Comparative Analysis of Return on Investment in the Bulgarian Real Estate Market

Yana Stoencheva[*]

Summary

This article analyses the return on some direct and indirect investments in the Bulgarian real estate market, while discussing their particular characteristics and advantages. As an object of our analysis of direct investments, we have selected residential properties and garages for personal vehicles, due to their clearer and simpler characteristics from the perspective of the mass investor, as well as the lower barriers for entering the market and the well-structured information available. The author offers a tested methodology which studies the return on investment by residential area and types of property in the three largest cities of Bulgaria. We also analyze the return on investment in the Real Estate Investment Trusts as a single form of indirect participation in the Bulgarian real estate market. The resulting findings can be of use to the individual investors, as well as to the real estate agencies, the investment companies, the building companies and other institutional investors.

Key words: investments, return, real estate, REITs (Real Estate Investment Trusts),

JEL Classification: G11, R21, R32

1. Introduction:

The right of free choice in investment is a conceptual principle of the market economy. When an individual needs to make a choice about a marital partner, profession, friends or lifestyle, he or she generally feels calm and confident, usually guided by their values and motivations they choose their proper "frame of idealism". However, when it comes to realizing a concrete business idea, making the right decision turns out to be a more complicated and laborious process. The reasons for this could be financial limitations, a variety of restricting circumstances, issues of transparency in conducting a transaction, insufficient information, knowledge or qualification among the investors, as well as the difficulty to guarantee good financial results in the future. The choice of different forms of capital investment like properties, shares, bonds, commodities, currency, precious stones, gold and etc. can meet the requirements of any preferred strategy. But in order to find what one is really seeking in terms of preferences and financial affordability, one has to exert some consistency, perseverance, business savvy, but first and foremost one needs access to objective and relevant information. In the contemporary world the demand for profitable investment opportunities which secure good return at low risk, largely exceed

[*]Yana Stoencheva, Ph. D. Assistant Professor in Real Estate department at the University of National and World Economy, e-mail: hrischeva.y@abv.bg

the offer of such. According to Patrizia Investment Company (2014), the highest return on average annual basis in England's investment market for the period 1982-2013 is from shares and properties, more specifically residential properties (Table 1).

4. The availability of well-structured and comprehensive published information in the field.
5. The insufficient supply of parking spaces for private vehicles in the cities, which raises the demand for garages and

Table 1. Average annual return on investment and risk in England in the period 1982 – 2013

Assets	Average return in %	Risk in %	Assets	Average return in %	Risk %
			Real Estate		
Stocks	14.34	22.4	Industrial Real Estate	10.5	10.5
Bonds	7.1	3.5	Office Real Estate	8.9	11.2
Gold	5.2	16	Residential Real Estate	14.31	10.1
UK REITs	12	25.8	Commercial Real Estate	10.1	9.4

Source: https://www.patrizia.ag/fileadmin/user_upload/Research/Investment_Compass_UK/Compass_UK_Residential_01-2014.pdf

Such a large-scale and extended study over a lengthy period of time for Bulgaria has not been conducted or has not been released. Moreover, while the Real Estate investment Funds represent a considerable share of the capital market in England and have good profitability in other countries, in Bulgaria they are a recent phenomenon that has come into existence not until 2004.

The present study examines the investments in real estate (residential properties, personal garages and shares in Real Estate Investment Trusts).

The reasons for the choice of these particular issues to analyze are the following:
1. The investment in residential properties is one of the most popular and accessible one for investors, given their everyday use and vital role as shelter.
2. The investment has relatively low purchase barriers, compared to investment in commercial and business properties (shops, restaurants, hotels), office buildings, factories, etc.
3. The increasing free cash flow to households in the form of bank deposits and falling interest rates on mortgage and consumer loans, as has been shown by Damyanov (2016).

further drives up the price of rent.
6. The opportunity to invest in a professionally run investment fund without restrictions like minimum requirements for invested capital.

The goal is to investigate the level of attractiveness and return on investment of certain types of properties, namely residential properties, garages and REITs. The present analysis will contribute by testing a methodology for the evaluation of return on investment in real estate, broken down by territory, size and type.

2. Methodology, methods and scope of the study

In terms of methodology, the study is carried out by applying a theoretical-empirical method. Theoretically, a number of static and dynamic methods have been reviewed, discussed and employed to estimate the return on investment in real estate. In order to conduct the research in practical terms, which encompasses various considerations, the author has chosen the method of calculating the factor (multiplier) of the purchase price. A comparative study has been carried out on the return for different types of properties and an attempt has been made to summarise the findings on this return through the coefficient of variable.

Scope of research:
- time limit – considering the dynamics of the sale and rent offer prices of the analysed real estate categories, the study of return on investment is conducted as of 30th October 2016.
- information scope – the selected data for sale and rent property prices has been accessed exclusively through the web portal www.imot.bg.
- scope of studied types of property: three and four- bedroom or multi-bedroom flats, business properties (offices, shops, warehouses, eateries, among other property) have not been examined, considering the shortage of accessible well-structured information.
- return on investment in real estate has been is analyzed along the criteria of location (neighbourhood) and size of property (studios, one-bedroom and two-bedroom flats).
- the present study does not aim to inform prospective investors about the ratio between purchase price and return on investment in the various categories and locations, nor give suggestions on how to increase it.

The basic motivation behind a decision to invest in real estate is to retain or increase wealth by creating opportunities for future income. As it is the case with every investment decision, the decision for investment in real estate is based on the evaluation of the return on this particular investment. There are various definitions of return in the economic literature. For instance, profitability (return, profitableness, ROI) is defined as a ratio between the financial result of the investment and the invested capital (Yovkova, 2011). Other authors (Timchev, 1999) define return as a measure of effectiveness of the capital invested. According to the authors, the term "return" can be summed up as the financial ratio measuring the benefit of a particular investment. Most often return is presented as a percentage year on year, but we can estimate a monthly return, considering that in Bulgaria any income or salary is paid on a monthly basis.

When we talk about return on investment in real estate, and particularly on the research topic of our study – residential properties and personal garages - attention should be focused on the main factors that can influence the levels of return such as:
- the amount of rental income[1];
- the expected income from a sale of a property;
- the expenditure when acquiring a property, or respectively for building it;
- expenditure on upkeep and renovations. When renting out a property there are always running expenses that go towards repair of worn-down items, like bathroom fixtures, kitchen equipment, door knobs, furniture, painting and re-flooring.
- average interest rate for borrowing capital;
- expense on taxes; such are property tax and rubbish tax, individual income tax on capital gains after the deduction of 10% expenses;
- expenditure on managing a property and etc.;

Before taking a concrete step towards investing in real estate, an investor needs to be well-informed about the target property, including its quantity and quality characteristics, the economic and social aspects of owning a residential property

---

[1]According to the regulations for applying the law for state property, the rent for garages is determined by multiplying three times the basic rental price of 1 square meter of residential property, taking into account the indicators for a particular category of area, type of zone and infrastructure. This price serves as a basis for determining the starting rental price when conducting tenders for renting out. On the other hand the rental price for parking spaces is determined by the article 38, corrected by coefficient for parking spaces (CPS)=0.70 for parking spaces in underground car parks of residential buildings or with CPS=0.50 for ground parking spaces within the residential property.

(Ignatova (2017), Dakovski (2005). They should also be aware of the various methods in place to evaluate possible return and the financial viability of the investment. In order to accurately estimate the return on investment in residential properties and garages, a number of methods could be utilized, divided roughly by different authors into static and dynamic: Yovkova (2011), Zhelev (2013), Goddard (2012), etc.

The first group of methods – the static ones - allows us to evaluate the investments in real estate on the basis of money flows, which are hard to compare, given that they are carried out at different times. For this reason, these methods are not deemed to be particularly accurate, though they are rather common and easily applicable methods. Within the group of static methods, we distinguish between: method of the average annual norm of income, method of the number of turnovers of the invested capital, method of comparing the analytical profit, etc. This paper holds the view that the most popular static methods accessible to investors that could be used successfully in evaluating the return on investment in residential properties and garages are as follows:
- Method for calculating the factor (multiplier) of the sale price. It presents the sale price of the property as a multiplied sum of the annual net rental incomes. In other words, this is the number of years necessary to pay off the amount invested for the purchase price of the property, which can be calculated by dividing the amount invested by the expected average net annual rental income.

If the property is acquired as inheritance or as a gift, its investment value is actually its market price. Very often differs from its tax value and its financial evaluation based on its level of depreciation. The market price plus the additional acquisition costs could be regarded as the purchase price, if the property was to be purchased. Given that the market price changes under the influence of many factors, it is more appropriate to use average market prices for a particular type of property with certain characteristics, calculated as a half-total of the price at the beginning and at the end of the year.

- Method for calculating the net initial return – this method represents the ratio in percentage between the net rental income during the first year and the purchase price, including all the incurred expenses. This method is defined (by Murzin 2013) as a coefficient of general efficiency of capital investment and he qualifies it as one of the simplified (statistical) methods for evaluation of the investment attractiveness of the realties. The author defines the reciprocal value of the resulting exponent as a term for return on investment. This is actually a variation of the first method, but with the qualification that it only employs the first year of usage, which runs the risk of inaccuracy over a longer period of time. An identified shortcoming of this indicator is the downplaying of fluctuating value of the currency in time. To compensate for that, the necessity to discount the money flows, accumulated during a certain period and to compare the incurred expenses with the received or expected income, has been highlighted.

A formula providing a realistic exponent for evaluation of return on investment is shown below (Yovkova 2014):

$$r = \frac{N + \dfrac{(P_t - P_0)}{n}}{P_0} \cdot 100 \qquad (1)$$

where:

r – is average annual return on investment in a particular property during the investment period (period of ownership, period of life);
N – is average annual net rental income;
P_t – is the market price of the property in the year ,,t" – the last year of the reviewed

period (period of ownership, or the last year of life cycle of the property);

P_0 – is the purchase price of the property, including all the commissions, fees, taxes or investment expenses (while constructing the property);

n - the number of years of ownership of the property.

The formula includes the investment capital, as well as the incoming cash flows and the number of years of ownership. It provides a realistic index of the studied topic.

Characteristic for the investments in residential properties and garages is that the return can vary depending on the period. As an index in the analyses we can use the average return, calculated via the formula for the average/chronological periodic quantity, which by structure is not different from the median quantity (Kaloyanov and others 2014):

- median:

$$\overline{r_a} = \frac{\sum_{t=1}^{T} r_t}{T} \qquad (2)$$

Where:

r_a - is the average return for the whole period of usage;

t – is the number of the sub period (month or year);

T – the number of sub periods.

- we can calculate a median geometrical rate of growth of return (Kaloyanov and others, 2014)

$$\overline{r_g} = \sqrt[T-1]{\frac{r_T}{r_1}} \qquad (3)$$

The second main group of methods for evaluation return and the financial viability of investments in real estate are the dynamic methods. They account for the time frame of the cash flows throughout the entire life cycle of the investment. Firstly we define

the one off (investment) expenses, followed by the expected net annual income. To this group of methods we can add the method of Net Present Value (NCV), the method of the Net Future Value (NFV), the method of Internal Rate of Return (IRR), the method of Modified Internal Rate of Return (MIRR), the method "income-expenditure", etc. In detail we are going to review the ones that are more accessible to the mass investors when analyzing the return on investment in residential property and garages, more specifically:

- Method of the Net Present Value – with this method the money flows are discounted with a certain percent of discount and then the investment expenses are deduced from that amount. The method allows for the expected future income to be adapted to the present moment. An investment project whose net present value is a negative figure, is considered unattractive and likely to be a loser. It turns out that the net present value depends on the expected return during a specific period determined for reaching a return, usually denoted in a number of years *(n)*.

$$NPV = \sum_{i=1}^{n} \frac{x_i}{(1+r)^i} - x_0, \qquad (4)$$

where:

NPV is the net present value;

x_i – the expected net cash flow in the year "*i*";

r – target return;

x_0 – investment expenditures.

- Method for calculating the internal norm of return – the internal norm of return is the percentage at which the total amount of the discounted expected net annual cash flows is equalized with the investment expenses.

From the reviewed methods, a conclusion could be drawn that the dynamic methods are far more accurate and preferable,

especially when there are larger investments involved. When comparing the investment attractiveness of several properties, the advantage of the dynamic methods could be decisive in distinguishing between different levels of wear and tear and hence different periods of use.

3. Methodology of analysis in calculating the return on investment in residential properties and garages

Taking as a basis the reviewed methods for calculating the return on investment vis-a-vis residential properties and garages, a method had to be selected that is applicable given the available information, and clear enough to be readily understood and allow for a comparison of the findings of the present study with other similar studies in the country or abroad. To this effect and for the practical purpose of revealing the differences in return on investment in the various types of properties and garages, the author has chosen the static method of calculating the factor (multiplicator) of the purchase price on the grounds of its clarity and practicality in analyzing the subjects at hand. While choosing this method, the following considerations have been taken into account:

1. Information was collected from the popular real estates' web portal, which boasts with sufficiently extensive database of offers. This is a key advantage, considering that the broader the database is, the deeper the analysis and more accurate the findings are.

2. The utilized website provides the possibility for distinction between the residential properties by characteristics set in advance. The level of similarity among the properties based on a larger number of characteristics would provide more valuable results, though their division in groups of a combined type by several characteristics was difficult, because of lack of concurrence between the characteristics in the two sections of the selected website – sale and rent. This also stems from the non-mandatory character of the minimal type of information required, both for the sale and rent adverts (for instance type of construction, number of floors, particular floor, year of construction, etc.)

3. The data collected in advance include the average prices of the properties in the extract, the average prices per square meter and the number of adverts in the sales and rents sections for the different sizes of properties and garages in the studied cities accounting for the preliminarily set characteristics for differentiation. It is worth pointing out that thanks to the information technologies, calculating the average prices in the extract is completely automatic, which saves us time and effort.

4. The study excludes the neighborhoods that, for properties with a particular number of rooms, there are less than three sale or rent offers, since there is a real risk for the given ask prices to be untypical and hence the resulting analysis to be arbitrary.

5. The assumption has been made that both the sale and the rental deals are made at lower than the official ask prices, but since there is a lack of information about the level of reduction, we assumed that the percentage of the decrease is similar for all properties, hence that would not influence return.

6. When calculating the average annual return on investment in renting, the figure could be conveyed through the number of years necessary to return the investment or as a relative share of the annual income of the ask price.

In practice the gross theoretical rental income exceeds the actual (net) income, because it is subject to deduction for

property tax, rubbish tax, general upkeep and repairs when changing tenants, lack of income while looking for tenants, insurance payments, mortgage payments, etc. Since the period between tenants can vary, the author has deemed it realistic to deduce the income for two months, so for net annual income is considered the expected income for ten months.

Term of return on investment in years =
$$\frac{\text{average ask price per 1 sq.m.}}{\text{average rental price per 1 sq.m.}} / 10. \quad (5)$$

The indicator for return in percentage is in essence reciprocal to the indicator number of years for return.

Average annual return in % =
$$\frac{\text{average rental price per 1 sq.m.}}{\text{average asking sale price per 1 sq.m.}} \times 1000 \quad (6)$$

country's territory is not too large, so investing in various places would not present a difficulty vis-a-vis the management of the property.

4. Findings of the study

Utilizing the above-described methodology, an analysis revealing the return on investment in residential properties and garages, area by area, within the territory of Sofia and consequently the estimated average annual return is compared with the one in the next in size cities of Plovdiv and Varna has been carried out.

To this effect, the comprehensive data on sales and rental offers has been used from the web portal www.imot.bg by 30.10.2016. This website provides the largest possible database[2] which allows to form a sufficiently

Table 2. Average annual return on investment in studio flats by neighborhood in Sofia through renting, in % by 30.10.2016

Neighbourhood	Return	Neighbourhood	Return	Neighbourhood	Return
1. Mladost 3	8.16	16. Krasna Polyana 2	6.23	31. Gotse Delchev	5.10
2. Reduta	7.57	17. Vitosha	6.21	32. Banishora	5.05
3. Manastirski Livadi	7.28	18. Suhata Reka	6.18	33. Slatina	5.05
4. Boyana	7.23	19. Lyulin 10	5.89	34. Strelbishte	5.04
5. Mladost 4	7.21	20. Lyulin 4	5.67	35. Drujba 1	5.02
6. Lyulin 2	7.21	21. Obelya 2	5.60	36. Ovcha Kupel 1	4.88
7. Ovcha Kupel 2	6.98	22. Drujba 2	5.53	37. Sveta Troitsa	4.83
8. Lyulin 7	6.92	23. Mladost 1	5.50	38. Lozenets	4.82
9. Pavlovo	6.63	24. Levski G	5.47	39. Mladost 1A	4.68
10. Darvenitsa	6.56	25. Belite Brezi	5.41	40. Iztok	4.63
11. Zona B-18	6.53	26. Dianabad	5.40	41. Nadejda 3	4.60
12. Hadji Dimitar	6.50	27. Mladost 2	5.37	42. Lyulin 5	4.57
13. Ovcha Kupel	6.31	28. Borovo	5.19	43. Musagenitsa	4.46
14. Studentski Grad	6.28	29. Yavorov	5.16	44. Oborishte	4.07
15. Lyulin 8	6.24	30. Center	5.11	45. Ilinden	3.99

We thus established the relative indicators of coordination (Stoenchev 2013) that could be used for territorial comparisons.

7. A major assumption in this paper is that carrying out a comparative territorial study within Bulgaria is relevant, given that the

large totality for estimating the average quantities.

To evaluate the average annual return on residential properties, the used primary data were the average asking sale and rental prices for studios, one-bedroom and two-

[2]According to Gemius and Similarweb for November 2015 the web portal imot.bg has 296 000 hits. Second and third place respectively is taken by imoti.info with 168 000 hits and imoti.net with 139 000 hits.

Table 3. Average annual return on investment in one-bedroom flats by neighborhood through renting, in % by 30.10.2016.

Neighbourhood	Return	Neighbourhood	Return	Neighbourhood	Return
1. Mladost 3	9.10	27. Drujba 2	5.45	53. Mladost 1A	4.98
2. Boyana	7.00	28. Levski G	5.45	54. Suhata Reka	4.92
3. Lyulin 9	6.28	29. Tolstoy	5.42	55. Slatina	4.91
4. Poligona	6.24	30. Darvenitsa	5.40	56. Lyulin 6	4.89
5. Krastova Vada	6.14	31. Iztok	5.39	57. Lyulin 3	4.86
6. Gevgeliyski	6.09	32. Zapaden Park	5.33	58. Ovcha Kupel 1	4.85
7. Mladost 4	6.08	33. Buxton	5.33	59. Gotse Delchev	4.83
8. Obelya 2	6.03	34. Ivan Vazov	5.28	60. Poduene	4.76
9. Manastirski Livadi	5.99	35. Banishora	5.28	61. Lagera	4.66
10. Nadejda 2	5.98	36. Zaharna Fabrika	5.27	62. Lozenets	4.63
11. Lyulin 7	5.98	37. Nadejda 4	5.27	63. Lyulin 2	4.58
12. Lyulin 8	5.89	38. Hladilnika	5.26	64. Serdika	4.56
13. Lyulin 4	5.85	39. Knyajevo	5.24	65. Musagenitsa	4.52
14. Dragalevtsi	5.82	40. Lyulin 5	5.20	66. Krasno Selo	4.39
15. Zona B-19	5.80	41. Sveta Troitsa	5.20	67. Izgrev	4.35
16. Dianabad	5.80	42. Zona B-5	5.15	68. Belite Brezi	4.15
17. Ovcha Kupel	5.77	43. Drujba 1	5.15	69. Ilinden	4.12
18. Orlandovtsi	5.77	44. Mladost 2	5.13	70. Yavorov	4.04
19. Simeonovo	5.75	45. Pavlovo	5.12	71. Oborishte	4.01
20. Reduta	5.67	46. Lyulin 10	5.10	72. Slavia	3.94
21. Studentski Grad	5.64	47. Borovo	5.07	73. Hipodruma	3.88
22. Nadejda 1	5.59	48. Razsadnika	5.06	74. Medicinska Academia	3.81
23. Zona B-18	5.48	49. Vitosha	5.06	75. Doctorski Pametnik	3.57
24. Hadji Dimitar	5.48	50. Center	5.04	76. Strelbishte	3.35
25. Ovcha Kupel 2	5.47	51. Geo Milev	5.00		
26. Krasna Polyana 2	5.47	52. Mladost1	5.00		

bedroom flats, accounting for the fact that there is an insufficient number of adverts for three-bedroom and multi-bedroom flats. The estimated indicators are presented in percentages in order to facilitate the potential investors when they compare the interest rates of the bank deposits and the government securities.

Considering that the number and the structure of the sale and rent offers for residential properties in the specialized websites are dynamically changing, there is no absolute guarantee that every investment will bring about a specific return. However, given the comprehensive character of the reported data, one can form a realistic picture and compare the return on investment in the different areas of Sofia. Based on the estimated indicators in Tables 2, 3 and 4, we could draw the conclusion that the highest return on investment in Sofia at the time the survey was conducted was found for two-bedroom flats, followed by the one-bedroom flats and the studios. In other words, with the decrease in the number of rooms, the return on investment falls. This conclusion is only valid, however, if the available investment capital is not limited. When a property is being bought for investment purposes and not for personal use, it is essential that the general trend and forecasts for the pricing in a particular area are taken into account with the view to the future profitability of the investment. To that end potential investors

*Table 4. Average annual return on investment in two-bedroom flats by neighborhood through renting in
percentage by 30.10.2016*

Neighbourhood	Return	Neighbourhood	Return	Neighbourhood	Return
1. Malinova Dolina	9.80	22. Poduene	4.98	43. Krasno Selo	4.42
2. Mladost 3	8.91	23. Simeonovo	4.96	44. Levski V	4.38
3. Mladost 1A	6.13	24. Mladost 1	4.95	45. Gorublyane	4.34
4. Poligona	6.11	25. Banishora	4.90	46. Belite Brezi	4.26
5. Krastova Vada	5.78	26. Hadji Dimitar	4.87	47. Geo Milev	4.25
6. Manastirski Livadi	5.66	27. Zona B-19	4.84	48. Bakston	4.24
7. Mladost 4	5.55	28. Dianabad	4.83	49. Ovcha Kupel	4.22
8. Vitosha	5.51	29. Gotse Delchev	4.73	50. Ovcha Kupel 1	4.13
9. Ivan Vazov	5.37	30. Lozenets	4.65	51. Strelbishte	4.11
10. Nadejda 1	5.35	31. Reduta	4.65	52. Sveta Troitsa	4.11
11. Center	5.34	32. Lyulin 3	4.63	53. Krasna Polyana 2	4.06
12. Dragalevtsi	5.29	33. Zona B-5	4.63	54. Levski G	4.04
13. Zona B-18	5.27	34. Suhata Reka	4.59	55. Pavlovo	3.93
14. Levski	5.20	35. Razsadnika	4.55	56. Drujba 2	3.92
15. Borovo	5.16	36. Knyajevo	4.51	57. Doctorski Pametnik	3.91
16. Izgrev	5.14	37. Nadejda 3	4.50	58. Musagenitsa	3.88
17. Studentski grad	5.14	38. Iztok	4.49	59. Gorna Banya	3.86
18. Lyulin 9	5.10	39. Karpuzica	4.46	60. Lagera	3.83
19. Mladost 2	5.08	40. Ovcha Kupel 2	4.45	61. Darvenitsa	3.73
20. Yavorov	5.07	41. Oborishte	4.43	62. Lyulin 10	3.72
21. Nadejda 2	4.98	42. Drujba 1	4.43	63. Medicinska Academia	3.71

would be interested in looking into areas which, for example, an underground station is under construction. (When the construction of the third metro line is completed in the next year, certain neighborhoods will suddenly rise in attractiveness, such as Levski, Suhata Reka, Hadji Dimitar, Military Academy, Hipodruma, Belite Brezi, Ovcha Kupel, etc.)

Let us now take a closer look at those areas in which the return on investment is the highest. In the top three across all three rankings, by flat categories, we see Mladost 3 – it holds the number one position amongst the studios and one-bedroom flats and number two in the two-bedroom ranking. This fact is well-justifiable. The main factors that contribute to the attractiveness of this neighborhood are the well-developed public transport infrastructure (numerous bus lines and two metro lines), substantial concentration of big supermarket chains (Fantastico, Billa, Kaufland and Lidl), the relative proximity to other commercial centers (Sofia Ring Mall, Ikea) and the nearby Business Park which houses some of the largest international companies with subsidiaries in Sofia. Additional factors are the low concentration of minority groups, the lack of industrial plants, the well-developed sewerage system, the relatively well-maintained green and recreational areas, the proximity of the Vitosha mountain, etc. The only area that can boast with a higher return on investment percent is Malinova Dolina with 9.8% for its two-bedroom flats.

For the purpose of a more in-depth analysis, the author has estimated the

average return in absolute sum-total for all areas (i.e. the average return on 1 lev invested in purchasing a residential property of a particular size on an annual basis) and the standard deviations from the average return. It is on this basis that the deviation coefficient in percentage points was estimated. The results obtained show that the coefficient of deviation is the highest with the two-bedroom flats (20.9068), followed by the studios (17.25579) and the one-bedroom flats (15.5809). Considering the above results, this paper holds the view that the level of profitability is dependent on the location of the two-bedroom flats, followed by the studios and the one-bedroom. This definitely plays a role when taking an investment decision. The level of deviation is proportional to the investment risk, defined by the existing methodologies and so is of crucial significance when profitability is the main motive behind the purchase of a residential property in Sofia. This is due to the size of the capital city where the distance from the centre or the mountain, the access to amenities and good transport connections and therefore general attractiveness and profitability substantially differ from one area to another.

For the purposes of an in-depth analysis, several groups of neighborhoods have been allocated, depending on their average annual return on investment.

In the first group are placed the areas with sustainably high average annual return on investment. Those are the neighborhoods from the first third of the ranking, namely Mladost 3, Manastirski Livadi, Mladost 4, Zone B-18 and Studentski Grad.

The second group encompasses the areas with steadily low average annual return on investment in all categories, namely the neighborhoods from the last third of the ranking, like Ovcha Kupel 1 and Musagenitsa.

The third group encompasses areas where certain anomalies can be observed, i.e. high return on certain size of flats and low on others. Such are Lyulin 2, which shows high return of 7.21% from the studios, but sustainably low of 4.58% from the two-bedroom flats. Pavlovo has sustainably high return of 6.63% from the studios and below 4% from the two-bedrooms. Darvenitsa is with high return of 6.56% from the studios and at the bottom of the rankings with 3.73% from the two-bedrooms. Analogously, Ovcha Kupel comes among the top 10 neighborhoods on return in the studios and with a relative low return when it comes to the two-bedrooms.

Analysing the three groups of neighbourhoods presented above, it should be noted that the areas considered most prestigious, boasting high average prices by sq.m., equally for sale or rent, like Lozenets, Iztok, Doctor's Monument, Medical Academy, Ivan Vazov, and other, do not fall into any of the identified categories. Very often the high ask property prices in the centrally located neighbourhoods cannot be compensated by the rentals, although they are relatively high, because of the diminishing importance of the location factor. In other words, potential buyers are inclined to live in the suburbs at lower cost, and enjoy the comfort of commuting downtown on the underground. Consequently the return on investment in the above-mentioned areas is lower than expected. Having said that, however, it is likely in the future that the investment interest in these prestigious areas is reignited so that they move up in the ranking for average annual return, given the steady rise of the prices and rentals in the neighbourhoods connected to the centre via the metro line and the likelihood that their prices should almost reach the levels of the ones for the properties located in the city center.

The return on investment in residential property in the capital of Sofia is compared to the one in the next two largest Bulgarian

Table 5. Average annual return on investment in residential properties, grouped by number of rooms by areas in Sofia, Plovdiv and Varna, in % by 30.10.2016.

studios					
Sofia	Return	**Plovdiv**	Return	**Varna**	Return
1. Mladost 3	8.16	1. Trakia	9.52	1. Levski	6.31
2. Reduta	7.57	2. Southern	8.32	2. Grand Mol Varna	6.27
3. Man. Livadi	7.28	3. Vastanicheski	8.27	3. Sportna zala	6.18
4. Boyana	7.23	4. Gagarin	6.39	4. Zk Trakia	6.06
5. Mladost 4	7.21	5. Kyuchuk Paric	6.25	5. Center	5.89
6. Lyulin 2	7.21	6. Sadiiski	6.08	6. Briz	5.84
7. Ovcha Kupel	6.98	7. Smirnenski	6.04	7. Chataldja	5.76
8. Lyulin 7	6.92	8. Center	6.00	8. Lk Trakia	5.67
9. Pavlovo	6.63	9. Karshiaka	5.95	9. Tsveten	5.66
10. Darvenitsa	6.56	10. Kamenica 1	4.80	10. Kolhozen Pazar	5.62
1-bedroom flats					
Sofia	Return	**Plovdiv**	Return	**Varna**	Return
1. Mladost 3	9.10	1. Ostromila	7.39	1. Grand Mol Varna	5.85
2. Boyana	7.00	2. Smirnenski	7.08	2. Central Post	5.41
3. Lyulin 9	6.28	3. Izgrev	6.98	3. Levski	5.23
4. Poligona	6.24	4. Southern	6.78	4. Bazar Levski	5.19
5. Krastova Vada	6.14	5.Vastanicheski	6.16	5. Pogrebite	5.06
6. Gevgeliyski	6.09	6. Trakia	6.13	6. Zk Trakia	5.04
7. Mladost 4	6.08	7. Karshiaka	5.94	7. Briz	4.93
8. Obelya 2	6.03	8.Kyuchuk Paric	5.75	8. Troshevo	4.89
9. Man. Livadi	5.99	9. Center	5.65	9. Lk Trakia	4.88
10. Nadejda 2	5.98	10. Kamenica 2	5.61	10. Tsveten	4.87
2-bedroom flats					
Sofia	Return	**Plovdiv**	Return	**Varna**	Return
1. Mal. Dolina	9.80	1. Trakia	7.88	1. Grand Mol Varna	5.13
2. Mladost 3	8.91	2. Southern	5.78	2. Levski	4.76
3. Mladost 1A	6.13	3. Smirnenski	5.57	3. Sportna zala	4.74
4. Poligona	6.11	4. Sadiiski	5.57	4. Briz	4.68
5. Krastova Vada	5.78	5. Center	5.53	5. Kolhozen Pazar	4.63
6. Man. Livadi	5.66	6.Vastanicheski	5.42	6. Pobeda	4.54
7. Mladost 4	5.55	7. Karshiaka	5.37	7. Pogrebite	4.50
8. Vitosha	5.51	8. Gagarin	5.17	8. Chataldja	4.43
9. Ivan Vazov	5.37	9. Kyuchuk Paric	5.12	9. Bus Station	4.38
10. Nadejda 1	5.35	10. Stariyat grad	4.97	10. Lk Trakia	4.34

cities Plovdiv and Varna, using the same criteria and time period. The results from the comparative study are presented in Table 5. The author looks into the 10 most attractive neighborhoods in each of the three cities, comparing the average annual return on investment.

The above data shows considerable differences among the average annual return on investment in the different flat categories, as well as city by city. The lowest return in all three flat categories proves to be in Varna, where the highest return is registered in the studios in the area of Levski. It is interesting

to observe that the return in Sofia and Plovdiv is higher than in the seaside capital while at the same time there are substantial differences of sometimes over 1% between the returns from the three flat categories.

In addition to the average annual return[3] on investment, certain differences can be observed between the average sale prices

they have a number of advantages which set them apart from the other investment properties. For instance:

1. High market liquidity due to insufficient offer[4] and high demand, which in turn maintains the high price level of their sale, purchase and rent.
2. A permanent shortage trend stemming

Table 6. Average sale prices, rent and average return in % in Sofia, Plovdiv and Varna by 30.10.2016.

City	Studio			1-bedroom flat			2-bedroom flat		
	Average sale price in euro	Average rent in euro	Average return	Average sale price in euro	Average rent in euro	Average return	Average sale price in euro	Average rent in euro	Average return
Sofia	41700.09	222.19	5.77	65903.55	314.99	5.26	114067.50	445.64	4.82
Plovdiv	25659.92	145.25	6.31	39704.53	225.87	5.89	60834.50	275.25	5.35
Varna	30626.13	149.31	5.45	52547.82	221.76	4.62	75452.68	292.37	4.09

and the rentals in the three residential categories and cities (Table 6).

The rationale behind the free-market relations is deeply rooted in the trade in real estate. What is worth noting in Table 6 is that different sale prices of properties in the three cities lead to different potential returns. The highest average annual return in all three flat categories is registered in Plovdiv. It is worth pointing out that the sale prices there are the lowest, as well as the rentals of studios and 2-bedroom flats. These characteristics make the city extremely attractive for long-term investment in residential properties.

The research focus in the next section of the analysis is the investments in garages, which have been enjoying a growing interest on the part of investors over the past several years, especially in the big cities. This could be attributed to the rising trend of possession of personal motor vehicles and the decreasing number of outdoor parking spaces. Even though it is difficult to place garages in a separate investment category,

from the massive use of motor vehicles and their steady growth in numbers.

3. Lower capital barriers for entry the market for this type of investment, compared to other property investments, despite the high average prices per square meter in some of the high-end areas of Sofia.[5]

4. Unlike the residential properties, the office and commercial spaces, the degree of wear and tear in a garage is fairly low. There is little or no necessity for refurbishing or renovation and risk for the accumulation of utility bills is negligible.

The above-listed advantages of this specific investment class of assets, which render them attractive for the potential investors, while raising the interest of both potential owners and lessees. Among the main attractions are the secured parking place, limiting the harmful influence of weather conditions which can cause damage and requires time and resources for repair works. Such could be the damages caused by adverse weather conditions, temperature anomalies, increased

[3] Average annual return is estimated as a ratio between the average rent per sq. m. and the average purchase price per sq. m.
[4] According to the web portal www.imot.bg by 30.10.2016 the sale and rental offers for flats and garages are respectively as follows: residential properties (all categories): sales – 17505, rents – 5054, garages: sales – 359, rents – 189.
[5] Average sale prices in euros per sq.m.: Beli Brezi – 775, Oborishte – 730, Lozenetz – 690, Centre – 669, Strelbishte – 664, Iztok – 642.

humidity, among other climate-related factors. Another crucial factor is the guaranteed safety from theft and vandalism, as well as the possibility to use the garage as a storage facility if the space restrictions allows for this.

For the purpose of a more precise analysis of the return on investment in garages, in addition to using the already mentioned methodology, the offers are grouped by size within the scale 13 – 26 sq.m. (one parking space)[6] while the offers for outdoor parking spaces have been excluded.

Only the return on investment in garages in Sofia has been presented, given the limited number of offers in the two large Bulgarian cities that come next in the ranking.

The compiled data presented in Table 7 above shows that the return on investment in garages in the majority of Sofia neighborhoods is comparable to the one for residential properties. We can observe discrepancies between these figures for the studios and the one-bedroom flats, on one hand, and the garages on the other in areas like Zona B-18, Iztok, Mladost 4, Geo Milev, also between the one-bedroom flats and garages in Strelbishte, Studentski Grad, Hipodruma. The same applies for the two-bedroom flats in Buxton, Zona B-18, Iztok, Ovcha Kupel, Studentski Grad, Hipodruma. The total average return on investment in garages is higher than the total average return in the three flat categories. The most substantial differences are observed in comparison with the two-bedroom flats, followed by the one-bedroom flats and the studios. This clearly shows the advantage of investment in this particular class of assets.

An object of additional investment interest in the Bulgarian real estate market, from the single as well as from the institutional investors' perspective, could be presented by the REITs[7], whose main purpose is to provide permanent income for the future. In addition to that, there are other advantages that make them attractive, such that direct investments do not have (the lack of minimal capital restrictions for entering the market, the access to properties' portfolios which a single investor could hardly have, the professionally managed portfolios). The facts about the achievements translated into return, gained by the property managing funds in some developed countries for the period 2008-2011, are really impressive. (Manaenko 2013).

- for the USA – 60.90 %;
- For the UK – 8.76 %;
- For Singapore – 27.99 %;
- For France – 14.72 %.

The above results were achieved by Real Estate Investment Trusts for public companies, whose main income comes from the management, renting, sale or purchase of real estate, as well as direct lending against security of property or investment in mortgage securities.

Unlike the countries mentioned above and their high returns achieved during that particular period, the capital market in Bulgaria is still emerging and has only expanded during the last decade, particularly between the years 2004 and 2008, when the REITs began to emerge and gain popularity. Besides their main

---

[6] Defining a size limit for a parking space excludes from this research untypical average prices per sq. m. which could be observed for garages/car parks with total size of over 700 sq. m.

[7] The legal foundations for REITs in Bulgaria are laid with the passing of the Bill for the companies with a special investment purpose, published on 20.05.2003 and in force since 01.01.2004. According to the law, a company with a special investment purpose is a joint-stock company which invests capital, raised through the issuing of securities, in real estate or in claims (securitization of real estates and claims). The main activity of these companies is the securitization of properties which according to the additional provisions art. 1, paragraph 1 of LCSIP (Law for Companies with Special Investment Purpose) is "activity through which property rights (ownership right and building right) over real estates or rights over money claims, including future claims, are materialized in securities offered publicly".

Table 7. Average annual return on investment in garages and flats by neighborhood in Sofia in % by 30 October 2016

Neighborhood	Return		Return		Return	
	Studio	Garage	1-bedroom flat	Garage	2-bedroom flat	Garage
1. Banishora	5.05	5.63	5.28	5.63	4.90	5.63
2. Belite Brezi	5.41	4.66	4.15	4.66	4.26	4.66
3. Borovo	5.19	6.11	5.07	6.11	5.16	6.11
4. Buxton	-	6.23	5.33	6.23	4.24	6.23
5. Vitosha	6.21	5.68	5.06	5.68	5.51	5.68
6. Geo Milev	3.91	5.22	5.00	5.22	4.25	5.22
7. Gotse Delchev	5.10	5.91	4.83	5.91	4.73	5.91
8. Dianabad	5.40	4.98	5.80	4.98	4.83	4.98
9. Zona B-18	6.53	3.38	5.48	3.38	5.27	3.38
10. Iztok	4.63	7.02	5.39	7.02	4.49	7.02
11. Krasno Selo	4.85	4.03	4.39	4.03	4.42	4.03
12. Lozenets	4.82	4.81	4.63	4.81	4.65	4.81
13. Lyulin 8	6.24	6.16	5.89	6.16	5.21	6.16
14. Man. Livadi	7.28	6.64	5.99	6.64	5.66	6.64
15. Mladost 2	5.37	6.30	5.13	6.30	5.08	6.30
16. Mladost 4	7.21	4.88	6.08	4.88	5.55	4.88
17. Oborishte	4.07	5.00	4.01	5.00	4.43	5.00
18. Ovcha Kupel	6.31	6.91	5.77	6.91	4.22	6.91
19. Strelbishte	5.04	5.35	3.35	5.35	4.11	5.35
20. Studentski Grad	6.28	6.88	5.64	6.88	5.14	6.88
21. Hipodruma	5.19	5.44	3.88	5.44	3.70	5.44
22. Center	5.11	5.20	5.04	5.20	5.34	5.20
Average return on investment	5.49	5.56	5.06	5.56	4.78	5.56

advantage, the diversification, to a great extent they also help stimulate the development and growth of the real estate market in Bulgaria. Accounting to the massive rise of these companies on the Bulgarian capital market in 2007, a special stock exchange index BG-REIT was set up, which covers the largest REITs, based

Table 8. BG-REIT constituents and their respective free-floats and weight factors (effective as of 19.12.2016)

Stock symbol	Issue	Free-float	Weight factor	Capitalization
5BD	Bulland Investments REIT-Sofia	0,6484	1	9 463 067
5BU	Bulgarian Real Estate Fund REIT-Sofia	0,8071	0,6459	23 016 198
5CK	CCB Real Estate Fund REIT-Sofia	0,471	1	21 816 390
5ER	ERG Capital-3 REIT-Sofia	0,3682	1	3 866 100
5H4	Balkan and Sea Properties REIT-Varna	0,3924	0,7575	23 016 207
6A6	Advance Terrafund REIT-Sofia	0,5795	0,2265	23 016 177
6SB	Super Borovets Property Fund REIT-Varna	0,7513	1	13 512 882

Table 9. REITs' return on investment in securitization of real estate in Bulgaria for 2015-2016 [9]

REITs Company	Return on assets % (ROA)		Increase on return in %	Portfolio of properties
	2015	2016		
Black Sea Investment	2.4	5	108.33	No info
HBG Investment Property Fund	1.2	1.3	8.33	Residential properties and land plots
Emirates Properties	32.7	0.1	-99.69	Commercial properties
Quantum Developments	5.1	4.9	-3.92	Touristic and holiday properties, commercial, residential properties
PRC	2.7	2.8	3.70	Commercial and residential properties
Serdika Properties	0.2	1.5	650.00	Touristic and holiday properties, office space, residential properties, land plots
Sopharma Properties	3.8	3.7	-2.63	Office space, commercial properties
CCB Real Estate Fund	0.1	0.4	300.00	Office space

Source: http://www.sipca.bg/bg/articles/article39.html

on their market capitalization, exchange of their traded shares and the free float.

A point of interest for the potential investors that have decided to put some capital into REITs could be their assets, the portfolio into which these companies invest, as well as the positive prospects for a sufficiently high return on investment. Table 9 presents only REITs involved in securitization of real estate, which have achieved profit in their percentage of return on investment assets during the particular period and in the portfolio[8] of assets in which they invest.

The above-shown data demonstrates that the number of companies which have a achieved profit in their percentage of return is insufficiently low – only 7 companies out of 39 in total for securitization of real estate. However to analyze the return more accurately,

more indicative of the achievements of the companies is the indicator "return on assets" compared to the indicator "return on own capital". Usually it shows lower values, but it covers the activities more comprehensively and is not dependent on the amount of the company's own capital. In the second quarter of 2016, the return on investment in assets ranges between 0.1% and 5% for the companies that have achieved net profit for their activities. During this period, the highest factor of return on assets has the company Black Sea Investment (5%). The lowest return on assets for the same period is declared by Emirates Property (0.1%). The biggest year-on-year increase compared to the second quarter of 2015 has Serdika Properties – 650%, while Emirates property shows the sharpest decrease of 99.69%. The average return on assets for the second

[8] The data on the portfolio of estates, in which the companies invest, are compiled by the author from the official information on the companies' websites.
[9] Table 8 presents data only for the companies involved in securitization of real estates which are at a profit in their return on investment in assets for the given period.

Table 10. REITs positions on the European capital market [10]

Country	Enacted year	Symbol	Number of REITs	Market cap (Eur€m)	% of European market
United Kingdom	2007	UK-REIT	36	56.59	33.00
France	2003	SIIC	32	49.36	28.78
Netherlands	1969	FBI	5	29.12	16.98
Belgium	1995	SICAFI	17	11.03	6.43
	2014	SIR			
Spain	2009	SOCIMI	5	7.81	4.55
Turkey	1995	REIC	30	6.76	3.94
Germany	2007	G-REIT	4	2.79	1.63
Ireland	2013	REIT	3	2.42	1.41
Italy	2007	SIIQ/SIIINQ	3	2.17	1.27
Greece	1999	REIC	4	1.82	1.06
Bulgaria	2004	SPIC	53	0.87	0.50
Finland	2009	Finnish Reit	1	0.75	0.44
Total Europe	-	-	193	171.47	100.00

quarter of 2016, estimated as an average value for the companies that have achieved net profit, stands at 2.46%, which is several times lower than results of foreign companies. As a result, the conclusion was made that investments in REITs have a considerably lower return, this business has not expanded yet and is not managed successfully enough. More evidence revealing the underdeveloped potential of the Bulgarian companies is provided in Table 9, which presents the country ranks first in terms of REITs among the listed countries, but penultimate by market capitalization. This reveals that the Bulgarian companies are underdeveloped compared to the companies operating in the European capital market.

5. Conclusion

Based on the findings in the present study and the comparison of all the presented investment categories, the conclusion is made that the highest return on investment in real estate in Bulgaria is generated in the one-bedroom and two-bedroom flats in Sofia and the studios in Plovdiv. In order to yield maximum benefits from this sort of investment, though, we need to be aware of all the characteristics of a certain area or type of residential property. Garages offer a relatively high return on investment of 5.56%, together with low barriers for market entry, compared to residential properties. The present study also found that REITs show the lowest potential in return on investment.

References

Goddard, G., Marcum, B., 2012. Real estate investment a value based approach. Spring-Verlag Berlin Heidelberg, 55-59

Kaloyanov, T. et al. (2014) Statistics. Sofia: University of National and World Economy Publishing house, 2014. p.376-382. (In Bulgarian)

Murzin, A. D. Real Estate: Economics, Evaluation and Cadaster. Rostov on Don: Phoenix, 2013. p. 125 (In Russian)

---

[10] Based on data generalized by the author, taken from the official site of EPRA (European Public Real Estate Association) http://www.epra.com/regulation-and-reporting/taxation/reit-survey/ by 30.10.2016.The market capitalization of the companies is presented in euros and is pertinent by 29.07.2016.

Timchev, M. 1999. Financial and economic analysis. Sofia: Trakia-M Publishing house, p.17. (In Bulgarian)

Stoenchev, N. 2013. Statistics. Sofia: University of Forestry Publishing house, p. 58. (In Bulgarian)

Stoyanov, S. and others, 2013. Economics of Real Estate. Varna: Science and Economics Publishing house, Economics University of Varna, p. 84-87. (In Bulgarian)

Yovkova, Y. (2011) Economics and management of real estate. Collected studies. Sofia: Economy University publishing house, p.64-66. (In Bulgarian)

Yovkova, Y. (2014) Investments in real estate and aspects of their financing. Sofia: University of National and World Economy Publishing house, 2014, p. 25 (In Bulgarian)

Ignatova, N., 2017. Housing Policy of the Administrative-Territorial Units in Northeastern Bulgaria 2010-2014. *Economic and Social Alternatives*, Issue 1, p. 70-80. (In Bulgarian)

Dakovski, T., 2005. Economic and social problems of the mass ownership of residential property. *Economic and Social Alternatives*, Issue 2 (In Bulgarian)

Damyanov. D., 2016. Real Returns, Interest Income Tax, and Household Saving in Bulgaria. *Economic Alternatives*, Issue 1, p. 18.

Bogdanova, M. (2015) The real estate websites in November 2015, [Online], Available: https://fakti.bg/imoti/166652-saitovete-za-imoti-prez-noemvri-2015-g [Accessed 13 December 2016] (In Bulgarian)

Manaenko, I. (2013) "Foreign Real Estate investment Trusts: Pros and Cons". *Investments. "A professional overview"*, [Online], 1 (5), Available: www.veles_capital.ru/content/magazine/Files/Investment_5_2013.pdf [Accessed 13 November 2016] (In Russian)

2014, Maximum asset diversification or active selection management? – The role of residential real estate in a UK mixed Portfolio, *PATRIZIA INVESTMENT COMPASS,* [Online], 10, Available: https://www.patrizia.ag/fileadmin/user_upload/Research/Investment_Compass_UK/Compass_UK_Residential_01-2014.pdf [Accessed 13 November 2016].

2016, A quarterly information bulletin REITs for the second quarter of 2016, [Online], (19). Available: http://www.sipca.bg/bg/articles/article39.html (In Bulgarian)

2016, Regulations for application of the law for the state ownership and properties, [Online]. Available: http://www.lex.bg/laws/ldoc/2135535275 (In Bulgarian)