

# FOREIGN INVESTORS ON THE STOCK MARKET IN POLAND

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**Abstract:** The aim of the study is to analyse the activity of foreign investors on the stock market in Poland in the period between 2006 and 2016. Foreign investors generated over a half of trading in shares on the Main Market of the Warsaw Stock Exchange in the first half of 2016. It is important to define which factors determine so high turnover value of foreign investors. The article focuses primarily on the relationship between the profitability of stock exchange investments in shares counted in Euro and the activity of foreign investors. The profitability of investments on the WSE has been determined on the basis of the rates of return of two main indices WIG and WIG20 expressed in Euro. The activity of foreign investors was measured with the turnover value of this investor group.

**Keywords:** market activity of investors, foreign investors, exchange fluctuations, turnover value.

## 1. Introduction

Foreign investors play a prominent role among the participants of the capital market in Poland. They have actively taken part in trading at the Warsaw Stock Exchange (WSE) for many years. They are mostly interested in stocks, especially those from the Main Market of the WSE. Since the financial crisis which began in 2007, the interest in the stock market of individual domestic investors has been declining, while it has been increasing in the case of foreign investors, who, at present, generate over a half of the turnover. The question arises what factors determine stock exchange investments of foreign investors and how they are different from the factors determining the activity of other groups of investors.

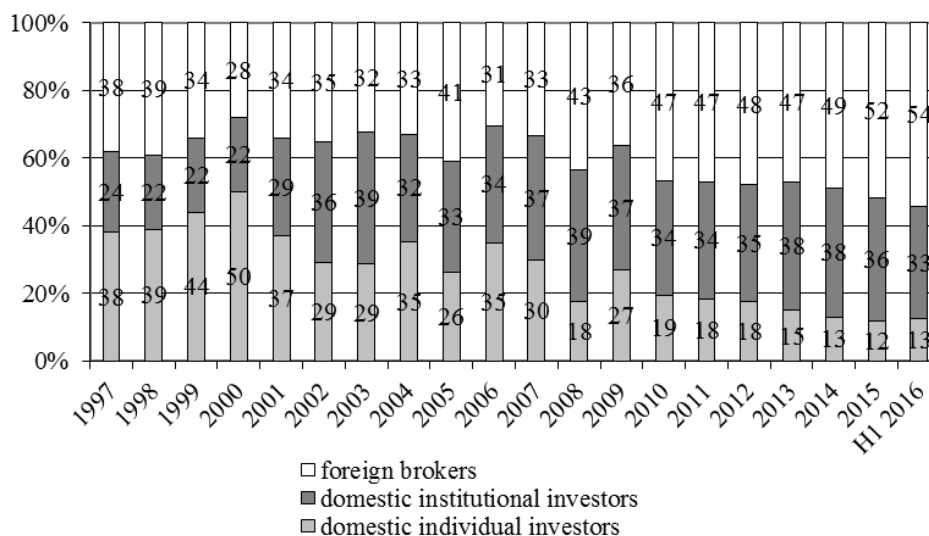
The aim of this article is to define the main factors influencing foreign investors' activity on the stock exchange in Poland – especially those connected with profitability and risk of investment. In the case of foreign investments, rates of return result not only from the fluctuation of the share price, but also from the volatility of exchange rates, which can improve or reduce the profitability of investment. Therefore, the risk of investment incurred by foreign investors is more considerable than in the case of domestic ones. Its main reason is

the risk of changing exchange rates, which are affected not only by the international situation, but also the political risk of the country where investments are made.

The article focuses primarily on the relationship between the profitability of stock exchange investments in shares counted in Euro and the activity of foreign investors in the sample period 2006–2016. The profitability of investments on the WSE has been determined on the basis of the rates of return of two main indices WIG and WIG20 expressed in Euro. The activity of foreign investors was measured with the turnover value of this investor group.

## 2. The structure of stock exchange investors on the Warsaw Stock Exchange

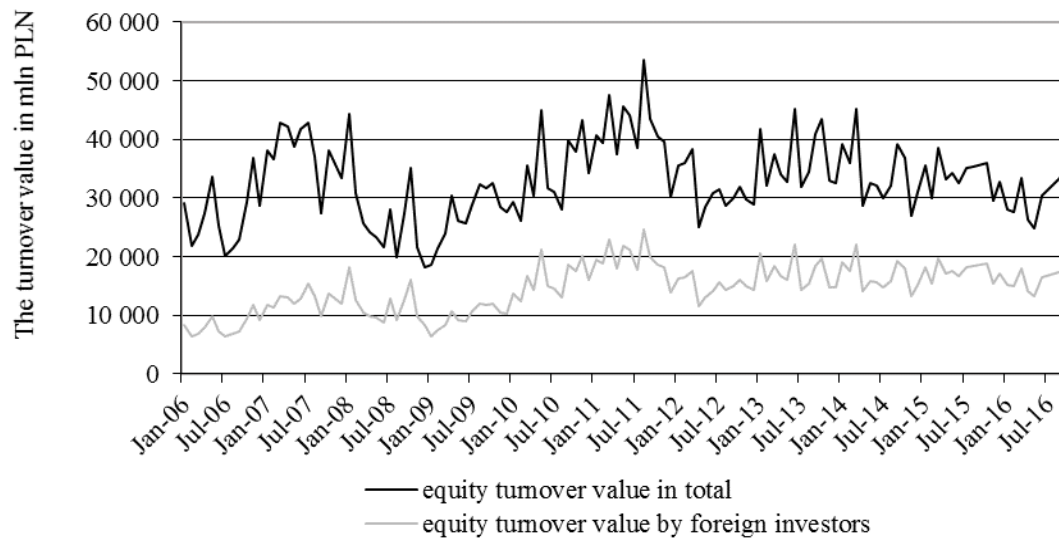
Foreign investors' share of stock trading on the Main Market of the WSE has varied so far, which suggests that the profitability and risk of investment for individual groups of investors were not identical. In the years 2001-2004 and 2006-2007, foreign investors generated approximately 1/3 of the total turnover. Since 2009, their share has been systematically increasing and, in 2015, it exceeded 1/2 of the turnover. In the first half of 2016, it reached 54% (Figure 1). This increase occurred at the expense of domestic individual investors, whose activity on the Polish stock exchange has dropped alarmingly in recent years.



**Figure 1.** The share of turnover value by investors on the Main Market of the WSE. Own presentation based on the WSE data.

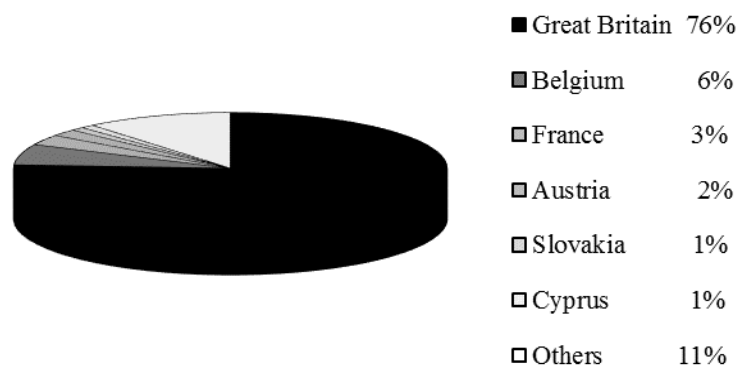
In the meantime, the turnover of foreign investors in the analysed years 2006-2016 was relatively more variable than the turnover of all investors put together. The volatility of the monthly turnover of foreign investors – measured with its standard deviation – amounted to

4,044,000 PLN (at the average monthly turnover of 12,447,000 PLN), whereas the variation in the turnover of all investors was 6,811,000 PLN (at the average monthly turnover of 29,780,000 PLN). This means that the coefficient of variation in the turnover of foreign investors (the ratio of the standard deviation of turnover to the average turnover) was 32% and it was higher than the coefficient of variation in the turnover of all investors (23%).



**Figure 2.** The volatility of the turnover value on the Main Market on the WSE. Own presentation based on the WSE data.

The analysis of foreign investors' country of origin indicates that this group consists of investors mainly from Great Britain. In 2014, their share of stock trading was 76%. Investors from Belgium, France, Austria, Slovakia, and Cyprus generated another 13% of turnover.



**Figure 3.** Share of foreign brokers in trading on the Main Market on the WSE in 2014. Own presentation based on the WSE data, 2014.

### 3. The determinants of foreign investors' activity on the stock market

Basic expectations of investors as to stock investments consist in security of trading and settlements. Institutions responsible for these issues which are of crucial importance here can be divided with respect to their function: regulatory, clearing, and managing. Investors' positive perception of the capital market depends on their activity. It builds the prestige of the capital market as a place of long-term and safe allocation of one's savings. Investors' activity is next influenced by the investment climate in a specific country resulting from its current financial, economic, and socio-political situation (e.g. the level of interest rates, inflation, and capital gains tax). Last but not least, investors' engagement into the stock market is determined by the present stock exchange situation and investors' expectations as to the future level of stock market prices (Widz, 2016). A long-term boom and decline in the market determine investor sentiments and influence their activity, e.g. a long decline in the market adversely affects the turnover on the stock exchange (Wasilewski, and Juszczuk, 2015).

Each investment is characterised by specific income and risk, and investors' decisions depend on their expectations and forecasts regarding the rate of return and risk of investment (Ostrowska, 2007) – irrespective of a group a given investor belongs to (whether it is a domestic or foreign investor, individual, or institutional). In general, the risk of financial investment is higher if the value of the profit rate of investment is more variable. Significant stock market fluctuations can encourage some investors (with bigger inclination to risk-taking) to invest on the stock exchange, creating opportunities to achieve an over-average return. In the meantime, other investors are likely to restrain themselves from making investments, especially short-term ones. Long-term investments should be profitable, and investors acting within such a time horizon should be rewarded for the risks incurred due to this form of allocating their savings (Widz, 2016).

Next to general situation on the stock market, factors which investors find important include: the economic situation of the company, the company's policy regarding dividends, and structure of the shareholding (Wasilewski, and Juszczuk, 2015). The policy of dividend payments, in turn, arouses interest in the shares of a company which follows such policy and brings greater stability of the price of this share. As a rule, the State Treasury's share in the shareholding structure guarantees increased dividends, but it also means lesser effectiveness of a company, which translates into lower rates of return on investments in its shares.

Investors also take into account the liquidity of a given instrument on the market. The profit rate of investment, which is characterised by lower liquidity, should be higher since it includes an additional bonus for the lack of liquidity. Lower liquidity of investment means risk of liquidity. In such a case, investors expect a higher profit rate.

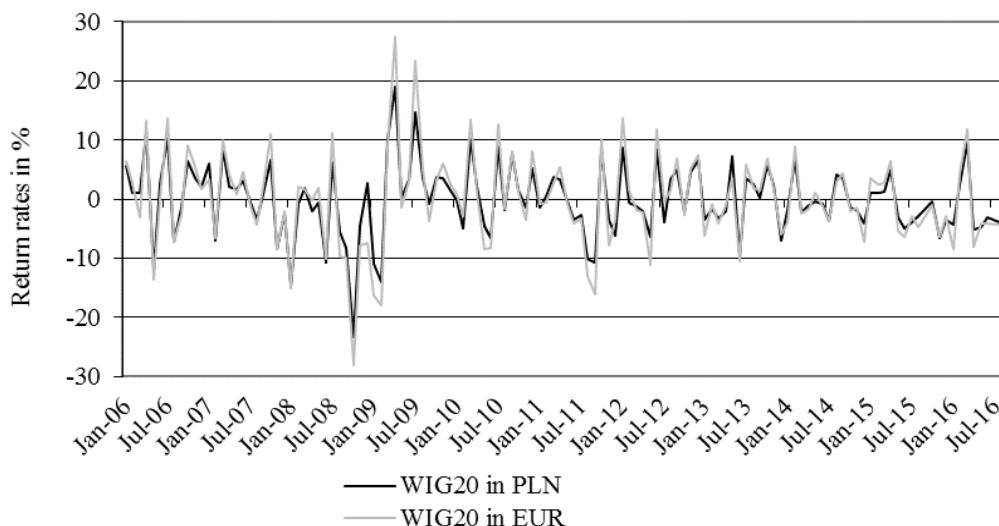
In the case of foreign investors, there are additional risks related to investing abroad. This group includes, among others, political risk in a country where investment is realised.

This risk is related to political stability, existing – often different – market infrastructure, and binding legal regulations. Political risk is also connected with the possibility of introducing regulations affecting the profitability of investment such as regulations concerning additional taxation on generated profits.

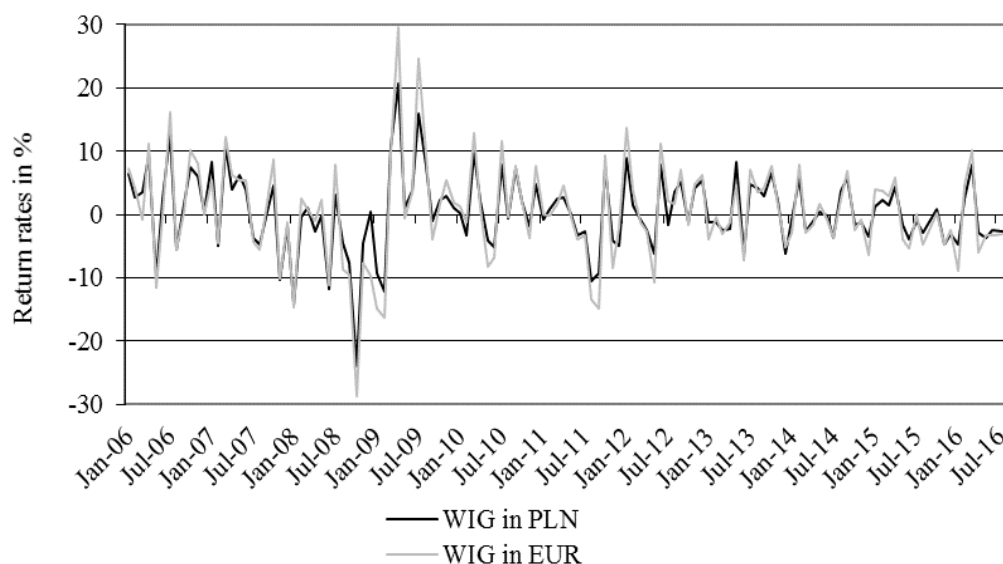
What is particularly crucial for foreign investors is the risk related to exchange rates. It exists when investment is realised in a currency different from the domestic one. The rate of return on investment may depend then on the changes in currency rates. The weakening (depreciation) of an investor's domestic currency in relation to foreign currency is beneficial (Jajuga, 2009). The conclusion is that foreign investors – comparing to domestic investors – find their investment horizon more important since leaving of the investment can coincide with an adverse change in exchange rates, which increases the risk of investment. Some of the main factors which determine the activity of foreign investors on the stock market include the volatility of the shares and exchange rate fluctuations, which influence the rate of return on investment.

Figures 4 and 5 compare the rates of return on indices WIG and WIG20, counted in EUR and PLN. It turned out that the risk related to the volatility of investment in indices WIG and WIG20 is higher when investment income is counted in EUR, that is after considering the volatility of EUR/PLN exchange rates. The volatility of the rates of return on WIG20 EUR (measured with the standard deviation of the rates of return of WIG20 EUR) was 7.88% whereas the volatility of the rates of return on WIG20 PLN was 6.14%. As for the volatility of the rates of return on WIG EUR (measured with the standard deviation of the rates of return of WIG EUR), it was 7.81% whereas the volatility of the rates of return on WIG PLN – 6.06%.

Factors determining the activity of investors, foreign as well as domestic, can range from the temptation of speculative gains and arbitrage to securing oneself against risk. Accordingly, investors can be divided into: speculators, arbitrageurs, and hedgers, where the first group seems to be dominant. A more thorough analysis of investors' motivation indicates a variety of motives depending on whether these are individual or institutional investors.



**Figure 4.** The return rates on indices WIG20 PLN and WIG20 EUR on the Main Market on the WSE. Own presentation based on the WSE data.



**Figure 5.** The return rates on indices WIG PLN and WIG EUR on the Main Market on the WSE. Own presentation based on the WSE data.

Individual investors can invest on the capital market either directly or through institutional investors, who act in the name of their clients but also in their own name. Investment objectives of institutional investors are specified in their statutory documents and differ from one institution to another. The main groups of institutional investors can be divided into: investment funds, hedge funds and private equity, pension funds, securities firms (brokerage houses), commercial and investment banks, insurance companies, and asset management. These are large financial institutions professionally dealing with allocating funds on the financial market and having a much broader knowledge which investments are the most attractive at their disposal than individual investors. It naturally results from the fact that institutional investors employ professionals and have tools facilitating the analysis of the

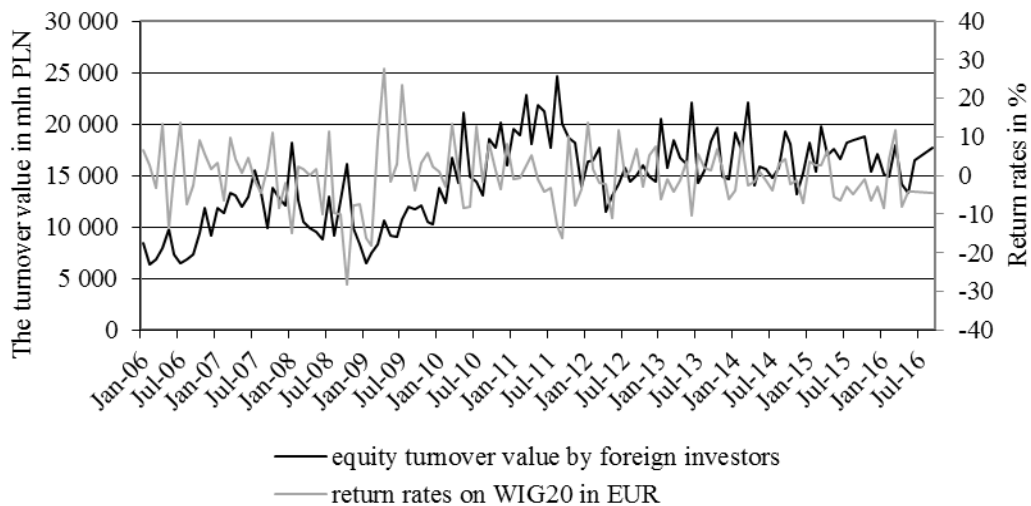
market and specific financial instruments. It gives them an advantage over individual investors.

#### **4. The influence of market fluctuations on foreign investors' turnover on the Warsaw Stock Exchange**

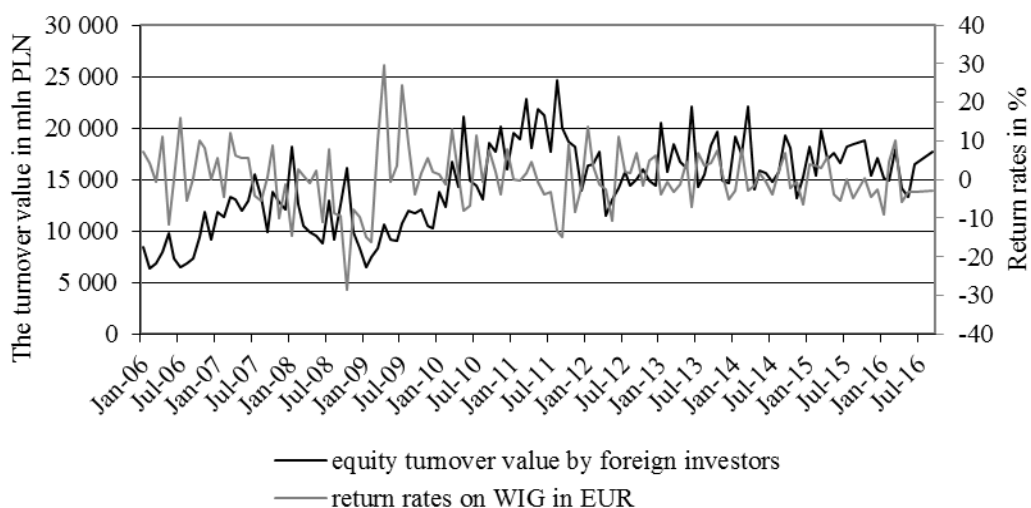
The year 2006 on the WSE started a tendency for the increasing share of stock trading of foreign investors. In the years 2006–2016, this group of investors was the most active in August 2011. A high turnover of this investor group was recorded also in May 2010 as well as in March, May, and June 2011, in June 2013, and in March 2014. Interestingly, the highest turnover in August 2011 was accompanied by highly negative rates of return on WIG20 in EUR (-12.96%) and WIG in EUR (-13.31%). It means that investors withdrew from investment due to falling share prices which additionally overlapped with an unfavourable decrease in the EUR/PLN exchange rate. The withdrawal of foreign capital from Poland contributed to an even greater appreciation of EUR, bringing a further decline in the profitability of investment. A similar situation happened in October 2008, when an abrupt decline in the profitability of stock exchange investments (-28.16% on WIG20, -28.71% on WIG) was accompanied by a sharp increase in turnover. Also in May 2010, June 2013, and March 2014, falling share prices and negative rates of return led to an increase in the activity of investors, who withdrew from investments.

The lowest turnover of foreign investors was recorded in February and July 2006 and January 2009, when the market also registered negative rates of return. The negative profitability of investments deterred investors from new purchases. Throughout 2009, the turnover of investors was on a definitely lower level in each investor group, which should perhaps be connected with the massive losses they had incurred in 2008. Investors' general pessimism and a decidedly higher risk of investment brought a very slow increase of foreign investors' turnover in 2009, even though investments rendered a high rate of return.

As for the years 2012-2015, changes in turnover level were relatively well-correlated with the level of investment profitability. Still, even in this period, there were situations when turnover was increasing by leaps due to falling share prices, e.g. in June 2013 and March 2014 (Figures 6 and 7).



**Figure 6.** Foreign investors' turnover value on the Main Market on the WSE against the monthly return rates on WIG20 index in EUR. Own presentation based on the WSE data.



**Figure 7.** Foreign investors' turnover value on the Main Market on the WSE against the monthly return rates on WIG index in EUR. Own presentation based on the WSE data.

The analysis of the relationship between the level of foreign investors' activity – measured with turnover on the WSE – and fluctuations of stock exchange situation – measured with the rates of return on indices: WIG20 EUR and WIG EUR – indicates that an intense activity of investors can be connected with both positive and negative rates of return, and positive rates of return do not always guarantee an increase in the interest from investors. It is, therefore, expected that Pearson correlation coefficients will not be very high.

The study of the whole sample period (years 2006-2016) showed no statistically significant correlation between investors' turnover on the stock exchange and the rates of return on main stock exchange indices either in the case of all investors or foreign investors. It results from the fact that the growth in turnover can happen not only in the period of



a dramatic increase in share prices, but also during their dramatic fall (as a result of the increase in the turnover volume). The volume of turnover would be a more reliable measure for the current analysis (Rogalski, 1978; Karpoff, 1987) – the WSE does not keep such statistics though. What was observed were statistically significant correlations between the turnover value and the volatility of return rates on indices. During periods of high volatility of investment profitability counted in EUR (when the risk of investments was decidedly higher), investors' activity measured with their turnover significantly decreased. This is demonstrated by negative correlation coefficients at the level of -0.63 and -0.67 (Table 1).

**Table 1.**

*Correlation matrix of the Main Market of the WSE (based on monthly data)*

Correlation	Turnover value	Turnover value of foreign investors
The return rate on the WIG20 EUR index	-0.0160	-0.1036
Volatility of the return rate on the WIG20 EUR index	<b>-0.5585</b>	<b>-0.6311</b>
The return rate on the WIG EUR index	-0.0141	-0.1151
Volatility of the return rate on the WIG EUR index	<b>-0.5400</b>	<b>-0.6706</b>

Note: Statistically significant parameters ( $\alpha=0.05$ ) are in bold. Own calculations based on the WSE registers.

## 5. Conclusions

Fluctuations of the stock exchange situation significantly affect investors' behaviour on the stock market, including foreign investors. It turns out, however, that these relationships are not unambiguous. A rapid fall in the rates of return can increase the activity of investors, who withdraw from investments. Persistently low or negative rates of return, in turn, discourage investors from making new investments. The result of the decline in the profitability over a short period of time is then the growth in turnover – which is a reaction to falling prices – and, in the long run, their fall. As a rule, high rates of return increase the turnover, but – if they are accompanied by the very high volatility of prices – investors who do not allow for such a high risk can be deterred.

The fact which also has to be considered is that there can be simultaneous as well as sequential (cause and effect) relationships between rates of return and the turnover level, although the research results have not confirmed it clearly (Smirlock, and Starks, 1988). In many cases, a bi-directional Granger causality has been found to exist in the stock returns-volume relation, although some other works could only find evidence of a uni-directional causality: either returns would Granger-cause trading volume, or vice versa (Chen and Liao, 2007).

It must be remembered that the profitability of investments made by foreign investors is influenced by the level of exchange rates. Increase in foreign currency exchange rates

(depreciation of the Polish zloty) for the duration of the investment makes investing in shares in Poland less attractive for foreign investors. The high volatility of EUR/PLN exchange rates in the analysed period made the risk of investment measured with the volatility of profitability counted in EUR higher than the risk of investment measured with volatility counted in PLN. The analysis also indicated that the level of investment risk was considered important by foreign investors. During periods of high volatility of investment profitability counted in EUR, investors' activity measured with their turnover significantly decreased, e.g. in 2008 and 2009.

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