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Article

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Determinants of Initial Public Offerings: The Case of Poland

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ABSTRACT

The main objective of this study is to indicate the influence of local macroeconomic factors, consequently GDP growth rates, the reference interest rate, industrial production growth rates, Warsaw Stock Exchange Index (WIG) returns and the volume of private equity investments, on the number of initial public offerings (IPOs) in an emerging market, Poland, over the period of 2004 to 2012. Our sample includes 218 local enterprises that conducted an IPO on the Main Market of the Warsaw Stock Exchange. Financial and privatized companies are excluded from the data processing. As follows from the previous studies, the situation in the year preceding the company's initial public offering is crucial. Therefore, we used a model with one-year delay for all the explanatory variables in relation to the dependent variable (i.e. number of new listings). The model estimation was performed with the Ordinary Least Squares method. The main conclusion of our model is that the GDP growth has a significant impact on the number of new issues. This result implies that the business cycle has a direct impact on the IPO activity in the Polish capital market. The next conclusion is that the attractiveness of a capital market for investors measured by annual index returns appears to be an important factor for going public activities. Surprisingly, the model could confirm that other macroeconomic and capital market factors have had no explanatory power for IPO numbers in Poland between 2004 and 2012.

Keywords: Corporate Finance; going public; Initial Public Offering (IPO); determinants; Poland.

JEL classification: E17; G32.

MSC2010: 91B64.

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Factores determinantes de una opción pública de venta (OPV): el caso de Polonia

RESUMEN

El objetivo principal del presente estudio consiste en demostrar la influencia de factores macroeconómicos locales tales como la tasa de crecimiento del Producto Interior Bruto (PIB), la tasa de interés anual de referencia, la tasa de crecimiento de la producción industrial, el retorno de la inversión del Mercado de Valores de Varsovia (GPW) y el volumen de inversiones de capital privado, en el número de ofertas públicas de venta (OPV) en un mercado emergente como el de Polonia en el periodo 2004-2012. Nuestra muestra incluye a 218 empresas locales que durante ese periodo llevaron a cabo alguna OPV en el Mercado de Valores de Varsovia. Las empresas financieras y las empresas públicas privatizadas están excluidas del estudio en el tratamiento de los datos. Como se desprende de los estudios previos, la situación financiera de las empresas durante el año precedente a la OPV es crucial; por lo tanto, hemos utilizado un modelo que tiene en cuenta los datos del año anterior para todas las variables explicativas en relación con la variable dependiente (por ejemplo, el número de nuevas entradas). El modelo de estimación se realizó usando el método de mínimos cuadrados ordinarios. La principal conclusión del uso de nuestro modelo es que el crecimiento del Producto Interior Bruto (PIB) tiene un impacto significativo en el número de nuevas emisiones de valores. Este resultado implica que el ciclo económico tiene un impacto directo en la actividad del Mercado de Valores de Varsovia en lo que se refiere a las OPV. La siguiente conclusión es que el atractivo de un mercado de capitales para los inversores, medido por los índices de rendimiento anuales, parece ser un factor importante en la actividad de las OPV. Sorprendentemente, el modelo podría confirmar que otros factores macroeconómicos y del mercado de capitales, no hay tenido ningún poder explicativo en el número de OPV registradas en Polonia durante el periodo 2004-2012.

Palabras clave: finanzas corporativas; oferta pública de venta (OPV); determinantes de una OPV; Polonia.

Clasificación JEL: E17; G32.

MSC2010: 91B64.



1. INTRODUCTION

Warsaw Stock Exchange (WSE) is currently among the leading European stock markets in terms of initial public offerings (IPOs). The IPO activity on the Polish capital market contrasts sharply with the number of new listings performed in other central and eastern European countries (CEE). Table 1 presents number of IPOs in the period 2000-2012 on the stock exchanges of Warsaw, Prague, Budapest, Bratislava, Ljubljana and Vienna. We include all equity listings in compliance with statistics provided by individual stock exchanges (official web sites), Paleari *et al.* (2010) and IPO Watch Europe, PWC (2012).

Table 1. Number of IPOs on the CEE Capital Markets in 2000–2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Warsaw Stock Exchange (Main)	13	9	5	6	36	34	35	68	29	10	26	31	16	318
Prague Stock Exchange	0	0	0	0	1	0	2	2	1	0	1	1	0	8
Budapest Stock Exchange	0	0	0	0	1	0	3	0	1	2	6	6	0	19
Bratislava Stock Exchange	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Ljubljana Stock Exchange	0	0	0	0	0	0	2	1	1	0	1	2	0	7
Vienna Stock Exchange	8	8	2	7	1	6	6	4	1	0	2	2	1	48
Total	21	17	8	13	39	40	48	75	33	12	36	42	17	401

Source: CEE Stock Exchanges, Paleari et. al. (2010), IPO Watch Europe, PWC (2012)

Our calculation shows that the majority of IPOs were conducted between 2004 and 2008. A slump in the number new listings is evident in 2009 when the financial and economic crisis culminated. Almost 80 % of IPOs completed in CEE in the period we observe were listings conducted on the Warsaw Stock Exchange, followed by the Vienna Stock Exchange (12 %). Thus, in terms of the number of IPOs, the Polish capital market was dominant in the CEE region.

The available data suggest that IPO markets in the Czech Republic, Hungary, Slovakia and Slovenia are underdeveloped and in this respect is our conclusion consistent with Peterle (2013). Peterle (2013) emphasizes that “although national regulations and structures quickly became similar in CEE countries after EU accession to those in Western Europe, their market capitalizations and turnovers in absolute terms reveal its considerably smaller size compared to the developed European counterparts”.

Factors influencing the number of IPOs and their size have been investigated in a relatively limited number of studies where the determinants of going public activities are divided into external such as macroeconomic and capital market factors and internal such as the tendency of a company to reduce leverage or to obtain capital for new projects.

The internal factors taking influence on decision to go public in a firm are divided in both academic and professional literature into four groups.

Authors in the first group point out the situation of a firm which needs to obtain external funds to undertake external net present value projects. The primary securities market offers an opportunity to raise capital from a large number of previously unknown investors. As a result, more capital is accumulated than a single investor, or a limited number of investors, would be able or willing to provide. Raising funds through an IPO should be an alternative to borrowing, particularly in companies with high investments (now or in the foreseeable future), high proportion of debt in the capital structure, and high potential for growth (Chemmanur and Fulghieri, 1999; Ritter and Welch, 2002). Pagano *et al.* (1998) investigated a comprehensive data set of Italian companies. They conclude that U.S. companies usually undergo a considerable growth process after listing while the decision of Italian independent companies can be interpreted as “an attempt to rebalance their balance sheet after large investments and growth. Brau and Fawcett (2006) investigated 336 nonfinancial U.S. companies that had successfully completed an IPO or attempted and subsequently withdrew an IPO. More than a half of the interviewed CFOs strongly supported the notion that “an IPO serves to create public shares for use in future acquisitions”.

Pagano *et al.* (1998) followed by Black and Gilson (1998) connect IPOs with another reason. Public trading of shares provides a great advantage to both the issuers, to whom the shares issued provide a long-term source of financing, and to the investors, who can sell the shares purchased at any time on secondary markets and thus recover the desired liquidity, i.e. the money they invested. The short-term financial funds of individual investors are thereby transformed into long-term sources, which then make it possible to implement large-scale investment projects. Raising the stock capital through a public issue also eliminates the difference between the large shareholders, who tend to take a long-term approach to investing, and the small ones, who value liquidity and are therefore inclined to take a short-term view of their investment.

Zingales (1995) and Black and Gilson (1998) argue that going public is the way how the majority shareholder's desire to reduce his stake in the company. Thereby, an IPO allows venture capitalists to cash out and resolves the problem of generational succession in a family-run enterprise. From the shareholder's perspective, the option to cash out his co-ownership by selling the shares of stock at any time on the secondary market is an advantage that imparts a great deal of flexibility to his financial decisions. On the other hand, Brau and Fawcett (2006) findings do not support the public statement of many venture capitalists that an IPO is an integral part of their harvest strategy because “firms with VC presence rank four motivations higher than the opportunity to allow VCs to cash-out”.

The last reason for going public is to gain a non-financial advantage from IPO implementation (Maksimovic and Pichler, 2001; Ježek, 2004). Going public is therefore associated with positive effects in the area of marketing. First of all, an IPO can increase the publicity or reputation of the firm. The prestige can be very advantageous in recruiting key employees as well as marketing products and services. Brau and Fawcett (2006) point out that the motivation for going public in the form of firm

reputation enhancing and analysts' attention attracting is significant for "smaller, younger, high-tech, and VC-backed firms".

Relations between the number of IPOs and external factors have been investigated for example by Loughran *et al.* (1994). His paper reviews the IPO timing in fifteen countries in relation to inflation-adjusted stock price indexes and GDP growth rates. The results suggest a positive relationship between the number of IPOs and stock price levels, however no positive correlation with the cycle movements. Rydqvist and Högholm (1995) compare the data for a sample of family-owned enterprises in Sweden (1970–1991) and eleven European countries (1980-1989). They find that "most going public activity took place after an exceptionally sharp stock price increase, and that going public activity is not related to the business cycle". Ljungqvist (1995) suggests that high number of IPOs is positively correlated with both high stock index levels and good business conditions and tends to follow phases of extensive IPO underpricing. Breinlinger and Glogova (2002) investigate the explanatory power of selected macroeconomic factors influencing IPOs by analysing a data set of annual IPO volumes for six developed continental European countries over a time period of 18 years. The authors followed the question if there are stable indications that IPOs depend on stock index returns for what they termed consolidated periods. The results show that a "logarithmic transformation of IPO volumes (representing authors' supposition of a nonlinear relationship between IPO volumes and stock index returns) leads to persistently significant estimates for both pooled and individual country regressions". The hypothesis that percentage changes in savings, GDP growth and interest rates have explanatory power for IPO volumes could not be supported by empirical evidence. A paper by Ameer (2012) shows a significant negative relationship between the interest rate and the number of IPOs and a significant positive relationship between the industrial production and the number of IPOs in the emerging market of Malaysia. Bilson *et al.* (2002) find a moderate evidence to support the connection between local macroeconomic factors and stock returns in emerging markets.

Academic studies conducted on CEE markets cover mainly descriptive statistical analysis of individual markets (Paleari *et al.*, 2010; IPO Watch Europe, PWC, 2012; Peterle, 2013), privatisation process in the 1990s (Aussenegg, 2000) and analysis of determinants and consequences of going public (Dudko – Kopczewska, 2004; Jargot, 2006; Sejkora, 2013; Peterle, 2013).

The study realized by Peterle (2013) using original evidence form a dataset of 94 IPOs in the CEE countries in the 2000s compares internal characteristics of IPOs with empirical evidence for developed EU capital markets and furthermore external factors of IPO activities in the region. The results of this study indicate that the internal characteristics of IPO activities in CEE are comparable with those in the developed countries of the EU. Firstly, free float and share increase distribution by type of IPO company ownership structure illustrate "the modest post-IPO diversification of shareholder structure in the CEE region". In this regard, "the pre-IPO owners tend to remain the relevant owners also after the IPO". Next, the study confirms that IPOs with only newly issued shares are the most frequent IPO type in the region in the 2000s. This supports the assumption that "the

majority of companies decide to sell equity in the primary public market to raise fresh capital”. Due to the fact that primary and secondary shares issued in an IPO represent only 23% and 13% respectively, of pre-IPO shares on average, the author indicate “the high average concentration of ownership structure and its modest post-IPO diversification”. Thirdly, in terms of the methods used in IPO procedures (e.g. bookbuilding, role of underwriters), the paper reports their convergence with the rest of developed European countries. Peterle (2013) also examined the “distinctive macroeconomic and business factors that could also have had an important impact on IPO activities” in the region during the 2000s. The European Bank for Reconstruction and Development transition indicators and the World Bank financial development and doing business indicators were included into the study. The high IPO activity in Poland could be explained “by four deviations in average indicator values from the corresponding CEE indicators”: the highest pension fund-to-GDP ratio and the highest paid-in minimum capital for companies measured as a percentage of income per capita. Considering macroeconomic factors, Peterle (2013) concludes that “quicker reform development in terms of governance and enterprise restructuring, competition policy, improved business regulations and sizable pension funds, could have had a positive impact on IPO activities in Poland in the indicated period”.

This study intends to complement the prior research by considering the explanatory power of selected external factors on number of IPOs in Poland in the period 2004-2012 and thus to enlarge the current IPO literature with an analysis the following question: What is the influence of local macroeconomic factors, consequently GDP growth rates, industrial production growth rates, the reference interest rate, Warsaw Stock Exchange Index (WIG) returns and the volume of private equity investments, on the number of IPOs in Poland over the period of 2004 to 2012? The number of variables covered in this paper is greater than those considered in previous Polish IPO studies (Dudko – Kopczewska, 2004; Brzezczynski, 2014; Jargot, 2006; Peterle, 2013 and Sejkora, 2013) and we also apply a different research approach by using the model estimation performed with the Ordinary Least Squares method and with the use of the Gretl (GNU Regression Econometrics Time-Series Library) software. Moreover, we focus on IPO activities after 2004 and thus enlarge the current IPO literature (e. g. Jargot, 2006; Peterle, 2013) which operates with different time-series. In this paper, we also develop our previous research approach (Meluzin – Zinecker – Kovandová, 2014) based on the Spearman correlation analysis.

The paper is structured as follows. Section 2 describes the research design, i.e. data and methodology. Section 3 presents the empirical research results. The last section summarizes and provides concluding remarks.

2. MATERIAL AND METHODOLOGY

This paper addresses the issue whether local macroeconomic factors have any influence on the number of IPOs and the value of capital raised by IPOs in the emerging market of Poland. The nature of this

study is based on the theory and previous empirical research. All macroeconomic indicators analyzed in this paper have sufficient support in the finance academic studies (Ameer, 2012; Breininger and Glogova, 2002; Brzeszczynski, 2014; La Porta *et al.*, 1997).

For purposes of this paper the following hypotheses have been outlined:

Hypothesis 1: There is a positive relationship between GDP growth rates and the number of IPOs.

La Porta *et al.* (1997) assess the influence of economic conditions (namely the legal system) on the number of IPOs using a sample of 49 countries. As reported by Breininger and Glogova (2002) the La Portas *et al.* research results show that “the quality of law enforcement, which is highly correlated with the level of GDP per capita, has a strong positive effect on the number of IPOs”. The authors identify a statistically significant relationship between long-term GDP growth rates, i.e. average annual percentage growth of per capita GDP for the period 1970 to 1993, on the number IPOs. Peterle (2013) confirmed that macroeconomic factors, specifically “a quicker reform development in terms of governance and enterprise restructuring, competition, policy, improved business regulations and sizeable pension funds, could have had a positive impact on IPO activities in Poland in the 2000s”. On the other hand, the studies conducted by Rydqvist and Högholm (1995) and Loughran *et al.* (1994) show that the GNP short-term growth rates are no significant explanatory power for IPO activity across the sample of European countries. In a similar way, Breininger and Glogova’s analysis (2002) of annual IPO volumes for six continental European countries over a time period of 18 years could not support the hypothesis that GDP growth rates have explanatory power for IPO volumes.

Hypothesis 2: There is a negative relationship between the reference interest rate and the number of IPOs.

Rees (1997), concentrating on UK data, found no significant link between the number of IPOs and interest rates. Research results by Breininger and Glogova (2002) also indicate that there is no perceivably influence of interest rates (ten-year government bond yields) on demand for raising equity through IPOs. On the contrary, the study published by Ameer (2012) reports the opposite. Ameer’s results (2012) imply that “monetary policy has a direct impact on capital markets and that central bank intervention propagates IPO cycles in Malaysia”. Based on a paper by Jovanovic and Rousseau (2004) Ameer (2012) supposed a negative relationship between interest rate and the number of IPOs.

Hypothesis 3: There is a positive relationship between industrial production growth rates and the number of IPOs.

The industrial production index as a measurement of the output of an economy also helps to map structural economy development (Hosley *et al.*, 1985). The industrial production index rate is the indication of business lifecycle and business life cycle affects by its fluctuations the stock market prices (Moody *et al.*, 1993). Besides, authors say that enterprises enter capital markets when other enterprises enter them too, meaning potentially higher overall industrial production (Choe *et al.* 1993, Lowry and Schwert, 2002).

Hypothesis 4: There is a positive relationship between the stock market index returns and the number of IPOs.

Stock markets around the world are interconnected through the communication channels and information can spread very quickly among investors. Pessimism on stock markets predicts downward pressure on market prices and on the other hand optimism or low amount of pessimism predicts higher stock market trading volume and higher returns (Tetlock, 2007). The pessimism and optimism which affects stock markets is in alignment with investor sentiment theory and the market timing theory. As the stock market index mirrors the investor's willingness to invest or not, the number of IPOs vary accordingly. Enterprises are more likely to implement IPOs when the stock market promises higher returns and therefore profit for enterprises and also for potential investors. Studies by Loughran *et al.* (1994), Ljungqvist (1995), Rees (1997) and Rydqvist and Högholm (1995) detect a significantly positive influence of stock index levels and stock index returns on the number of IPOs. Brzezczynski (2014) analyzed the number of new IPOs and the main stock market index (WIG) returns for the Polish stock market over a period from 1997 to 2008. He detects the correlation coefficient between those two variables 0.0244 when IPOs and stock market index return are analyzed simultaneously. However, the value of this index is 0.5683 when the WIG returns are lagged by one year. Brzezczynski (2014) concluded that "the number of IPOs in emerging markets and the profitability of the public offers are related to macroeconomic conditions, business cycles and stock market activity. In most emerging market countries there is a time lag between movements of the stock market index and decisions to launch new IPOs".

Hypothesis 5: There is a positive relationship between private equity investments volume and the number of IPOs.

Private equity investors view emerging markets as a suitable opportunity to diversify their investment portfolios and to catch excess risk premiums (Errunza, 1983). In the financial literature the going public strategy has been considered for an important channel how venture capitalists can leave investee companies. Cumming and Johan (2012) present the evidence about the number of IPO backed exits from first round (new) investments in seed, early and expansion stage investments in Canada, USA, China, the United Kingdom, France, Israel, India and Germany as a percentage of total worldwide IPO exits in the period 1990 - 2010. While the share of IPOs on the U.S. market has declined since 1995, China's share on the IPO market in terms of numbers of VC backed IPOs has significantly increased relative to the U.K., France, Israel, India, Germany and Canada in the last decade.

The above-hypotheses allowed the model to be specified:

$$NIPO_t = \alpha_0 + \alpha_1 GDPGR_{t-1} + \alpha_2 IPGR_{t-1} + \alpha_3 GBY_{t-1} + \alpha_4 WIG_{t-1} + \alpha_5 PEI_{t-1} + \epsilon_t \quad (1)$$

Descriptions of specific variables and the sources of data used are shown in Table 2.

This paper is based on evidence from the Polish capital market over the period of 2004 to 2012. We focus on IPO activities after 2004 in order to enlarge the current IPO literature (e. g. Jargot, 2006;

Peterle, 2013), which does not cover the whole period of 9 years, i.e. the time after the Polish accession to the EU. Our sample includes only local enterprises that conducted an IPO on the Main Market of the Warsaw Stock Exchange. Financial and privatized companies are excluded from the data processing. The IPO data were obtained from Warsaw Stock Exchange Fact Books and PWC public and internal data. Macroeconomic data such as gross domestic product growth rates (GDPGR), reference interest rates (GBY), industrial production growth rates (IPGR), Warsaw stock exchange index (WIG) and private equity investments (PEI) were obtained from the Polish National Bank (NBP), Polish Central Statistical Office (PCSO), OECD Stat Extracts and European Venture Capital Association (EVCA).

Table 2. Source Data

	Data sources	Calculation	Expected sign
<i>Independent Variables</i>			
% Real GDP Growth Rates (GDPGR)		annual growth rates in % (using yearly closing dates)	+
% Industrial Production Growth Rate (IPGR)	OECD Stat Extracts, Polish National Bank		+
% Ten-Year Government Bond Yields (GBY)		in % (using yearly closing dates)	-
% Change in Stock Market Index Returns (WIG)		in % (using yearly closing dates)	+
Private Equity Investment as % of GDP (PEI)	European Venture Capital Association (EVCA) Yearbooks	in % (using yearly closing dates)	+
<i>Dependent Variable</i>			
Number of Listings (NIPO)	Warsaw Stock Exchange Fact Books, PWC IPO Watch Europe (2012), PWC Internal Data (2014)	frequency	

Source: Authors' own elaboration

Note: IPOs on the Main Market of the Warsaw Stock Exchange, without Financials and Privatizations, only Locals

As follows from the research done (Ameer, 2012; Breininger and Glogova, 2002; Brzeszczynski, 2014; Jargot, 2006), the situation in the year preceding the company's initial public offering is crucial. Therefore, the model uses one-year delay for all the explanatory variables in relation to the dependent variable. The model estimation was performed with the Ordinary Least Squares method and with the use of the Gretl (GNU Regression Econometrics Time-Series Library) software, version 1.9.14. Reduction of insignificant variables was done by means of stepwise elimination (a posteriori method), removing sequentially the variables with the largest p-value.

3. EMPIRICAL FINDINGS

Table 3 presents the results of the estimation of the model described with formula (1). An important feature of the model is the one-year shift of new IPOs relative to the macroeconomic indicators.

The model is statistically correct. Based on the F-Snedecor test (*F-statistics*) it can be stated that the estimated model contains variables that are statistically significant. Two of five explanatory variables proved to be significant. The general performance of the model is satisfactory (Adjusted $R^2 =$

0.534314). Doornik-Hansen and White's tests indicate that the distribution of residues is consistent with the normal distribution and there is no random component that is heteroscedastic. Based on the Ljung-Box test we can also conclude that there is no autocorrelation of the random component.

The macroeconomic factor with the strongest one and at the same time positive impact on the number of executed IPOs in Poland is the economic situation in the country, expressed in the economic growth rate (% GDPGR) achieved in the year preceding the examined phenomenon ($GDPGR_{t-1}$ variable). The parameter α located at the variable was the absolute highest and amounted to 7.1139. This means that on average GDP growth of 1% results in a more than proportional (by over 7%) increase in the number of IPOs. Therefore, the research hypothesis H1 was verified positively.

Change in stock market index returns describing the situation on the Polish capital market in the year preceding the analysed phenomenon (variable WIG_{t-1}) proved also to be statistically significant. The resulting value of the parameter of the variable WIG_{t-1} ($\alpha = 0.3924$) indicates a positive but at the same time not very strong influence of this variable on the number of IPOs. The hypothesis H4 was verified positively.

The model (1) shows that the decision about going public are dependent on both macroeconomic and capital market conditions, i.e. that IPOs tend to increase when GDP and stock market index returns are rising. The hypothesis that the reference interest rate (H2), industrial production growth rates (H3) and private equity investments (H5) have explanatory power for IPO numbers in the Polish capital market could not be supported by the model (1). Therefore, the hypotheses H2, H3 and H5 failed to be verified positively. It cannot be ruled out that these variables proved to be significant if we used a different time series.

Table 3. Results of the Estimation Model Describing the Number of IPOs in Poland in the Years 2004-2012 with Macroeconomic Determinants

Dependent variable $NIPO_t$					
Independent variables	Coefficient	Standard error	t-statistics	p-value	Significance^{a)}
Constant	-14.7442	14.5816	-1.011	0.3510	
$GDPGR_{t-1}$	7.1139	2.8942	2.458	0.0493	**
WIG_{t-1}	0.3924	0.1350	2.908	0.0271	**
Observations			9		
Standard error of residuals			12.04789		
R ²			0.650736		
Adjusted R ²			0.534314		
F (2, 6) = 5,589479			p-value 0.042605		
Doornik-Hansen test			p-value for test $\chi^2(2) = 0.278794$		
$\chi^2(2) = 2,55457$					
White's test			p-value = $P(\chi^2(5) > 8.81758) = 0.116565$		
TR ² = 8,81758					
Ljung-Box test			p-value = $P(\chi^2(1) > 1.32456) = 0.25$		
Q' = 1,32456					

^{a)} ** indicates significance at the 5% level.

Source: Authors' own calculations

4. DISCUSSION AND CONCLUSION

In this paper we investigate the influence of macroeconomic factors, consequently GDP growth rates, the reference interest rate, industrial production growth rates, Warsaw Stock Exchange Index (WIG) returns and the volume of private equity investments, on the number of IPOs in an emerging market, Poland, over the period of 2004 to 2012. Our sample includes only local enterprises that conducted an IPO on the Main Market of the Warsaw Stock Exchange. Financial and privatized companies are excluded from the data processing. Previous investigations of this issue conducted under conditions in terms of both developed and emerging countries show no consistent results regarding the explanatory power of macroeconomic indicators and the number of IPOs.

The first conclusion of our model is that the GDP growth has a significant impact on the number of new issues. This result implies that the business cycle has a direct impact on the IPO activity in the Polish capital market. Building on works by La Porta *et al.* (1997) and Brzeszczynski (2014) our research results support the conclusion that "any decision to launch an IPO should be very carefully analysed using not only past financial data for the company, but also macroeconomic forecasts. Poor timing may result in the loss of capital if stock market prices are too low". The Spearman correlation analysis used in our previous paper (Meluzin – Zinecker – Kovandová; 2014) also identified a statistically significant difference between the number of IPOs and GDP in Poland over the period of 1992 to 2012.

The next conclusion is that the attractiveness of a capital market for investors appears to be an important factor for going public activities. This research result supports findings of previous studies (e.g. Loughrand *et al.*, 1994; Rees, 1997; Pagano *et al.*, 1998). In the light of the study by Peterle (2013) we point out the importance of the capital market characteristics. The attractiveness of a capital market from the investors' perspective is designed by measures as annual index returns and the annual market and turnover growth.

The model shows that other macroeconomic and capital market factors have had no explanatory power for IPO numbers. In a future research on the questions analysed in this paper we intend to use panel data for a larger number of emerging capital markets in order to complement the discussion.

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