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INDIRECT INVESTMENT OPPORTUNITIES INTO THE BALTIC REAL ESTATE
MARKET — A NATURAL PERSON'S PERSPECTIVE

Bachelor's Thesis

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I have written this Research paper/Bachelor Thesis independently. Any ideas or data taken from other authors or other sources have been fully referenced.

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Introduction

“Someone’s sitting in the shade today because someone planted a tree a long time ago.”

- Warren Buffett

Buying a real estate object for investment purposes remains a common investment option among representatives of the wealthy class of all countries. An alternative to direct investment in real estate is the market of financial instruments related to real estate. It is called indirect way investment (Kharin & Volodin, 2008). This way does not require such a large amount of funds as buying the real estate object. Moreover, this is the mode of investing where one does not acquire assets directly. Indirect investment is usually considered to be a safe investment and is very popular among investors due to its great degree of liquidity, clarity, and possibilities of diversification (Joneikytė, Drejeris, 2012).

As was already said, the author would like to consider the real estate market of Estonia as a sphere of investment. Being one of the key factors of economic growth, real estate investments have a large multiplicative effect, which extends to both the micro and macro levels (Lenkovets, 2009). Investments in this sector have always been popular, as Franklin D. Roosevelt once said: “Real estate cannot be lost or stolen, nor can it be carried away. Purchased with common sense, paid for in full, and managed with reasonable care, it is about the safest investment in the world”. Another limitation of the work is that it will consider methods as a holder of capital. Despite many works on investments, both in terms of direct and indirect ways, not a single study examined the overall structure and ability of an individual to indirectly invest his money in the real estate sector as a holder of capital. Moreover, no previous research was done on the Baltic real estate companies. This article fills this gap by exploring possibilities of investing in the real estate market from the point of view of individuals.

Putting it all together, the current dissertation is devoted to indirect investments in the Baltic real estate market from the natural person’s perspective. While considering opportunities/risks of alternatives of indirect investing in the real estate market available for the natural person, the author plans to rely on annual financial reports, which are the main source of financial data of Baltic real estate organizations. The work will help an investor without capital for direct investment in real estate to get an overview of the opportunities in the real estate sector.

The aim of the thesis is to determine the opportunities of indirect investment in the Baltic real estate market from the point of view of a Natural person. As a result of this

research, the author will reveal the full range of opportunities for indirect investment in the Baltic real estate market, to provide useful information to an investor. The author will study business models, the type of securities in which an individual can invest capital, discuss the financial indicators of the publicly traded organizations in the Baltic States, and reveal their project diversification by real estate segments and geographical exposure.

To achieve the aim and result, the author formulates several research tasks of a theoretical and empirical nature:

- To give an overview of real estate as an investment asset.
- To study the real estate business models.
- To reveal real estate indirect investment instruments as an equity holder.
- To calculate and analyse the financial performance indicators of Baltic real estate companies.
- To study the geographical exposure of future projects and to consider the types of real estate that Baltic real estate companies consider as a future projects.
- To provide useful information about the possibilities of indirect investment in the Baltic real estate market.

The thesis consists of two parts, theoretical and empirical. The research tasks of the dissertation are distributed in such a way that the first three research tasks are completed in Chapter 1, and the rest in Chapter 2. In the theoretical part of the thesis, the author builds a structure that he is going to apply when conducting an empirical analysis; The author is convinced that the work will be useful not only for people interested in investing, but also for large companies that plan to invest in the real estate market.

KEYWORDS: real estate investment, investment instruments, real estate business models, Baltics real estate companies.

1. Indirect ways of investing in real estate – theoretical foundation

1.1. Real estate as an investment asset

Real estate refers to the physical property and land that includes buildings, natural resources, and other improvements that can be bought, sold, or rented for use as a residence, business, or other purpose. Real estate can include a wide range of properties, including residential homes, commercial buildings, industrial properties, and land. Real estate is a major component of the global economy. It is a complex and dynamic industry that involves a range of professionals, including real estate agents, brokers, developers, property managers,

and lenders. Real estate transactions can be complicated and involve legal, financial, and regulatory considerations.

In addition to providing housing and commercial space, real estate is a popular investment option, with many individuals and institutional investors using real estate to generate income and grow wealth. Real estate is subject to a range of factors that can impact property values and investment returns, including economic conditions, supply and demand, interest rates, government policies, and local market conditions. Successful real estate investing requires a thorough understanding of these factors and careful analysis of individual properties and markets.

Overall, real estate plays a critical role in the global economy and offers a range of benefits and challenges for investors and property owners alike. Whether used as a residence, business, or investment, real estate is an important asset class that has the potential to generate significant returns and contribute to long-term wealth creation. Investment real estate is one of the options for investing your household savings. Krulický and Horák (2019) confirmed that Investment real estate is real estate that can bring the expected profit to its owner. There is no guarantee of income but based on the statistics and facts given below in the work, an individual can expect an increase in the capital from investments.

Most likely, everyone can determine that a country house, an apartment in the city and an empty land plot are real estate. However, not everyone imagines a hierarchy. To talk about the real estate market further, it is necessary to start with the basics - with real estate classification. Companies involved in this sector cover different types of real estate, as shown in Figure 1, real estate is divided into several groups. Based on the information in the figure, we can list several examples of how companies generate cash inflows from their real estate assets.

According to the Kaplan, Inc., Real estate is most often divided into residential real estate and non-residential one. Property acquired to generate income is generally considered commercial property. Non-residential property consists of commercial property, excluding apartment buildings, and other property such as land. Figure 1 also provides examples of each section. Investors are demanding a higher rate of return on heavily managed properties while it has higher operational risk. (Kaplan, Inc., 2016)

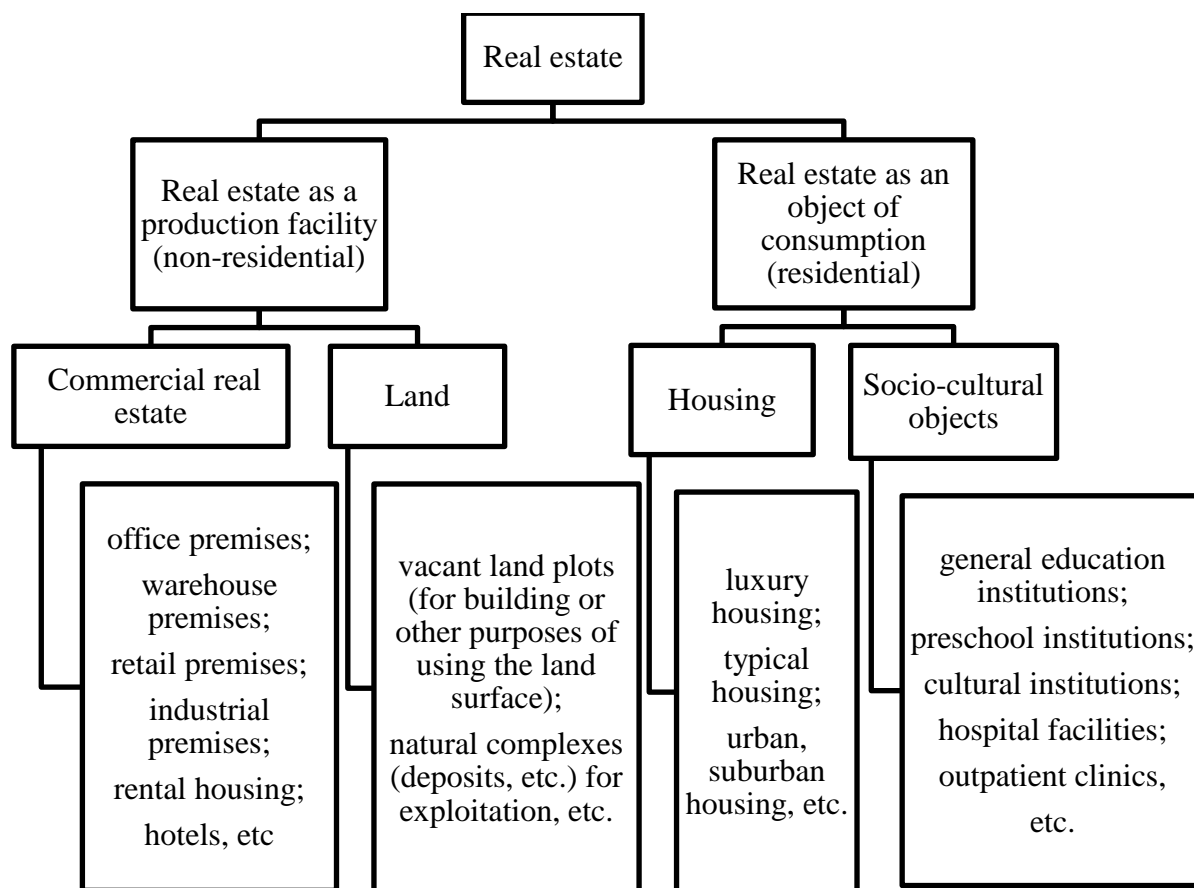


Figure 1. Classification of Real estate

Source: Lenkovets (2009)

Investments in real estate have several advantages over investments in other areas. They meet the requirements of safety and security to a greater extent. For example, a land plot, an office, or an apartment in this regard has more attractiveness than stocks, bonds, or savings accounts in banks and other financial companies. Real estate investments are more controlled by investors, they are less influenced by political and social factors, market panic, etc. Real estate is also attractive to investors as a portfolio asset, as a diversified portfolio of investments gives firms greater financial stability. (Lenkovets, 2009)

Ghent, Torous, and Valkanov (2019) expressed their conclusions about Commercial Real estate. The authors are confident, that it should be considered in a well-balanced multi-asset portfolio for the following reasons:

1. Risk-adjusted returns: Commercial real estate outperformed both stocks and bonds over the past 20 years while realizing lower volatility than stocks.
2. Reliable income: Commercial real estate may be accretive to portfolio income, generating outsized yields relative to both stocks and bonds. Over the past 20 years,

commercial real estate has produced an annual yield of 4,3% versus 1,9% and 3,9% for stocks and bonds, respectively.

3. Diversification: Commercial real estate has exhibited low or even negative correlations to major asset classes over the past 20 years.

4. Potential hedge against Inflation: As a hard asset whose value tends to increase with replacement cost over the long term, commercial real estate provides a potential hedge against inflation.

Along with that, real estate investments provide tax benefits: Real estate investors can benefit from the tax deduction. Long-term growth potential is another advantage because Real estate can appreciate in value over time.

Overall, real estate can be a valuable investment asset that provides a range of benefits to investors, but it is important to carefully evaluate the risks and rewards before investing. Additionally, it is important to consider your investment goals, risk tolerance, and financial situation before investing in real estate.

However, real estate investing also comes with risks and challenges, such as property management responsibilities, market volatility, and liquidity constraints. Additionally, as was already said, real estate investments typically require a significant amount of capital, which may limit the accessibility of this asset class to some investors. Author collects the protentional risks for the investor. According to Kaplan, Inc. (2016), there are several principal risks connected with real estate investment:

- Business condition. Economic conditions such as the GDP of the country, interest rates, income amount, inflation, etc.
- New property lead time. Risks in the process of obtaining permits, completion of the construction of the facility and, its full lease.
- Cost and availability of capital. Real estate prices can be influenced by capital market forces without changes in tenant demand. For example, if there is access to borrowed capital, then the demand for real estate will be higher.
- Unexpected inflation. Inflation affects the price of renting and the costs of real estate.
- Demographic factors. The demand for real estate is correlated with the age group and size of the population.
- Lack of liquidity. A quick sale in most situations is impossible without a discount.

- Environmental issues. The condition of the apartment plays a significant role in its cost.
- Availability of information. A lack of information about the object increases the risks of investment.
- Management expertise. Mismanagement of the property, a bad deal during the negotiations of a lease, and poorly done renovations can negatively impact investment.
- Leverage. The use of leverage increases risks because, with a slight change in net operating income, cash flows change significantly.
- Other factors. Natural disasters, acts of terrorism, wars, etc.

In the work of Worzala and Sirmans (2003), the authors found additions to the main risks of real estate investments. They confirm that when investing internationally in real estate, you can face both economic and political risks. The choice of the country to invest in, of course, is a determining factor for the effectiveness of the investment. Worzala and Sirmans (2003) wrote that the main risks in choosing a country, where investors want to put their money in the real estate market, include high current account deficits, inflated exchange rates, high inflation, large short-term debt denominated in dollars, low capital accumulation, poor regulation of the banking system and corrupt government supervision/nepotism.

The second serious risk is the lack of transparency of the company. It may be difficult to obtain reliable information about the results of activities, investments, and lack of ownership rights. Liquidity is also a serious risk for international investors. Liquidity is affected by the availability of debt and equity capital, as well as the tax regime existing in various countries.

Worzala and Sirmans (2003) support the idea of other authors and write that there is a high degree of liquidity risk in most markets. In addition, changes in real estate prices are difficult to fully hedge, which creates a source of currency risk. His work also emphasizes that additional risks that are sometimes ignored in research are tax, accounting, and legal risks, as well as property, rights, and powers of the local police.

Of course, it is impossible to list all kinds of risks, but this list emphasizes the main aspects that an investor should consider. It is impossible to eliminate all the risks for real estate market participants. These risks should be considered and compensated with the revenue part. Real estate investments require constant monitoring and management. It is necessary to react quickly to changes in market dynamics, competitive conditions, and rental rates.

It is believed that the primary task of investing is to preserve capital, and only then achieve profitability rates or maintain solvency. After the approval of the overall risk management strategy, it is necessary to identify specific risks to which the company is exposed. At the same time, a detailed analysis of risks and triggers that can cause them is necessary to study whether it is possible to control these risks. (Wiegelmann, 2012)

1.2. Real estate business models

The author is convinced that when buying any security, an investor should be sure that he understands the structure of the organization and the process by which this organization generates funds. That is why in this part the main business models of real estate companies will be considered. The earnings dilemmas and models that will be described below can be and are most often used, by companies and individuals too. The author has tried to convey the basic structure of the processes.

Titova (2020) emphasizes the following business models:

- 1) Real estate Development (REOC Model)
- 2) Construction
- 3) Investing in rental properties (REIT Model)

Real estate Development. Real estate development is an entrepreneurial activity related to the creation of a real estate object, reconstruction, or modification of an existing building or land plot, leading to an increase in its value, which is why it is also often called "Flipping". Leone and Mucedola, (2020) defined the concept of "flipping" as the acquisition of an asset to resell it in an abbreviated time and at a price higher than the purchase. In other words, the buyer receives the property with the discount due to its poor condition or other circumstances. After forcing the seller to reduce the price, the developer deal with repairs, and sell at full market value. When all the necessary repairs are done, the developer sells the property at a higher price, receiving the difference between the full market price and the discounted price with cost of the improvement. The faster the resale takes place, the more effective is the investment. Before making specific investments, it is extremely important to know how much it costs to complete the necessary adjustment (Depken, Hollans, & Swidler, 2009).

Chen and Brown (2022) confirm the idea of the profitability of development, saying that investment real estate can provide capital gains for investors by increasing the value of the real estate over time. It is important to note that capital gains can be made only after the sale of the object.

A special case of resale of real estate is the purchase of it at the stage of the excavation and the sale of already built housing. Some objects in the real estate market are purchased when the foundation for the apartment has not yet been laid. Although there is more risk in such transactions, the lower cost of apartments compared to already operated objects makes them attractive to buyers.

Currently, the Culture of "fix and flip" has gained great popularity. According to Adams (2017), the basic principle is the following: "Look for the ugliest houses in the most beautiful neighbourhoods". That is the real value of this way of earning. There are also many difficulties. It is a challenge for a company's employees to find these houses. Most often companies collaborate or hire real estate agents, as they bring an understanding of the value after renovation. To determine exactly how much the house will cost after the investment in repairs real estate company, fund, or trust need a strong relationship with the general contractor and a tour of the property. In this type of business, understanding the main costs and potential value is of great importance. (Adams, 2017)

Chen and Brown (2022) gave an example that Investment real estate can also take the form of a property in disrepair or otherwise underdeveloped, for repair after purchase. Further, a company may have the intention to rent an object for long-term profit or immediately sell it after repair to generate income.

Real Estate Development is comparable to another business model in American jurisprudence, which is called REOC. That is why the author would like to consider this model as one. Robert C. Kelly (2021) formulated that Real Estate Operating Companies (REOCs) are businesses that purchase, develop, manage, and sell real estate.

The shares of REOC are publicly traded and listed on a major stock exchange. According to Baker and Chinloy (2014), REOC's profits come from leasing and selling portfolio real estate, project development, property management, and related services. REOCs can protect investors from some of the risks associated with real estate ownership. In addition, it does not require huge investments, compared to buying real estate directly (Chen, Clemons, & Logan, 2022). It can be conducted, that owning several shares in one of these companies gives the investor immediate access to several diverse types of real estate. This property is carefully selected and after the conclusion of the contract, it is managed by specialists who represent REOC.

Construction. In general, the construction business model includes identifying projects and bidding, managing the construction process, ensuring that quality and safety standards are met, managing subcontractors, and maintaining positive customer relationships.

Successful construction companies are normally able to balance these elements to deliver high-quality construction projects that meet customer expectations while remaining profitable. They do not have the opportunity to resell ready-made real estate objects, the task of construction companies is to build an object and hand over an already finished asset. According to the results of Pekuri, Pekuri, and Haapasalo (2013), construction managers link business models to the areas of activity of their companies, business segments, working methods, or certain types of projects and contracts, while linking their goals with providing more work. Pekuri, Pekuri, and Haapasalo (2013), concluded that research in the field of construction business models is not sufficiently developed and that business models in the construction industry should be studied and developed at the level of spheres of activity or business segments.

Investing in Rental Properties. The model through which capital can be increased in the long term is buying real estate and renting it out. Buying a rental home can be a terrific way to increase monthly cash flow. It is important to note that it is impossible to assure or give an accurate forecast that the investment will generate income since any return on investment implies a kind of risk. Comparing Real Estate with the Stock Market, the first one is usually more stable, but it does not release a potential investor from the uncertainty of the outcome. Based on these considerations, a person should be aware of the situation and always have a backup plan. In this case, this plan should be expressed in the availability of funds that will be used if something goes wrong. (Hawrylack, 2021)

Chen and Brown (2022) concluded that companies buy real estate for the sake of the stable income stream that it provides. All real estate from the above classification can be rented out and tenants pay the owner every month until the expiration of the lease agreement. It is also interesting to note that during the lease, the property has its value and after a certain time can be sold. In this case, a company can receive monthly income for a certain time, and then receive capital gains due to the price of the object.

In American jurisdiction, this model calls Real Estate Investment Trust. Chen, Mansa, and Kvilhaug (2022) described the REIT as a company that owns, manages, or finances income-generating real estate. It's a trust, which invests directly in Rental properties and distributes the rent income to its shareholders.

REITs combine the capital of numerous investors. This allows individual investors, in our case individuals with small capital, to receive dividends from real estate investments — without having to buy, manage or finance any real estate themselves. REITs invest in most types of real estate from the classification given in figure 1, including apartment buildings,

hotels, medical institutions, offices, shopping centers, and warehouses. In simpler words, a REIT rents premises and collects rent for real estate, and then distributes this income as dividends to shareholders. (Chen, Mansa, & Kvilhaug, 2022)

An equity REIT is a company that owns real estate and has operating income. The income of investors is formed from the rent received for real estate. When a company sells its real estate, investors will receive additional income if the sale value is higher than the price at the time of the conclusion of the contract. Dividends are paid on an annual basis, after payment of the operating costs of the property.

As of January 2022, REIT dividends were paid by an average of 2,59%, according to data provided by NYUs Stern School of Business (2022). Of course, the REIT is divided into different sectors and each of them offers different dividend payments. In this case, the average indicator will be taken. For comparison, the author could take S&P500 funds that offer a dividend yield of about 1,82% as of September 2022 (S&P 500 Dividend Yield, 2022).

To sum up the material, Figure 2 contains information on the process of creating and selling real estate, the entire process affects the listed three business models.

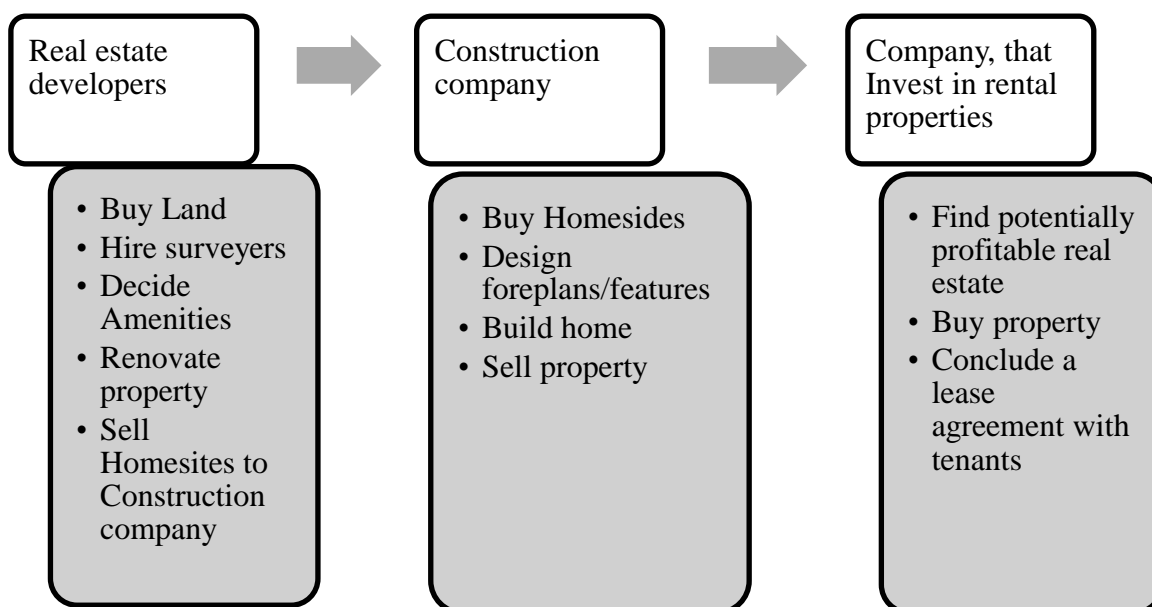


Figure 2. Process of the interaction of three models

Source: compiled by the author

Figure 2 describes the interaction between the three listed models. First, real estate developers buy land and prepare this land for development by the steps listed in the figure, after that they sell this land to construction companies. The construction company, after

creating the structure and everything necessary for its functioning, sells the real estate object. From here, the model of investing in rental premises comes into effect, which is engaged in the purchase of these premises and then begins the process of renting out. It is also important to note that in some cases the developer company does not sell the land for construction but hires the construction companies' company and after the creation of the structure sells the property independently.

1.3. Indirect investment instruments as an equity holder

As mentioned earlier, investors who buy real estate directly should be able to finance it, spend money on improvements, maintenance, and be prepared for the risks that accompany the property. Since all the main ways of obtaining cash flows from real estate mentioned in 1.1 require a large initial capital, in this chapter the author will discuss financial instruments through which an individual can enter the real estate market as a holder of capital. This allows an individual to be a participant in the growth of the real estate market, in the absence of a monetary equivalent for the ways of earning described above.

The author writes the following financial instruments through which it will be possible to invest in real estate indirectly:

- Equity-based Crowdfunding
- Securities - Stocks (Stocks of real estate development/construction companies)
- Funds (Mutual Real Estate Funds, Exchange-Traded Real Estate Funds)

Crowdfunding. Smith, James, and Li (2022) stated that Crowdfunding is the financing of a start-up business enterprise by using small amounts of capital from many individuals. Crowdfunding gives entrepreneurs a chance to attract massive amounts of money to their projects from individuals who have the capital to invest. Crowdfunding provides a forum for everyone who has an idea to present it to potential investors. This is useful for startups or individuals who are doing business, as it allows them to reach a wider and more diverse range of investors/sponsors of the crowdfunding platform — a terrific way for individuals to indirectly invest their money in real estate companies. (Smith, James, & Li, 2022)

Table 1

Advantages and Disadvantages of Crowdfunding as a method of indirect investment

Advantages	Disadvantages
Access to financing that you would not otherwise qualify for from traditional sources	Must follow the rules/fees of the crowdfunding platform
A great way to interact with potential consumers	In some cases, if funding goal is not reached, all the funds that were

	pledged will be returned to your investors
The ability to evaluate public opinion about your product	Possible damage to the reputation of a start-up company
Less investment required	Sometimes open only to accredited investors
Choose your investment opportunity	Lack of liquidity
Source of passive income	High level of risk

Note: The table also highlights the advantages and disadvantages of Crowdfunding overall

Source: Gobler, Kelly (2021); Smith, James, Li (2022)

Since this paper considers investments as an equity holder, The author studied equity-based crowdfunding. There are usually three parties involved in the equity real estate crowdfunding scheme: 1) the creator of the project is an individual/legal entity who has an idea of acquiring or reconstructing a certain building; 2) private individuals (crowd) acting as investors (usually retail) who contribute the financial resources necessary for the development of the project. 3) a crowdfunding platform is an intermediary between the first two players. Real estate projects are published on the resources of this platform and the most necessary information is provided to investors. Upon receipt of an amount from investors sufficient for the implementation of the project, a special corporation is created, and crowdfunding investors receive shares of the specified corporation. The purpose of this company is to purchase the selected real estate object and prepare and lease it until this object is sold at a profit. Thus, crowdfunding investors will receive the income received from renting out the property, and the value assigned to their rights to shares, during the subsequent liquidation of the company when the property is sold. (Garcia-Teruel, 2019)

Equity crowdfunding is becoming increasingly popular because it is a viable alternative to direct investment in real estate and can become a rapidly developing part of the indirect investment market. One view is that it is the beginning of building a sustainable business (Mochkabadi, & Volkmann, 2020).

Stocks of real estate development/construction companies. The author would like to emphasize that one of the possible ways to enter the indirect real estate investment market may be the purchase of such a financial instrument as a stock. From the University courses students could know, that an individual can buy this security, which allows them to receive a part of the company's profit or a share in the division of its property. In this case, an individual can purchase shares of companies engaged in real estate development or construction, thereby becoming an indirect participant in the real estate market.

Before investing in a development or construction company, it is necessary to accurately assess all the associated risks and possible benefits. The author highlights some factors that need to be paid attention to:

- **Market conditions now:** Development and construction companies strongly depend on the state of the real estate market. If the market is on the decline or in recession, companies participating in the market may have difficulty obtaining profitability. Conversely, with a stable and growing real estate market, these companies have more opportunities for growth and expansion.
- **Quality of management:** the success of a development or construction company depends on proper management. Studying the qualifications and level of professionalism will help you choose dependable partners.
- **Financial indicators:** it is necessary to analyse the financial statements of the company, including its financial balances, creditworthiness, and cash flow. A company with high financial indicators is more likely to withstand market downturns.
- **Competition:** there can be extremely high competition in real estate and construction, so it is important to study the competitive advantages of companies and choose the most attractive one.
- **Regulatory and legal environment:** the construction of real estate is regulated by building codes and regulations. Changes in these rules may affect the cost and profitability of the company's projects.

Funds. A real estate fund is a broad term potentially applicable to a wide range of various products that provide investors with the opportunity to invest in real estate, land, and other real estate-related assets. In Europe, investors can indirectly invest in real estate through various professionally managed investment products. The most important of them are open real estate funds; closed real estate funds, Real estate investment funds, and other real estate companies. (Galinienė, & Bumelytė, 2011)

Open real estate funds are regulated at the national level by regulations relating to specific funds and have the following characteristics according to EFAMA (2022):

1. Repayable at certain times at the request of the division/shareholder.
2. They are allowed to invest directly or indirectly through participation in real estate and/or in shares/units of other open real estate funds.
3. Clearly defined rules regarding risk diversification, net asset value calculation, and subscription and repayment rules.

Closed real estate funds, registered or not, are regulated at the national level, not necessarily by the regulation of a specific fund, and according to EFAMA (2022):

1. Have a fixed number of shares in circulation.
2. They are allowed to invest directly or indirectly through participation in real estate.

European investment funds have been developing for decades and have become key participants in the European capital market. Real estate funds are an important part of the classifications of investment funds. The most important of them are open real estate funds and closed real estate funds. Thus, retail investors can indirectly invest in real estate through professionally managed investment products. (Galiniene & Bumelyte, 2011)

In turn, American investors turn to mutual funds and exchange-traded funds (ETFs) to form retirement savings and other financial purposes. Mutual funds and ETFs have not only similarities but also differences. Each specific investor analyses where it is preferable for him to invest his funds. (Securities, U. S., & Exchange Commission, 2016)

Mutual Fund (Real estate Funds). A mutual fund as a financial instrument is an open-ended company that combines the money of many investors and invests it in stocks, bonds, short-term money market instruments, other securities or assets, or some combination of these investments (Securities, U.S., & Exchange Commission, 2016). Securities and assets owned by a mutual fund are called portfolios. Each share of a mutual fund determines the investor's proportional share in the fund's portfolio and the income that this portfolio brings (Securities, U.S., & Exchange Commission, 2016).

This paper is focused on indirect investments in real estate, and the author will consider REFs as an example of a mutual fund based on the real estate market. Barbora (2022) called Real Estate Funds (REFs) alternative investment funds that collect investors' money together and then use it for direct investment in various types of real estate. The scheme of the funds is as follows: The Fund collects money and, in most cases, then lends it to real estate companies.

Hayes and Mansa (2022) added that Real Estate Funds invest mainly in a company with the business models of REITs and Real Estate Operating Companies (REOC); however, some of real estate funds have real estate objects in their portfolios and invest directly. Hayes, and Mansa (2022) also added that real estate funds provide profit by increasing value, so they may not be the best choice if an individual wants to receive passive income or short-term profit.

In the work of Gudelis (2015), the author studied and compared the possibilities of indirect investments in the Lithuanian market. The author of this article concludes that the

leading participants in indirect real estate investments in Lithuania are real estate investment funds. This is reflected not only in the growth in the number of real estates managed by real estate investment funds, but also in the fact that in 2015 alone, the Central Bank issued 4 licenses to new real estate investment funds.

Securities, U. S., & Exchange Commission, (2016) considered that Exchange-Traded Funds are investment companies that offer to receive a share in an investment portfolio in exchange for investments. In other words, an ETF is a financial instrument, a pooled investment security. ETF invests in stocks, bonds, and other assets. Unlike mutual funds, ETFs do not sell and buy individual shares with retail investors. ETF shares are traded on stock exchanges at market prices. (Securities, U. S., & Exchange Commission, 2016)

Goodwin, Kanuri, and McLeod (2021) studied the Real Estate ETFs indicators until the end of September 2019 in comparison with the US stock market ETF index. The author's results show that real estate ETFs provided a high average monthly return, but they also had a slightly higher level of risk, measured by the standard deviation of the return.

Summing up, it can be said that, although previous empirical studies were limited, the author made efforts to sort and structure the main aspects of the chosen topic. Thanks to the above, it is expected that the reader will get a general understanding of indirect investments in the real estate market and its components. Using the analysed information in the first part of the Thesis, the author would like to deeply explore the investment opportunities for natural persons in the Baltic market.

2. Empirical overview of Baltic real estate companies

2.1. Methodology and data

One of the most difficult tasks when exploring opportunities of indirect investment in the Baltic real estate market is to choose the appropriate method for setting up a test that would correspond to the data available for a particular real estate market. To conduct a comprehensive empirical analysis, a multi-stage action plan was developed. The reader can see its summary in Figure 3.

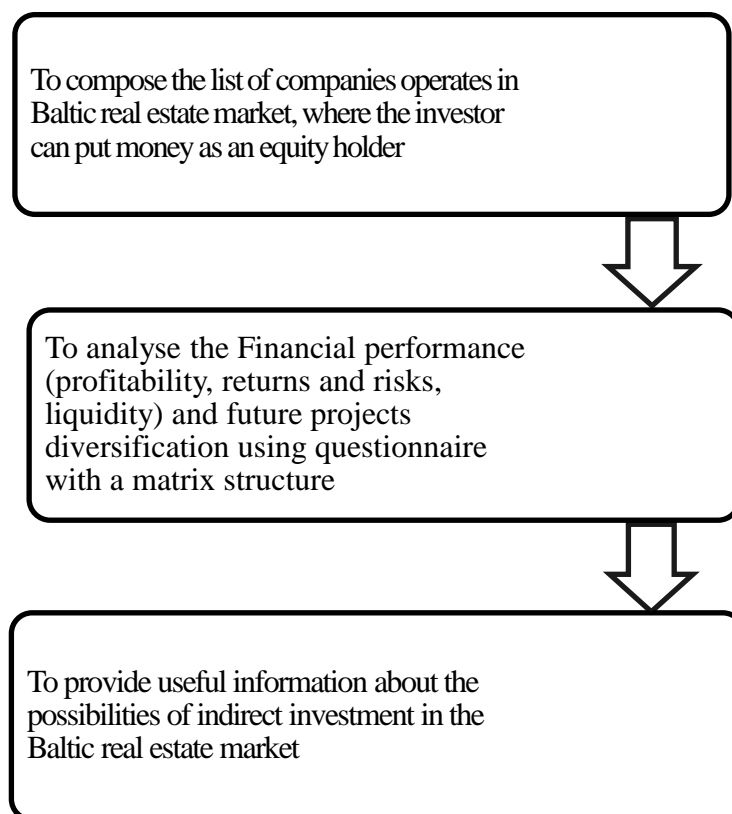


Figure 3. Stages of empirical analysis

Source: compiled by the author

To begin with, the author searched securities available to the investor of companies/organizations that meet all criteria. The basis was the home page of the NASDAQ Baltics website, on which the author selected the companies needed for analysis. Table 2 lists all Baltic real estate companies available on the NASDAQ Baltics stock exchange.

Table 2

List of considered organizations.

Name of the organization	Type of Business model
Instrument: Share	
EfTEN Real Estate Fund	Investing in rental properties
Hepsor	Property Development
Pro Kapital Grupp	Property Development
Merko Ehitus	Construction
Arco Vara	Property Development
INVL Baltic Real Estate	Investing in rental properties
Trigon Property Development	Property Development

VEF	Property Development/ Investing in rental properties
Panevėžio statybos trestas	Construction
Nordecon	Construction
Instrument: Fund (share of the fund)	
Baltic Horizon Fund	Investing in rental properties
EFTEN United Property Fund	Investing in rental properties

Source: compiled by the author based on NASDAQ

The data required for the quantitative part of the study were taken from the NASDAQ exchange. From there, information about the stock price for the past 5 years was collected. This served as the basis for assessing the liquidity of the security. From the home pages of the companies, the author took information about the annual report, thanks to which profitability and volatility was assessed.

A qualitative approach was also used in the work. The author contacted each selected company and asked them to fill out a questionnaire with a matrix structure, based on which it was possible to discuss the diversification of future projects, and their geographical and segmental (by types of real estate) distribution. In conclusion, the author found the historical profitability and volatility of the instruments.

Since one of the limitations of the work was the investment opportunities that offer capital to the investor, Crowdfunding organizations will not be considered in the empirical part. All crowdfunding organizations in the Baltic States were debt-based and did not fit the criteria of the author.

As mentioned earlier, the author identified the following criteria that need to be paid attention to: Profitability, Return and risk, liquidity, and Projects diversification. The author analysed each company according to these metrics. In this way, the author planned to demonstrate the investment opportunities in the Baltic real estate market for a private investor.

There is not enough data for one year to form an objective understanding of business performance. The results of a particular year (both positive and negative) may be due to random factors that will not work in the future. Therefore, the author calculated profitability from 2019 to 2021 and other metrics for 2018 to 2023. The author chose this three-year period for the profitability because in current unstable situation it is impossible to clearly assess the profitability in the long term. The five-year period was chosen for return, risk, and liquidity because the author wanted to assess the state of the securities of the chosen companies in these unstable times.

Profitability. The effectiveness of the company can be analysed using profitability metrics. Profitability is the possibility of making a profit using factors of production and capital, regardless of their origin. Profitability is measured after comparing the financial effects with the financial effort expended. Comparing the profitability level of a company with the profitability level of its main competitors shows how competitive it is in the market. Every decision made at the company level should be related to profitability indicators. (Dicu, Bondoc, & Popescu, 2019) In the work, the author used two profitability indicators, thanks to which it will be possible to get an idea of the profitability of real estate companies in the Baltic States.

Net profit margin (see Equation 1) this is one of the two indicators used. The net profit margin is the ratio of net profit to the company's revenue. It is expressed as a percentage and shows how much profit is obtained from each 1 euro (other currency) of sales after considering all business expenses associated with obtaining these revenues. Since companies express the net profit margin as a percentage, it is possible to compare the profitability of several companies regardless of their scale. The higher this value, the greater the percentage of sales is retained as profit.

$$\text{Net profit margin} = \frac{\text{Net income}}{\text{Revenue}} \quad (1)$$

The second indicator, the author took Return on Equity (ROE, see Equation 2). The return on equity ratio displays the amount of net profit a business generates for every euro of its own money. This coefficient shows how well the firm owners manage the capital they have invested. The indicator enables investors to swiftly assess the business, contrast it with competitors in the sector, and select the most appealing one for investment.

$$\text{ROE} = \frac{\text{Net income}}{\text{Average Shareholders Equity}} \quad (2)$$

Average shareholder's equity – The average shareholders' equity calculation is the beginning shareholders' equity plus the ending shareholders' equity, divided by two. This information is found on a company's balance sheet.

Return and risk. The author provided calculations about the daily and annual rate of return to have an idea of the dynamics of the growth or fall of the security. The annual rate of return method represents the amount earned by the company during the year. The author calculated the daily rate of return using the formula of Logarithmic yield or continuously increasing yield, also known as the power of interest, which is equal to equation 3.

$$\text{Daily ratio of return} = \ln \left(\frac{V_f}{V_i} \right) \quad (3)$$

V_f – final value, including dividends and interest

V_i – initial value

After the author calculated the daily rate of return for the last five years in the period from April 10, 2018, to April 10, 2023, it was necessary to translate these values into an annual indicator. To do this, the author deduced the average value for all five years and multiplied it by the number of days in which securities are in circulation on the stock exchange. To simplify the calculations, the author took 250 days. After multiplying the average number by 250, the author deduced the annual rate of profit for each company.

The variability of a variable is what determines volatility; the more a variable change over time, the more volatile the variable is. High volatility could be seen as a sign of market failure, in which assets are valued unfairly, and the capital market does not work as it should. For most, this term is synonymous with risk. (Daly, 2008)

A common indicator of stock market volatility is the standard deviation (see Equation 4). Estimates of the standard deviation serve as a useful indicator for analysing the risks of security. The standard deviation is a simple but useful indicator of volatility, in other words, risk.

$$\text{Standart Deviation of daily average return} = \sqrt{\frac{\sum_{i=1}^n (X_i - X)^2}{n - 1}} \quad (4)$$

X_i – Value of the i'th of daily yields, where i from 1 to N

X – the average/mean value of all daily returns for the period

N – The number of days that the security is traded in the sample

Thus, the author calculated the daily volatility. To express this indicator in an annual equivalent, the author multiplies the resulting number by the square root of 250, where 250 is the number of days a security is traded per year.

The next indicator of volatility that the author used in his work is the financial beta. It shows how an individual asset or portfolio behaves relative to the market. It can be expressed as a formula (see Equation 5), where σ 's are the standard deviations of the rates of return, and r is the correlation between the rates of return. (Tofallis, 2008)

$$\beta = \frac{r \sigma_i}{\sigma_m} \quad (5)$$

An equivalent formula is the ratio: (covariance between market returns and investment returns)/ (variance of market returns) (see Equation 6).

$$\beta = \frac{\text{Covariance}}{\text{Variance}} \quad (6)$$

Covariance – Measure of a stock's return relative to that of the market

Variance – Measure of how the market moves relative to its mean

A beta equal to 1 means that the asset is identical to the market. If it is more than 1, then the asset correlates with the market, but behaves more volatile: it grows more or falls more. If the beta is from 0 to 1, then the asset moves unidirectionally with the market, and the risk is less than the market. (Tofallis, 2008)

Using financial beta, the author studied the correlation between Baltics real estate organizations and the MSCI World Index. The MSCI index is an exemplary personification of the global economy. Morgan Stanley Capital International agency calculates indices of the family of the same name and provides numerous studies. In this paper, the MSCI World Index reflected the performance of the global economy.

Liquidity. Liquidity is the property of assets to be quickly sold at a price close to the market. It has been thoroughly studied in the stock markets. Liquidity has a positive impact on expected returns. The first reason is that during a market downturn, investors may be willing to pay a premium for liquid securities (Chordia, Roll, & Subrahmanyam, 2000). The second reason is that investors may perceive liquidity as a source of additional profitability at separate phases of the markets (Acharya, & Pedersen, 2005). The relationship between liquidity and the bid–ask spread (see Equation 7) is also well established; the larger the spread, the more expensive stock trading is (Marcato, & Ward, 2007). That is why the author took the bid-Ask spread as the main indicator of the liquidity of a security.

$$\text{Bid} - \text{Ask spread} = \frac{\text{Ask price} - \text{Bid price}}{\text{Average value between bid and ask}} \quad (7)$$

For this part, stock price indicators for the last 5 years will be taken from the NASDAQ Baltics website.

Projects Diversification. For any investor who is going to invest his capital in a particular company, it is important to understand the future business activities of the company. Diversification of projects makes it possible to reduce the risk of significant losses due to a failed project or an accidental event. As confirmed in the work of Grant, Jammie, and Thomas (1988), diversity and profitability have a positive relationship and the investor needs to pay attention to this. Titova (2020) notes that the main goal of this principle is to

achieve a minimum level of unsystematic (manageable) risk. Titova (2020) also emphasizes that the most important element of managed risk diversification is the diversification of types (segments) of real estate. As the author has already mentioned, it was decided to use a questionnaire with a matrix structure to evaluate future projects (see Table 3).

Table 3

Future projects diversification by segments and geographical exposure

	Estonia		Latvia		Lithuania	
	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in the capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
Commercial real estate	X	X	X	X	X	X
Housing	X	X	X	X	X	X
Land	X	X	X	X	X	X
Socio-cultural objects	X	X	X	X	X	X

Note: Instead of X, companies pasted 0 or 1

Source: Compiled by the author

Thanks to this structure of the questionnaire, the reader will understand the geographical diversification of the future projects across the real estate organizations in the Baltic States. It is noteworthy that the reader will also have an understanding whether the company operates only in the capital of the country or beyond its borders. It is also impossible not to note that the segmental distribution will be clear from the results, by that author means which type of real estate projects will be presented by the company.

The author believes that such an approach of data and methodology could allow one to look at the indirect investment possibilities from different angles. The reader will be provided with the results of the author's work, thanks to which reader will be able to better navigate the possibilities of indirect investment in the Baltic real estate market. Those who wish to invest will be able to form their own vision for a particular security, because each investor has a different rate of return, risk, and future perspective attitude. From this point of view, the method provided by the author fits perfectly. Of course, it has its drawbacks: not all possible financial indicators were used, obtaining results on the diversification of future projects was a lot of work and dividends of the companies were not included into annual

returns calculation, since it is the decision of the investor whether to keep the dividends or reinvest them. However, the author is sure that despite the shortcomings, the results of the calculations will make the goal of scientific work achievable.

2.2. Results and discussion

It was decided to split the results into the same groups as in paragraph 2.1. This will increase visibility and the ability to slay in a single direction of study. Detailed results can be found in Appendix A-J. In this part, a general analysis of the results will be performed.

Profitability. For finding Net profit margin and ROE, data from the financial statements of companies from 2019 to 2022 were used. Unfortunately, little information is available for the EfTEN United Property Fund as it is a new fund. That is why it was impossible for him to calculate the Net profit margin and ROE indicators. For other companies, all detailed calculations are added to the appendix. The average profitability results for the taken period author provided in table 4.

Table 4

Average profitability results from 2019 to 2022

Name of the organization	Average Net profit margin	Average ROE
EfTEN Real Estate Fund	71,21%	9,68%
Hepsor	3,82%	13,78%
Pro Kapital Grupp	-89,77%	-131,27%
Merko Ehitus	6,95%	14,97%
Arco Vara	9,33%	7,19%
INVL Baltic Real Estate	146,71%	19,73%
Trigon Property Development	33,59%	14%
VEF	4,11%	1,39%
Panevėžio statybos trestas	-3,28%	-8,42%
Nordecon	0,42%	1,38%
Baltic Horizon Fund	-4,63%	-1,03%

Note: For Trigon Property Development NPM was calculated only for 2022

Source: compiled by the author

Based on them, we can conclude that according to the indications of Net profit margin and ROE, the business models were distributed as follows: With a huge advantage average indicators of profitability over the past three years, the Investing in rental properties model breaks out (Net profit margin: 54,35%; ROE: 7,44%). After this, the Construction model appeared in the middle (Net profit margin: 1,36%; ROE: 2,64%). Interestingly, companies

working in the field of Property Development showed a negative average value in both profitability indicators over a given period (Net profit margin: -7,78%; ROE: -18,98%).

The average value was influenced by the abnormal indicators of INV L Baltic Real Estate and Pro Kapital Group. Over the past three years, INV L Baltic Real Estate has had large net income figures with small revenue. The author can associate this result with an increase in the value of real estate assets in the company's portfolio. Pro Kapital Group has the opposite situation, in 2019 and 2020 the company showed negative net income values, with positive revenue. That is why such a result came out in the author's calculation.

Return and risk. To visualize the profitability of security it is essential to analyse calculations about the daily and annual rate of return, volatility by Standard Deviation and Financial Beta for all companies (see Table 5). To calculate the following metrics, information was taken for the last five years in the period from 10.04.2018 to 10.04.2023.

Table 5

Annual rates of return, volatility by Standard Deviation, and financial beta from 10.04.2018 to 10.04.2023

Name of the organization	Annualized rate of return	Annualized Volatility	Beta coefficient MSCI World
EfTEN Real Estate Fund	5,58%	16,36%	0,1267
Hepsor (from 26.11.2021)	-44,84%	22,6%	0,1015
Pro Kapital Grupp	-17,73%	39,58%	0,2405
Merko Ehitus	6,47%	20,94%	0,2172
Arco Vara	4,24%	33,76%	0,2657
INV L Baltic Real Estate	-0,37%	28,29%	0,0117
Trigon Property Development	12,42%	52,78%	0,0081
VEF	27,04%	74,23%	0,0859
Panevėžio statybos trestas	-11,07%	31,76%	0,2345
Nordecon	-9,36%	26,5%	0,2184
Baltic Horizon Fund	-17,15%	16,28%	0,1206
EfTEN United Property Fund (from 31.05.2022)	-15,22%	8,8%	0,0547

Note: For some companies was less data due to the earlier foundation date

Source: compiled by the author

If we consider the average value of the Daily and the annual rate of return based on business models, then over the past five years only companies working in the field of Investing in rental properties have shown positive values. They got 0,013% per day and 3,325% per year. The average number of Daily and annual returns for companies in the field of Property Development and Construction came out negative. Of the two negative ones, Property Development looked a little better, with a result of -0,015% per day and -3,775% per year against -0,019% and -4,653% from Construction companies. VEF showed the best annual rate of return even though it is a company from the second NASDAQ list. It is also important to understand that the payment of dividends can influence the investor's choice. Of these companies, eight pay dividends that were not considered, and four do not pay. Dividends are paid by Arco Vara, EfTEN Real Estate Fund, Merko Ehitus, Nordecon, INVL Baltic Real Estate, Trigon Property Development, EfTEN United Property Fund, Baltic Horizon Fund. On the other hand, VEF, Panevėžio statybos trestas, Pro Kapital Grupp and Hepsor do not pay. Also, the author did not reveal a strong correlation between the profitability of the company and its return, volatility, and financial beta.

To calculate the Financial Beta and volatility through standard deviation, data on the daily price of shares/funds and index MSCI World, taken by the authors of companies over the past five years were used. Since there was a difference in the number of days traded between these three indicators, the author left only those days on which the shares/funds of a particular organization and MSCI World were traded on the exchange. While analysing the correlation of securities with the world economy, the author will consider the coefficients of the financial beta. Based on Table 5, we can conclude that all companies move with the World Market in the same direction. The assets of companies that are moving in the same direction are more stable. It speaks of a slight correlation of security with the stock index. They can grow either together or apart.

Volatility is another aspect that is essential to analyse before investing. On the one hand, high volatility makes it possible to earn more in the market. With large price fluctuations increase, and the difference in the price of buying and selling, on which a natural person can make a profit, increases. Individuals can earn more only if the prediction of the direction of the market and the price movement of the asset would be possible. If not, then the risks of losses also increase sharply. And then volatility is only to the detriment of the trader. The main purpose of the work is to study the opportunities of indirect investment in the Baltic real estate market and a table showing the volatility of companies is necessary for the analysis of these opportunities. Looking at it, the reader can imagine the size of the profit

or loss depending on the volatility. At the same time, based on these calculations, it is possible to imagine the possible risks associated with certain organizations.

Liquidity. To deduce the average value of liquidity, data on the security price of each company over the past five years were taken: from 10.04.2018 to 10.04.2023. Table 6 shows the result of the author's calculations.

Table 6

Average Bid-ask spread from 10.04.2018 to 10.04.2023

Name of the organization	Average Bid-ask spread
EfTEN Real Estate Fund	0,68%
Hepsor (from 26.11.2021)	0,38%
Pro Kapital Grupp	1,81%
Merko Ehitus	0,29%
Arco Vara	1,7%
INVL Baltic Real Estate	1,33%
Trigon Property Development	9,35%
VEF	33,61%
Panevėžio statybos trestas	1,68%
Nordecon	0,78%
Baltic Horizon Fund	0,39%
EfTEN United Property Fund (from 31.05.2022)	0,33%

Note: For some companies was less data due to the earlier foundation date

Source: compiled by the author

Most companies have turned out to be quite liquid and the average Bid-ask spread over the past five years has not exceeded two percent for most companies. However, some have an enormous difference in the purchase and sale prices. The author was surprised by the Merko Ehitus indicator, which has been 0,29% for the last five years. When an individual buys security with a market order, he takes a loss equal to the spread because he is buying at the ask price. Therefore, it is beneficial for a natural person to have a small spread and large trading volumes.

Projects Diversification. Unfortunately, the author faced a problem in identifying the diversification of future projects. Four of the twelve companies refused to provide this information due to confidentiality. However, the author can still analyse the responses given by the remaining number of companies. Table 7 shows the total number of future projects of companies that have shared this information with the author.

The number of future projects does not guarantee an increase in monetary capital to the company and does not indicate its future profitability, however, this may indicate the company's intention to develop and expand. Interestingly, the distribution of projects turned out to be obvious for all types of businesses. However, both leaders in this indicator and laggards were revealed.

The author studied what type of real estate the company is considering in the future, and for each company the result is different. Table 7 represents the result of the author's work.

Table 7

Types of real estate that companies are considering as a future project and the overall number of projects

Name of the organization	Type of real estate				Total number of projects
	Commercial real estate	Land	Housing	Socio-cultural objects	
EfTEN Real Estate Fund	5	0	0	0	5
Hepsor	2	2	2	2	8
Pro Kapital Grupp	2	0	6	0	8
Arco Vara	0	3	1	0	4
Trigon Property Development	0	1	0	0	1
Nordecon	0	0	2	0	2
Baltic Horizon Fund	3	0	0	1	4
EfTEN United Property Fund	5	1	4	0	10

Note: Merco Ehitus, INVL Baltic real estate, VEF, Panevėžio statybos trestas refused to take the questionnaire

Source: compiled by the author

The author did not reveal a strong correlation between the future projects amounts and the financial performance of the company. Moving forward, an important part of this analysis was to identify the most common type of real estate, which companies most likely consider as an opportunity for future earnings. This information is provided in Figure 4.

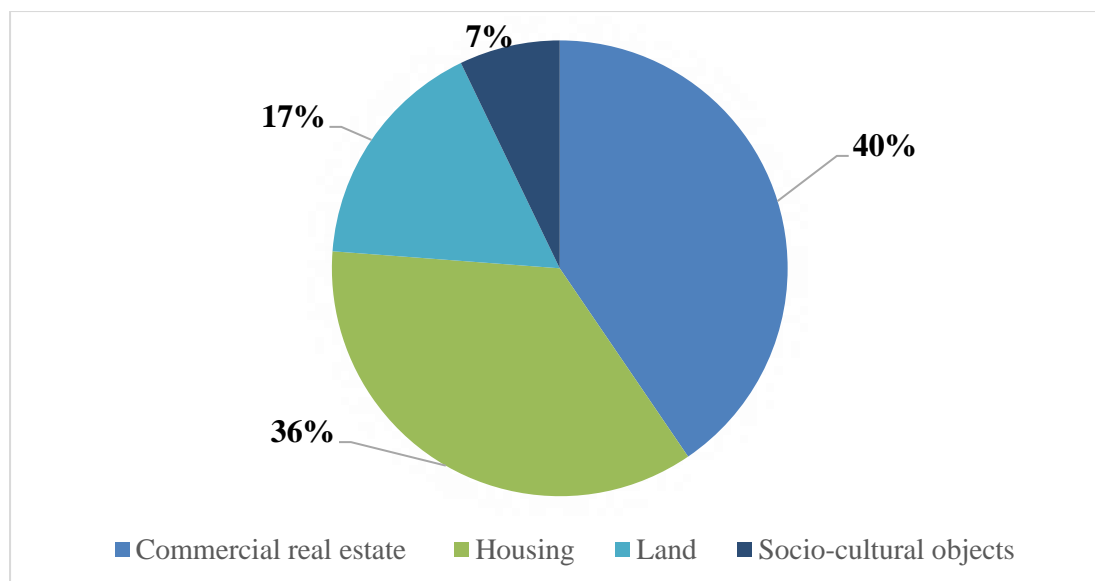


Figure 4. Diversification by types of real estate

Note: Merco Ehitus, INVL Baltic real estate, VEF, Panevėžio statybos trestas refused to take the questionnaire

Source: compiled by the author

From the results, it can be concluded that Commercial real estate and Housing are the most frequent choice as a project for real estate companies in the Baltic States. Most likely, this is due to many possible nuances when considering Socio-cultural objects as a project. Land plots were more often considered by development companies, but they occupy only 17% of the total.

Another goal that the author set was to identify the geographical distribution of future projector companies (see Table 8).

Table 8

Future projects diversification by segments and geographical exposure

Name of the organization	Estonia		Latvia		Lithuania	
	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
EfTEN Real Estate Fund	1	0	1	1	1	1
Hepsor	4	0	4	0	0	0
Pro Kapital Grupp	3	0	3	0	2	0

Arco Vara	2	1	0	1	0	0
Trigon Property Development	0	1	0	0	0	0
Nordecon Baltic	0	1	1	0	0	0
Horizon Fund EfTEN	2	0	1	0	1	0
United Property Fund	2	2	2	0	2	2

Note: Merco Ehitus, INVL Baltic real estate, VEF, Panevėžio statybos trestas refused to take the questionnaire

Source: Compiled by the author

Determining the territories for development by real estate objects of different types is one of the main strategic objectives of the development of large cities. Its successful solution depends on many factors, among which a special place is occupied by the question of expediency and efficiency of construction and subsequent competent operation of real estate objects. A large geographical spread allows you to reduce the risks of exploring new areas. A company whose geographical exposure is larger is theoretically more stable. However, as the author mentioned earlier, the investor needs this data to analyse prospects and risks, these results cannot speak about the profitability of the company and the future.

To examine is true that companies focus mainly on capital, or do these projects cover the entire territory of Baltic states, the author created Figure 5. Even though the sample size is small, the results of the work done by the author allow us to conclude whether capitals are a priority for companies.

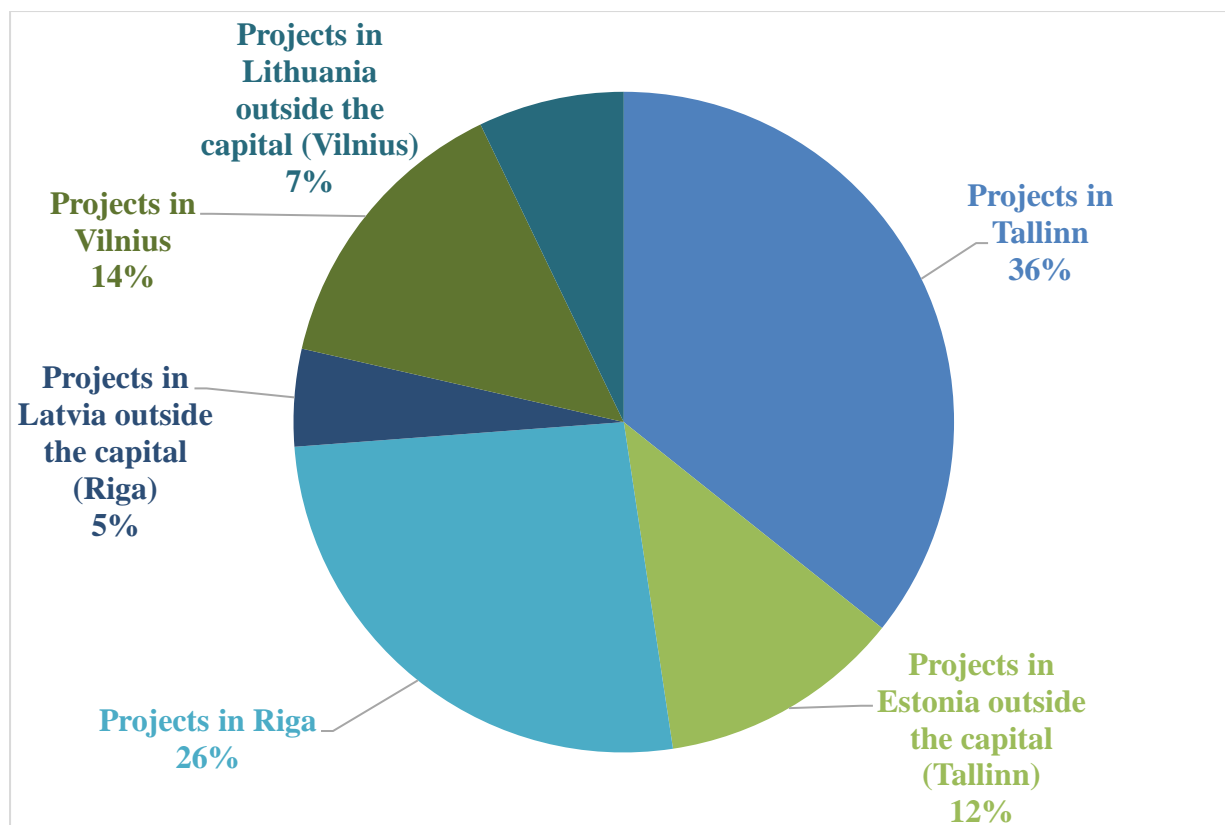


Figure 5. Geographical exposure of the future projects

Note: Merco Ehitus, INVL Baltic real estate, VEF, Panevėžio statybos trestas refused to take the questionnaire

Source: compiled by the author

As expected, the focus of future real estate projects fell on the Baltic capitals⁶ since 76% of all the future projects are located there. However, it is important to note that the territories of all the capitals were not forgotten. The processes of companies also take place in them, and their percentage is not zero. From the sample of the author's companies, 36% of the projects are in Tallinn, which shows a great interest in this city on the part of real estate companies. Lithuania is the country with the least number of projects both in the capital and abroad. Why it turned out this way is the topic of a completely different study, which can be based on this work. In general, the author is pleased with the results of the questionnaire with a matrix structure and the conclusions that can be drawn from them. They turned out to be visual and are ready to fully form an idea of future projects of Baltic real estate companies.

As mentioned earlier, this approach to date and methodology made it possible to look at the possibilities of indirect investment from different points of view. In chapter 2.2 all the calculations and results were presented, thanks to which the reader could navigate the possibilities of indirect investments in the Baltic real estate market. The author presented, in

his opinion, the most important financial indicators for the analysis of each company and the results.

As a result of the above analysis and data processing, the following key findings were identified:

- For an investor, in Baltic real estate market there are 12 opportunities for investing: ten shares and two funds.
- Each opportunity has its own Profitability (net profit margin, ROE), Returns and risks (annual returns, standard deviation, financial beta) and Liquidity (bid-ask spread).
- It was found that over the period taken, the model of investing in rental property showed the best results. However, it is important to note that certain investors have different views on risk and prospects, which is why the reader may form his own opinion about the most attractive company for investment.
- It is important for an investor to pay attention to the diversification of projects. The author analysed the future projects of companies and revealed that they are mainly located in the Baltic capitals and the main types of real estate are housing and commercial real estate.

To sum up, this section has identified the key elements to be considered by an investor wishing to invest in the Baltics real estate market through indirect investment as a capital holder. In this section, research tasks based on the empirical part of the work have been completed and presented to the reader. The author analysed the collected data and drew conclusions from the information received in accordance with the above research objectives, i.e., studied the possibilities of indirect investment in the Baltic real estate market from the point of view of a natural person.

Conclusion

Thus, during this study, we have identified opportunities for indirect investment for a natural person in the Baltic real estate market. In addition, we identified what tools and business models there are, reviewed companies working with real estate in the Baltic States and calculated their indicators. In general, the author managed to complete all research tasks and study in practice the investment opportunities of an individual — and this is a key factor for filling the gap identified by the author in previous studies.

By compiling the theoretical part, we have shown that real estate is a significant asset in any portfolio, with which both risks and potential earnings are associated. We have

analysed through which tools an individual can enter the Baltic real estate market and how companies generate cash flows.

It is important to note that at present it is impossible to guess with confidence what will happen to the Baltic real estate market in general and with companies specifically. We live in a very turbulent time and there are a huge number of factors that affect the economic state. Over the past few years, we have faced both a pandemic and a war, which has clearly had a negative impact on the entire situation in the real estate market, which is why it is impossible to guarantee profits now.

In this study, both approaches in methodology were used. The author considered that the calculation of indicators and the analysis of the results would not be enough to reveal the full range of possibilities. That is why it was decided to contact companies to find out their future projects. It was also necessary to analyse the geographically distributed and identify the dominant type of real estate. This methodology can be divided into two parts: the stage of quantitative analysis of a large amount of information and the stage of a qualitative questionnaire with a matrix structure, designed for more detailed identification of the above criteria.

The main conclusions of the study are the following:

- A) We found that real estate is an important asset, identified its types and risks.
- B) Three business models used by companies to generate income in the real estate sector were listed.
- C) Three main instruments have been identified through which an individual can invest in the real estate market as an equity holder.
- D) A list of companies representing the indirect Baltic real estate market was established, as well as their performance was evaluated and analysed. The most profitable business model for the period was identified.
- E) The author analysed the company's future projects and noted their geographical distribution and dominant types of real estate.
- F) The author has provided the necessary results and materials to the readers' about the possibilities of indirect investments in the Baltic real estate market.

A potential area for further research is a variety of things: from an in-depth study of the geographical distribution of real estate projects to the study of why one type of real estate prevails over another. In any case, the author has prepared a basis for further studies of this topic.

In conclusion, thanks to the analysis of data collected using quantitative and qualitative research methods, the author was able to convey and discuss all the opportunities for indirect investment for a natural person in the example of the Baltic market.

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APPENDIX A

Characteristics of securities in the Baltic real estate sector for the period from
10.04.2018 to 10.04.2023

Name of organization	Average daily rate of return	Annualized rate of return	Daily volatility	Annual volatility	Beta coefficient MSCI World	Average Bid-ask spread
Arco Vara	0,0169%	4,2351%	2,1349%	33,7551%	0,2657	1,70%
EfTEN Real Estate Fund	0,0223%	5,5846%	1,0345%	16,3564%	0,1267	0,68%
Hepsor	-0,1794%	-44,8404%	1,4292%	22,6001%	0,1015	0,38%
Pro Kapital Grupp	-0,0709%	-17,7282%	2,5033%	39,5800%	0,2405	1,81%
Merko Ehitus	0,0259%	6,4681%	1,3241%	20,9353%	0,2172	0,29%
INVL Baltic Real Estate	-0,0015%	-0,3665%	1,7892%	28,2897%	0,0117	1,33%
Trigon Property Development	0,0497%	12,4182%	3,3384%	52,7845%	0,0081	9,35%
VEF	0,1082%	27,0382%	4,6950%	74,2337%	0,0859	33,61%
Panevėžio statybos trestas	-0,0443%	-11,0695%	2,0090%	31,7644%	0,2345	1,68%
Nordecon	-0,0374%	-9,3578%	1,6762%	26,5033%	0,2184	0,78%
Baltic Horizon Fund	-0,0686%	-17,1481%	1,0295%	16,2781%	0,1206	0,39%
EfTEN United Property Fund	-0,0609%	-15,2172%	0,5563%	8,7957%	0,0547	0,33%

Source: author's calculations

APPENDIX B

Profitability calculations

Name of the organization	Hepsor		
Year	2019	2020	2021
Net income	960 000	2 590 000	-2 000
Revenue	19 540 000	38 770 000	1 496 000
Average shareholders equity (total equity)	6 890 000	9 450 000	18 900 000
Net profit margin	0,04912999	0,06680423	-0,0013369
ROE	0,139332366	0,27407407	-0,00010582

Name of the organization	Pro Kapital Grupp		
Year	2019	2020	2021

Net income	-26 980 000	-55 680 000	29 760 000
Revenue	55 280 000	19 230 000	43 100 000
Average shareholders equity (total equity)	71 140 000	13 090 000	42840000
Net profit margin	-0,488060781	-2,8954758	0,690487239
ROE	-0,379252179	-4,2536287	0,694677871

Name of the organization	Merko Ehitus		
Year	2019	2020	2021
Net income	16 270 000	22 990 000	29 140 000
Revenue	326 780 000	315 920 000	339 380 000
Average shareholders equity (total equity)	130 340 000	153 230 000	167 240 000
Net profit margin	0,049788849	0,07277159	0,085862455
ROE	0,124827375	0,15003589	0,174240612

Name of the organization	Arco Vara		
Year	2019	2020	2021
Net income	390 000	1 010 000	2 070 000
Revenue	13 110 000	14 060 000	11 610 000
Average shareholders equity (total equity)	13 300 000	14 220 000	17 960 000
Net profit margin	0,029748284	0,07183499	0,178294574
ROE	0,029323308	0,07102672	0,115256125

Name of the organization	INVL Baltic Real Estate		
Year	2019	2020	2021
Net income	10 420 000	5 420 000	3 400 000
Revenue	5 900 000	3 900 000	2 730 000
Average shareholders equity (total equity)	44 020 000	28 870 000	20 290 000
Net profit margin	1,766101695	1,38974359	1,245421245
ROE	0,236710586	0,18773814	0,167570232

Name of the organization	Trigon Property Development		
Year	2019	2020	2021
Net income	354412	347893	272042
Revenue	0	0	810000
Average shareholders equity (total equity)	2 143 461	2 491 354	2 363 079
Net profit margin	-	-	0,335854321
ROE	0,165345672	0,13964013	0,115121839

Name of the organization	VEF		
Year	2019	2020	2021
Net income	122 296	12 953	8 753
Revenue	1 190 963	1 095 956	980 822

Average shareholders equity (total equity)	3457161	3461928	3462495
Net profit margin	0,102686649	0,01181891	0,008924147
ROE	0,03537469	0,00374156	0,002527946
Name of the organization	Panevėžio statybos trestas		
Year	2019	2020	2021
Net income	590 000	-10 431 000	3 499 000
Revenue	108 464 000	74 912 000	98 451 000
Average shareholders equity (total equity)	34 745 000	27 149 000	30 554 000
Net profit margin	0,005439593	-0,1392434	0,035540523
ROE	0,016980861	-0,384213	0,114518557
Name of the organization	Nordecon		
Year	2019	2020	2021
Net income	4 149 000	4 118 000	-5 506 000
Revenue	234 071 000	296 082 000	288 534 000
Average shareholders equity (total equity)	32 754 000	37 235 000	28 126 000
Net profit margin	0,017725391	0,01390831	-0,01908267
ROE	0,126671552	0,11059487	-0,19576193
Name of the organization	EfTEN Real Estate Fund		
Year	2019	2020	2021
Net income	7 737 000	3 317 000	13 099 000
Revenue	9 512 000	10 731 000	12 921 000
Average shareholders equity (total equity)	71 171 000	71 483 000	96 914 000
Net profit margin	0,813393608	0,30910446	1,013776024
ROE	0,108710008	0,04640264	0,135161071
Name of the organization	Baltic Horizon Fund		
Year	2019	2020	2021
Net income	8 791 000	-13 541 000	1 413 000
Revenue	19 219 000	19 934 000	17 004 000
Average shareholders equity (net asset value)	152 518 000	136 321 000	132 584 000
Net profit margin	0,457411936	-0,6792917	0,083098095
ROE	0,057639098	-0,0993317	0,010657395

Source: author's calculations based on annual reports

APPENDIX C

Questionnaire response by EfTEN Real Estate Fund

Overall: 5	Estonia	Latvia	Lithuania
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	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
Commercial real estate	1	0	1	1	1	1
Housing	0	0	0	0	0	0
Land	0	0	0	0	0	0
Socio-cultural objects	0	0	0	0	0	0

Source: author's questionnaire

APPENDIX D

Questionnaire response by Hepsor

	Estonia		Latvia		Lithuania	
	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
Overall: 8						
Commercial real estate	1	0	1	0	0	0
Housing	1	0	1	0	0	0
Land	1	0	1	0	0	0
Socio-cultural objects	1	0	1	0	0	0

Source: author's questionnaire

APPENDIX E

Questionnaire response by Pro Kapital Grupp

	Estonia		Latvia		Lithuania	
	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
Overall: 8						

Commercial real estate	1	0	1	0	0	0
Housing	2	0	2	0	2	0
Land	0	0	0	0	0	0
Socio-cultural objects	0	0	0	0	0	0

Source: author's questionnaire

APPENDIX F

Questionnaire response by Arco Vara

	Estonia		Latvia		Lithuania	
Overall: 4	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
Commercial real estate	0	0	0	0	0	0
Housing	1	0	0	0	0	0
Land	1	1	0	1	0	0
Socio-cultural objects	0	0	0	0	0	0

Source: author's questionnaire

APPENDIX G

Questionnaire response by Trigon Property Development

	Estonia		Latvia		Lithuania	
Overall: 1	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
Commercial real estate	0	0	0	0	0	0
Housing	0	0	0	0	0	0
Land	0	1	0	0	0	0
Socio-cultural objects	0	0	0	0	0	0

Socio-cultural objects	0	0	0	0	0	0
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Source: author's questionnaire

APPENDIX H

Questionnaire response by Nordecon

	Estonia		Latvia		Lithuania	
	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
Overall: 2						
Commercial real estate	0	0	0	0	0	0
Housing	0	1	1	0	0	0
Land	0	0	0	0	0	0
Socio-cultural objects	0	0	0	0	0	0

Source: author's questionnaire

APPENDIX I

Questionnaire response by Baltic Horizon Fund

	Estonia		Latvia		Lithuania	
	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
Overall: 4						
Commercial real estate	1	0	1	0	1	0
Housing	0	0	0	0	0	0
Land	0	0	0	0	0	0
Socio-cultural objects	1	0	0	0	0	0

APPENDIX J

Questionnaire response by EfTEN United Property Fund

	Estonia		Latvia		Lithuania	
	Projects in capital (operate in Tallinn)	Projects outside the Capital (operates outside Tallinn)	Projects in capital (operate in Riga)	Projects outside the Capital (operates outside Riga)	Projects in capital (operate in Vilnius)	Projects outside the Capital (operates outside Vilnius)
Overall: 10						
Commercial real estate	1	1	1	0	1	1
Housing	1	0	1	0	1	1
Land	0	1	0	0	0	0
Socio-cultural objects	0	0	0	0	0	0

Source: author's questionnaire

Resümee

KAUDED INVESTEERIMISVÕIMALUSED BALTI KINNISVARATURULE — FÜÜSILISE ISIKU PERSPEKTIIV

Mikhail Tsanova

Käesolevas töös käsitleti kaudse investeerimise võimalusi Baltikumi kinnisvaraturul - Füüsilise isiku vaatevinklist. Selgus, et kinnisvara on investori portfellis lahutamatu vara, sellel on oma riskid ja eelised. Viidi läbi kirjanduse analüüs, mis võimaldas tuvastada kinnisvaraga tegelevate ettevõtete ärimudeleid ja instrumente, mille kaudu füüsiline isik saab investeerida.

Töö empiirilises osas püüdis autor Baltikumis tegutsevaid ettevõtteid analüüsides lugejale demonstreerida kõiki investeerimisvõimalusi. Lisaks avalikustati nende ettevõtete finantsnäitajad, milleks on kasumlikkus, tootlus ja risk, likviidsus. Samuti viidi läbi maatriksstruktuuriga küsimustiku abil ettevõtete tulevaste projektide analüüs. Analüüsiks valiti kaksteist Baltikumis tegutsevat ettevõtet. Autor vaatas üle kõik Baltikumis tasuta investeerimiseks avatud ettevõtted. Põhineb NASDAQi veebisaidil. Kasumlikkuse analüüsi jaoks võtsin perioodi 2019-2022. Tootluse ja riski ja likviidsuse jaoks valiti intervall 10. aprill 2018 kuni 10 aprill 2023.

Üldiselt võib väita, et kõik autori võetud ettevõtted näitasid end erineval viisil ja iga investor saab teost lugedes kujundada oma arvamuse konkreetse võimaluse kohta. Igal investoril on oma suhtumine riskidesse, volatiilsusse jne. Üksikasju analüüsides saate tuvastada mitu huvitavat punkti. Esiteks liiguvad kõik ettevõtted maailmaturuga ühes suunas ja nende finantsbeeta on 0-1. Teiseks loodavad ettevõtted tulevaste projektide kaalumisel rohkem pealinnadele, mitte kogu Balti riikide territooriumile. Kolmandaks osutusid ettevõtete jaoks kõige populaarsemateks kinnisvaraliikideks elamu- ja ärikinnisvara. Märkimist väärib, et kinnisvara kui vara kasumlikkust on hetkel raske ennustada, kuna olukorra ebakindlus maailmas ja kogu Baltikumis tervikuna ei ole, mistõttu ajalooline tasuvus ei ole tuleviku kasumlikkuse näitaja.

Kokkuvõtteks võib öelda, et kõik autori poolt kirjeldatud võimalused on raha paigutamise võimalus ja see töö aitab investoril saada aimu turust nii teoreetilisest kui ka praktilisest küljest. Autor suutis Balti turu näitel edasi anda ja arutada kõiki üksikisiku kaudse investeerimise võimalusi.

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