construction organization the cost of housing and leases it to this individual. At the end of the lease term, the leasing company transfers ownership to the lessee.

One of the most effective organizational forms of attracting financial resources is project financing, which provides for financing the construction of apartment buildings through escrow accounts (special escrow accounts that accumulate citizens' funds until the construction of the house is completed). The modern economic literature provides many definitions of the definition of project finance, which can be systematized in the form of the following concept: project finance can take the form of financing the construction of a new capital facility, and the borrower is usually a special purpose entity that is not allowed to perform any functions other than development, ownership and operation of the facility. The repayment of investments depends, first of all, on the cash flow of the project and on the collateral value of the project assets *(Basel Committee… 2004)*.

The origins of project finance can be traced back to the Middle Ages, when the British Crown sponsored silver mines with non-recourse loans from Italian merchant banks *(Henisz, 2014)*. However, the widespread practice of project finance only began in the early twentieth century with oil exploration in the United States *(Esty, 2014)*. The modern project finance toolkit as a financial risk management tool was developed in the 1980s when it became the main vehicle for financing large energy projects in the United States. And between 1991 and 2012, project finance raised over $2.5 trillion to finance over 6,000 international projects) *(Subramanian, 2016)*.

In the construction industry, project financing was first used in the United States in the mid-1970s, and according to this system, the developer finances the project with its own funds or bank loans, and receives funds from equity holders (apartment buyers) from the escrow account after the project is put into operation. At the same time, scientists focus on the issue of risk distribution in the framework of project financing *(Brealey, 1996)*. This is because most investments in public funds involve large-scale investments in assets tied to a particular location in highly uncertain conditions *(Hainz, 2012)*. For corporate finance, this makes projects too risky, leading companies to seek to identify the most important sources of risk and develop risk management strategies (eg contracts, equity) to address them. The use of such strategies allows certain sources of risk to be transferred to parties that are better able to manage them.

Depending on the scale, bank project financing and corporate project financing are distinguished; according to the level of risk allocation, project financing can be recourse, non-recourse and limited recourse; and depending on the method of mobilization and sources of resources: project financing, carried out at the expense of the project participants' own funds; bank loans; investments (placement of shares in the primary market, share contributions); bond loans; corporate loans; leasing. Thus, combined with project sharing and non-recourse cash-flow lending, risk sharing allows sponsors to make investments that would not otherwise be economically viable. By transferring a project to a non-recourse legal entity, sponsors protect their core operations from financial costs *(Subramanian, 2016)*. In addition, the high level of leverage increases the return on equity and makes investment in project finance a profitable business for sponsors *(Brealey, 1996)*.

Bond and bill loans are a widespread mechanism traditionally used to attract additional financial resources to large-scale investment projects. Securities in housing construction are documents confirming the owner's ownership of any property or amount of money that cannot be sold or transferred to another person without presenting the relevant document. So, the developer company issues bills of exchange for a certain amount and sells them to a construction participant. Upon completion of construction, the owner of the bills can receive an apartment or pay off the bills from the developer with the interest promised at the beginning of the issue.

The main advantages of using housing loan bonds in a financing scheme in comparison with equity construction include: a high level of liquidity and reliability of securities, the possibility of repayment of funds, and an increase in the value of bonds over time. In general, a bond as a security is a debt obligation, according to which the borrower guarantees the lender the payment of a certain amount after a specified period and the payment of an annual income in the form of a fixed or floating interest.

A housing construction cooperative (HBC) is created for the construction of a specific house, construction is financed mainly from the shares of the housing cooperative, which has an appropriate agreement with the developer. A cooperative is a non-contractual form of association of citizens on the basis of membership, uniting and directing their material resources to meet their needs in obtaining housing or improving housing conditions. Resources from this fund are used to purchase apartments for shareholders who have contributed 50% of the estimated cost of the apartment and are the first in line. In the future, the shareholders, to whom the cooperative has provided 50% of the cost of the apartment, return to the mutual aid fund the money that the cooperative spent on purchasing the apartment.

At present, construction financing has also become widespread through the creation of joint investment institutions (venture funds), which can be corporate or mutual. The content of this financing is that the developer forms a venture fund by selling investment certificates to a certain number of investors. A corporate fund is a legal entity formed in the form of a joint-stock company and carrying out exclusively joint investment activities. In turn, a mutual fund is a set of assets owned by the participants of the fund on the basis of the right of common shared ownership, are managed by an asset management company and are accounted by it separately from the results of its economic activities.

4. Current trends in investment in housing construction

Due to the impact of the global crisis and negative trends (COVID-19, Russian aggression), the financial situation in the housing market is very unstable. Thus, the World Economic Forum 2022 report “Five Strategies to Help Solve the Global Housing Crisis” *(Here…)* notes that more than half of US households cannot afford a $250,000 home, while the average home price across the country is $408,100. Approximately 11 million Americans spend more than 50% of their income on rent. In Hong Kong, renters spend a record 50.3% of their income on housing. Last year, rents in Phoenix, Arizona increased by 30%. Single-family home rental prices in the US rose by a record 7.8%. Home prices for sale rose 16.9%, faster than household income growth. The stock of homes for sale fell 48.7% from January 2019 to December 2021 to an all-time low of just 753,102 units available for a country of 333 million people. These trends, according to experts, are directly related to the problems of the financing market, both for large investors and for citizens seeking to invest in the purchase of housing.

In such a situation, the problems of finding new investment mechanisms are actualized. Modern information technologies contribute to this and lead to revolutionary changes in the processes of investing in housing construction, the dynamic development of which is accompanied by the creation of digital platforms. There are such innovative forms and methods of investment as: crowdfunding, crowdinvesting, crowdlending, real estate investments through cryptocurrencies and blockchain. All these new phenomena fundamentally change the structure and management of business, models of interaction with the consumer, including investment processes.

5. Conclusions

The housing construction market is an important part of the economy of any country. Due to the characteristics of such a product as housing (essential item, high price, investment nature, etc.), this market is constantly evolving and acquiring new forms. An urgent task is to search for new mechanisms for financing housing construction, which would allow expanding the possibilities of attracting funds from the population, potential buyers, businesses, and financial intermediaries. At the same time, it is important not only to expand the possibilities of attracting additional financial resources, but also to find mechanisms to ease the financial burden of payments for investors, reduce and distribute investment risks. Modern information and communication technologies create new opportunities for technical implementation and acceleration of investment processes, contribute to the emergence of radically new mechanisms. All these processes are of considerable interest for further scientific research.

References

1. Agrawal A.K., Catalini C., Goldfarb A. (2013). Some simple economics of crowdfunding. Working Paper 19133, National Bureau of Economic Research, Cambridge, 1–47. URL: https://www.nber.org/papers/w19133

2. Ahlers G., Cumming D., Günther Ch., Schweizer D., (2015) Signaling in Equity Crowdfunding. Entrepreneurship Theory and Practice, Volume 39 Issue 4, July 2015. URL: https://journals.sagepub.com/doi/10.1111/etap.12157

3. Basel Committee on Banking Supervision (2004) International convergence of capital measurement and capital standards – a revised framework, vol June. Bank for International Settlements, Basel.

4. Beidleman CR, Fletcher D, Vesbosky D (1990) On allocating risk – the essence of project finance. Sloan Manag Rev 31:47–55 URL: https://www.proquest.com/openview/0760dc2693e594d50c404cf597a8c15f/1?pq-origsite=gscholar&cbl=26142

5. Brealey RA, Cooper IA, Habib MA (1996) Using project finance to fund infrastructure investments. J Appl Corp Finance 9:25–39 URL: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1745-6622.1996.tb00296.x

6. Daniel J. McDonald and Daniel L. Thornton, "A Primer on the Mortgage Market and Mortgage Finance", Federal Reserve Bank of St. Louis, January/February 2008, http://research.stlouisfed.org/publications/review/08/01/ McDonald.pdf

7. Esty B, Chavich C, Sesia A (2014) An overview of project finance and infrastructure finance–2014 Update. In: Working paper. Harvard Business School, Boston. URL: https://hbsp.harvard.edu/product/214083-PDF-ENG

8. Firek, A.M. (2017). Real Estate Crowdfunding – Tłum jako alternatywne źródło finansowania nieruchomości, Rynek – Społeczeństwo – Kultura, No 3(24). URL: https://www.academia.edu/99311447/Real_Estate_Crowdfunding_T%C5%82um_jako_alternatywne_%C5%BAr%C3%B3d%C5%82o_finansowania_nieruchomo%C5%9

9. Gallego A.F.A. (2011). Crowdfunding: decisiones de implementación en las industrias creativas de países emergentes Kepes, V.8, N 7 págs. 159–169

10. Gostkowska-Drzewicka, M. (2016). Crowdfunding jako źródło finansowania inwestycji wnieruchomości, Finanse, Rynki Finansowe. Ubezpieczenia, No 1/2016(79), 62–65.

11. Hainz C, Kleimeier S (2012) Political risk, project finance, and the participation of development banks in syndicated lending. J Financ Intermed 21:287–314.

12. Henisz WJ (2014) Corporate diplomacy: building reputations and relationships with external stakeholders. Greenleaf Publishing, Sheffield; Kensinger and Martin 1988.

13. Here are five policies to help solve the global housing crisis URL: https://www.weforum.org/agenda/2022/03/how-to-solve-the-global-housing-crisis/

14. Housing Finance URL: https://www.worldbank.org/en/topic/financialsector/brief/housing-finance

15. Housing Finance in South Eastern Europe: Materials by the seminar organized by Council of Europe on housing finance for the South East Europe Housing Network on Housing Finance. URL: http://pdc.ceu.hu/archive/00005330/01/Compara tive_Studies_Housing_Finance_in_SEE.pdf (15.03.2017)

16. Howe J. (2009) Crowdsourcing: Why the Power of the Crowd is Driving the Future of Business [Book Review]. New York, NY: Crown Business https://www.researchgate.net/publication/280205170_Crowdsourcing_Why_the_Power_of_the_Crowd_is_Driving_the_Future_of_Business_Book_Review_2009_Jeff_Howe_New_York_NY_Crown_Business.

17. John TA, John K (1991) Optimality of project financing: theory and empirical implications in finance and accounting. Rev Quant Finance Account 1:51–74

18. Lehner O.M. (2013). Crowdfunding social ventures: A model and research agenda. Ventur. Cap. 15, 289–311 URL: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2102525

19. Mollick, E. (2014) The dynamics of crowdfunding: An exploratory study. J. of business venturing. 2014. Vol. 29, № 1. P. 1–16.

20. Mortgages in the USA. URL: http://www.emigrate2.co.uk/ emigrate-to/emigrate-to-usa/mortgages-inamerica/; Housing Finance in South Eastern Europe: Materials by the seminar organized by Council of Europe on housing finance for the South East Europe Housing Network on Housing Finance. URL: http://pdc.ceu.hu/archive/00005330/01/Compara tive_Studies_Housing_Finance_in_SEE.pdf (15.03.2017)

21. Schweizer, D., Zhou, T. (2016). Do Principles Pay in Real Estate Crowdfunding? Do Principles Pay in Real Estate Crowdfunding? Journalof Portfolio Management, Vol. 43, No. 6, 2017. URL: https://papers.ssrn.com/sol3/papers2.cfm?abstract_id=2846892.

22. Schwienbacher A. (2010) Crowdfunding of small entrepreneurial ventures / A. Schwienbacher, B. Larralde // The Oxford Handbook of Entrepreneurial Finance / ed. D. J. Cumming. Oxford, Oxford University Press, 2010.

23. Subramanian KV, Tung F (2016) Law and project finance. J FinancI Intermed 25:154–177.

24. Vogel, J.H., Moll, B.S. (2014). Crowdfunding for real Estate. The Real Estate Finance Journal, Summer/Fall, p. 11. URL: https://faculty.tuck.dartmouth.edu/images/uploads/faculty/john-vogel/crowdfunding_real_estate.pdf