ORIGINAL ARTICLE

Contact: tomasz.sosnowski@uni.lodz.pl

Tomasz Sosnowski
University of Lodz, Poland
 orcid.org/0000-0001-5610-0404

Persistence of pre-IPO earnings of new companies from CEE stock markets

Abstract

Research background: A company's earnings are one of the main determinants of investment decisions on the stock market. Thus, the reliability of disclosed financial information is crucial for the efficient allocation of capital. Unfortunately, reported earnings are an economic category susceptible to manipulation. This problem grows especially in the case of an initial public offering (IPO), as there is significant information asymmetry.
Purpose of the article: The main aim of the paper is to assess the persistence of earnings reported by companies in the IPO process and to empirically identify financial characteristics associated with persistence of earnings. The usefulness of financial information is directly related to the issue of earnings quality. Therefore, this paper contributes to the stream of study on the quality of financial reporting of new stock companies.
Methods: I employ a simple single-factor regression model to recognize the earnings persistence in new stock companies. Pre-IPO earnings are the explanatory variable. Then, I use multiple regression analysis to identify factors that influence this metric of reported earnings quality.
Findings & value added: Using a sample of companies from stock exchange markets in Central and Eastern Europe (i.e., the Warsaw Stock Exchange, the Bulgarian Stock Exchange, the Bucharest Stock Exchange, the Belgrade Stock Exchange, the Prague Stock Exchange) that went public between 2010 and 2018, I find that, generally, pre-IPO earnings hold higher persistence compared to earnings reported in the year of the IPO. Profitability seems to be a factor that significantly influences this feature. Thus, the results contribute to corporate theory and practice facing insufficient empirical evidence on the issue of sustaining pre-IPO profitability in the long term, addi-

tionally putting these concerns in the context of the economic environment of European emerging stock markets.

Introduction

Stock market investors act under information asymmetry, and in making allocation decisions, they are forced to rely heavily on information provided by issuers. In this context, the quality of information disclosed to the public, especially financial information, is one of the key drivers of expected returns (Agarwal *et al.*, 2019). Because of informational capacity and wide comprehensibility, corporate earnings are in the spotlight (Stevanović *et al*., 2021). Thus, high-quality earnings are expected to provide more information about the features of a company's financial performance, which is relevant to certain users (Dechow *et al*., 2010, p. 344). Among the many characteristics that are pointed out as features of high-quality earnings is persistence (Francis *et al*., 2005, p. 301), which is how current earnings are likely to persist into future periods.

In this study, I address the predictive value of earnings reported by companies that go public. Thus, the main aim of the study is to investigate the persistence of earnings disclosed by new stock companies in the financial statement published before their initial public offering (IPO). The main question is whether these unique and fast-growing companies can sustain earnings over time rather than just this particular corporate event. Additionally, I examine the role of pre-IPO profitability for earnings persistence. The lively scientific debate on the reliability of the amount of reported earnings disclosed in pre-IPO prospectuses motivated me to undertake such empirical research.

This paper contributes to the existing literature on earnings quality by investigating the persistence of pre-IPO earnings in the context of Central and Eastern European (CEE) capital markets. Focusing on those markets provides new insight into the international literature as the analysis of IPOs needs to take into account regional specifics. National culture is, directly and indirectly, relevant in explaining the IPO phenomena (Jamaani & Ahmed, 2022), and CEE countries vary in economic development, business climate, overall governance, institutional strength, and quality of regulation (Albu *et al*., 2020). Thus, the results of the study can benefit analysts, stock investors, policymakers, and researchers.

Analyzing the earnings persistence and its possible determinants by using multiple regression, I focus on companies that went public on CEE stock exchanges during the period 2009–2018. Thus, this study fits into the

literature on the quality of earnings published by companies in CEE countries. Previous research focused mainly on earnings management (Callao *et al.*, 2017). Companies operating in Poland have already attracted the attention of researchers (Brzeszczyński *et al.*, 2012; Piosik & Strojek-Filus, 2013), and such managerial activity was also addressed by IPO studies (Lizińska & Czapiewski, 2018; Sosnowski, 2018). Although there is evidence that companies operating in the Czech Republic, Slovakia, Hungary (Siekelova *et al.*, 2020; Valaskova *et al.*, 2021; Durana *et al.*, 2022), and Bulgaria (Krastev *et al.*, 2021) undertake earnings management initiatives, and empirical studies have confirmed the use of upward earnings manipulation (Kliestik *et al.*, 2021), knowledge on earnings quality is still relatively scarce.

The remainder of the article is organized as follows. Section 2 briefly discusses the related literature and develops hypotheses. Section 3 describes the sample and addresses the methodological issues. Section 4 presents the results, which are then discussed in the next section. The last section offers summary conclusions.

Literature review

Although the European financial system relies heavily on the banking sector, institutional investors and capital markets are becoming key elements in the process of raising capital for companies (Meluzín *et al.*, 2021). An IPO allows private companies to sell shares to stock investors for the first time and join an elite group of public companies, including the various benefits that come with it (Jamaani *et al.*, 2022). The increasing number of newly listed companies is generally interpreted as a positive feature of the market development, promoting investments and economic growth in the national economy (Setiawan *et al.*, 2021). The focus on the development of stock markets is generally motivated by the globalization and liberalization of capital flows (Meluzín *et al.*, 2018b), the growth of connections in the capital market, increasing competition in the real economy, and the need to create an economic environment that promotes entrepreneurship (Meluzín *et al.*, 2018a). A well-developed financial system with an efficient stock market enables the mobilization of savings, accelerates the flow of capital, and optimizes its allocation. As a result, European emerging markets have seen a significant increase in the number of IPOs over the past decades, and stock exchanges in CEE countries have become a vital element of a business-friendly environment (Kiseľáková *et al.*, 2019).

The high quality of financial reporting has been the focus of many studies because it results in efficient capital investment decision-making (Cho & Kang, 2019, p. 6; Dechow *et al*., 2010, p. 352). To be considered high quality, this information must be characterized by its valuation usefulness and contract validity (Závodný, 2021; Zhai & Wang, 2016). In this context, particular attention is focused on earnings quality, and among its various attributes, earnings persistence seems to be crucial. Earnings persistence denotes the likelihood a company's reported earnings levels will recur in subsequent periods (Ebaid, 2011, p. 175). Hence, it broadly comprises stability, prediction, diversity, and earnings trends (Fatma & Hidayat, 2019, p. 4).

Concerns about the credibility of financial disclosures made in the IPO have always been present. It is quite common knowledge that the managers of such companies have many incentives to boost their financial numbers and influence the valuation of shares (Sletten *et al*., 2018). For example, and DuCharme *et al.* (2004) document the use of earnings management by companies that go public. The focus tends to be on discretionary accruals (Miloud, 2013). These concerns are particularly justified in the context of the ample evidence regarding the use of window dressing (Lizińska & Czapiewski, 2019).

Nevertheless, there is no shortage of voices in the debate that point to the rather limited ability of IPO companies to implement earnings management. The most common argument is that their financial statements are thoroughly audited in the process of going public, and the extensive scrutiny of reported numbers provides a considerable barrier to inflate earnings (Alhadab & Clacher, 2018). Moreover, discretionary accruals as a proxy of managerial activity are questioned because they can only be the consequence of an increase in the company's capital after issuing new shares, and the conclusions about the earnings management actions are simply the effect of methodological inadequacies (Armstrong *et al*., 2016). This reasoning leads me to the following hypothesis about the persistence of earnings around the IPO event:

H1: *Pre-IPO earnings are more persistent compared to the IPO year earnings.*

One issue is usually highlighted in the discussion on changes in the financial standing of new stock companies, i.e., profitability. The timing of going public is generally not random. The original stakeholders are concerned about the high valuation of shares and aim for favorable conditions (Boucher & Kooli, 2022). Managers choose the timing of the IPO to be

associated with periods of high earnings and remarkably good performance levels (Benninga *et al*., 2005). Because companies with great potential and growth dynamics go public, it may be relatively challenging to repeat their spectacular previous achievements. Thus, that pre-IPO profitability may be a factor that significantly affects the persistence of reported earnings, and I posit:

H2: *The persistence of earnings performance in IPO companies is attributed to pre-IPO profitability.*

In summary, the quality of financial reporting is an important issue for companies in the capital market, especially from the point of view of the original and future owners because, among other things, it builds trust among stakeholders. Providing a fair and true view of the economic reality of a company reduces the information asymmetry between managers, shareholders, and other market actors. The IPO creates a framework for evaluating financial reporting of companies that undergo significant organizational, ownership, and capital structure changes, as well as the transformation of their institutional environment (Sosnowski, 2021). This area, although extremely important for business practice and still an important research problem for academics, has not received due attention so far. Furthermore, such studies using widely accepted methodology conducted for CEE stock markets will expand the knowledge about the financial reporting behavior of IPO companies in emerging primary stock markets, characterized by different institutional conditions in comparison to US or Western European markets.

Research method

The study sample consists of CEE companies whose IPOs took place on one of the five EU-regulated stock exchanges located in CEE, i.e., the Warsaw Stock Exchange, the Bulgarian Stock Exchange, the Bucharest Stock Exchange, the Belgrade Stock Exchange, and the Prague Stock Exchange. When the majority of research focuses on well-developed markets and common-law countries, it is important to provide evidence from other markets as the equity market development, cultural and social aspects (Kliestik *et al*., 2021; Cherkasova & Rasadi, 2017, p. 443) are systematically related to the reliability of financial information.

All IPO events are from 2010–2018, as such a time frame allows me to avoid the possible influence of economic crises on the results. The bottom

cut relates to the end of the 2008+ financial crisis. The upper cut-off results from the COVID-19 pandemic and its possible impact on the financial results in 2020.

To be included in the sample, the company's headquarters must be located in a CEE country that belongs to the EU. Each company must have all the required information for at least one year before and after the IPO. Thus, the financial data covers the years 2009–2019. Furthermore, due to the nature of financial reporting, companies from the financial sector are excluded. Consequently, the selection requirements lead to a final sample of 83 IPO companies.

Table 1 provides insights into the composition of the study sample. Analyzing the sectoral cross-section, one can generally see that the sample is quite diverse, with a slight predominance of companies from the consumer goods sector. The sample also shows no significant concentration over time, although there are small waves of IPO activity. Geographically, Polish companies outnumber the others significantly. Among the companies, a clear increase in the size of assets and equity can be observed after the IPO, which is related to the possibility of issuing new shares. With a relatively constant debt level, the marked increase in the total revenue is also a positive sign. In the year of the IPO, a sharp increase of mean earnings is apparent. However, the noticeable decline in profitability indicates that maintaining the dynamic pace of development prior to the IPO may be challenging.

The study focuses on evaluating earnings persistence around an IPO, which is related to the informativeness of past earnings on future performance. Following previous studies (Stevanović *et al*., 2021; Li, 2019), earnings persistence is measured by the coefficient α_1 from the equation, in which current earnings (EAT_t) are explained by past earnings (EAT_{t-1}):

$$EAT_t = \alpha_0 + \alpha_1 EAT_{t-1} + \varepsilon_t \qquad (1)$$

Coefficient α_1 is the main interest of the study, as a higher value generally indicates an increase in earnings quality (Dechow *et al*., 2010), and the closer coefficient α_1 is to one, the greater the persistence of earnings (Ebaid, 2011). I use two different measures of earnings, i.e., net income before extraordinary items (*NIBEI*) and net income after taxes (*NIAT*), because they offer some different information content for stakeholders.

To address the issue of the influence of the pre-IPO profitability on earnings persistence, I include in the above model *ROA* variable, which is the return on assets ratio, and the interaction term, *EAT×ROA*.

$$\begin{bmatrix} EAT_{t0} \\ EAT_{t+1} \end{bmatrix} = \beta_0 + \beta_1 EAT_{t-1} + \beta_2 ROA_{t-1} + \\ +\beta_3 EAT_{t-1} \times ROA_{t-1} + \gamma \begin{bmatrix} INDUSTRY \\ COUNTRY \\ YEAR \end{bmatrix} + \varepsilon_t \qquad (2)$$

Coefficient β_3 captures whether the pre-IPO profitability influence the persistence of pre-IPO earnings. To control for industry effect, country effect, and time-series correlations, I also include industry, country, and year dummies to the model. The subscript $t0$ denotes the IPO year, $t–1$ and $t+1$ identify the previous and the next year, respectively.

In his influential study, Sloan (1996) noticed that various components of earnings are characterized by unequal persistence, and earnings performance attributable to the accrual component is less persistent than earnings performance attributable to the cash flow component. Thus, I next employ a widely accepted and often-used approach and decompose *EAT* into two main components, namely cash flow and accrual:

$$EAT_t = CFO_t + ACC_t \qquad (3)$$

represented by cash flow from operations (*CFO*) and current accruals (*ACC*) (Dechow & Ge, 2006, p. 260). Therefore, to investigate if the persistence of earnings around an IPO is due to *CFO*, or rather *ACC*, I estimate the model written as follow:

$$EAT_t = \alpha_0 + \alpha_1 CFO_{t-1} + \alpha_2 ACC_{t-1} + \varepsilon_t \qquad (4)$$

where the slope coefficients α_1 and α_2 indicate the associations between the future earnings and earnings components *CFO* and *ACC*, respectively.

Then, I employ the above partition into earnings components to examine the role of pre-IPO profitability for the persistence of cash flow and accruals, and specify the following regression model:

$$\begin{bmatrix} EAT_{t0} \\ EAT_{t+1} \end{bmatrix} = \beta_0 + \beta_1 CFO_{t-1} + \beta_2 ACC_{t-1} + \beta ROA_{t-1} \\ +\beta_4 CFO_{t-1} \times ROA_{t-1} + \beta_5 ACC_{t-1} \times ROA_{t-1} + \\ +\gamma \begin{bmatrix} INDUSTRY \\ COUNTRY \\ YEAR \end{bmatrix} + \varepsilon_t \qquad (5)$$

The data necessary for the research were retrieved from the Refinitiv database. All coefficients are estimated using ordinary least squares regression.

Results

The outcomes of the empirical analyses consist of two main parts: the measurement of earnings persistence and the study of the pre-IPO profitability impact on it. First, the changes of the earnings persistence in the period around the IPO are assessed, and the results are presented in Table 2.

By analyzing the α_1 coefficients from the model where future year earnings are regressed on past earnings, it can be seen that the earnings reported before the IPO have information content, as all estimated coefficients are positive and statistically significant. However, earnings achieved in the IPO year are somehow distorted. Generally, in line with the prior literature, current earnings are most persistent for the following year's earnings, and their predictive value diminishes over time. These findings for both *NIBEI* and *NIAT* are shown in Panel A in Table 2. The α_1 coefficients decrease as the forecast horizon increases, and the $AdjR^2$ value declines noticeably. Nevertheless, the α_1 coefficients for the earnings presented in the IPO year vary significantly from this pattern. In the model where $t+1$ earnings are explained by past earnings, the coefficient of α_1 is higher for $t-1$ earnings than for $t0$. Thus, earnings in the IPO year are less persistent, and the H1 hypothesis holds.

Panel B of Table 2 provides results where post-IPO earnings are regressed on the accrual and cash flow components. First, for the IPO year in the *NIBEI* and *NIAT* models, both coefficients, α_1 for *ACC* and α_2 for *CFO*, are positive and highly significant, but α_2 is greater than α_1. Consistent with the prior literature, it suggests that the cash flow component is more persistent than accruals. Interestingly, $NIBEI_{t+1}$ is no longer attributed to accrual components, as α_1 lacks statistical significance for both $t-1$ and $t0$ *ACC*. In the $NIAT_{t+1}$ model, ACC_{t-1} is statistically significant only at the 0.1 level, and α_1 is 0.2427. Then, ACC_{t0} is not statistically significant in predicting $NIAT_{t+1}$. Thus, *CFO* has higher predictive power for earnings reported in the one year following IPO.

A thought-provoking byproduct of my analysis is the results that show how these two components, *ACC* and *CFO,* are persistent for earnings disclosed two years after going public. When *CFO* seems to be insignificant in predicting future earnings in the long run, pre-IPO and IPO accruals become negative and highly statistically significant for $NIBEI_{t+2}$ and $NIAT_{t+2}$.

As accruals are susceptible to managerial activity, this may suggest some earnings management behavior around the IPO.

The second strand of the analysis is focused on looking for relationships between earnings persistence and pre-IPO profitability and Table 3 reports the results. In all *NIBEI* and *NIAT* models, the coefficients for the pre-IPO earnings proxies are positive and statistically significant, suggesting that earnings reported before the company goes public remain informative of future earnings when controlling for profitability. However, the main concern in the study is the coefficient on the interaction term *EAT×ROA*. For earnings disclosed in the IPO year, only the coefficient on *NIAT×ROA* is significant at the 0.05 level. The positive sign indicates that profitability achieved prior to going public can support the persistence of earnings in the IPO year. However, this finding does not hold later. In the models for the following year, the coefficients on interaction terms *NIBEI×ROA* ($\beta_3=$–3.1392) and *NIAT×ROA* ($\beta_3=$–2.6527) are negative and highly significant. These results provide strong support for H2 as well, and they show that higher profitability before an IPO negatively affects earnings persistence.

An interesting fact emerged after the decomposition of reported earnings into cash and accrual components. Pre-IPO profitability enhances the persistence of the cash and accrual component for predicting earnings reported in the IPO year. For both the *NIBEI* and *NIAT* models, the coefficients β_4 on interaction terms are positive and statistically significant. However, when considering the earnings reported one year after the IPO, the interaction between the accrual component and profitability loses statistical significance, and the coefficients on the interaction terms *CFO×ROA* are negative and significant. This means that the negative impact of higher pre-IPO profitability on the persistence of previously reported earnings is channeled mostly through its negative impact on *CFO* rather than on accruals.

Discussion

Corporate lifecycle is an important explanatory variable in research on the quality of financial reporting in developing CEE countries (Michalkova, 2021). Earnings persistence has been considered by quite a few studies that take into account different markets, groups of companies, or research periods (Calegari & Maretno, 2005; Dechow & Ge, 2006; Ebaid, 2011; Li, 2019).

The general conclusion is that past earnings have predictive value, and the reported persistence parameter is generally in the range of 0.6 to 0.9 (Pincus *et al*., 2007). Although my research relates to a unique sample of

IPOs from the CEE market, the obtained results are consistent with the prior literature. Moreover, like Nikbakht *et al*. (2021), my results suggest that fast-growing companies with high pre-IPO profitability are more likely to have financial reporting quality issues. Thus, contrary to how Lestari and Khafid (2021) show, profitability may be worth special attention in the study of determinants of earnings quality.

Moreover, my findings are in line with previous research and prove the differential persistence of the cash and accrual components. As Calegari and Maretno (2005), Ebaid (2011), and Li (2019) documented, the cash flow component contributes to the persistence of earnings more. In other words, the persistence of earnings disclosed to the public before an IPO is not significantly different from that reported by other public companies. This conclusion supports the study of Lizińska and Czapiewski (2018), which showed a conservative picture of the use of discretionary accruals around IPO event.

Thus, this paper supports the studies of Venkataraman *et al.* (2008) and Ball and Shivakumar (2008), which showed higher financial reporting quality at the time of an IPO.

In contrast to other studies, my research provides additional insights into the persistence of pre-IPO earnings beyond the next year. For example, Hutagaol-Martowidjojo and Widyanto (2018) concluded that earnings persistence changes along with the alteration of the company's status from private to public, and earnings persistence increases after the IPO. However, that study evaluated only the potential of pre-IPO earnings for the IPO year earnings forecast. As I show, the year of going public is, to some extent, unusual. Thus, my results cast doubt on the claim that earnings reported after the IPO are more persistent than earnings before going public (Hutagaol-Martowidjojo & Widyanto, 2018).

Conclusions

In this paper, I focused on whether data on a company's performance presented to the public prior to an IPO maintains its informational utility thereafter. I empirically examine the persistence of pre-IPO earnings (i.e., *NIBEI* and *NIAT*) in the CEE context. This study contributes to a wide stream of discussions on the credibility of the content of companies' prospectuses and the potential possibilities of intentionally influencing managers on financial disclosures. Relatively small capital markets with less IPO activity are severely under-researched in this field.

The empirical findings generate several interesting insights. Financial information from the period before the company goes public can be considered quite a reliable source of information about future performance. However, the extraordinary occurrences taking place around an IPO cause a disruption in the persistence of earnings reported at that particular time. In this regard, the pre-IPO data prevail over the information disclosed in the financial statement for the IPO year. Moreover, my research indicates that higher profitability reported before an IPO positively affects the ability to use pre-IPO earnings to predict IPO year earnings, and it significantly reduces this ability for the following year's earnings. This remark may be particularly relevant to investors and practitioners in the stock market. It also contributes to the debate on the role of regulators in discouraging managers from inflating earnings and can help policymakers set better financial reporting standards, particularly in the scope of pre-IPO real earnings management.

This study is not free from limitations and caveats. IPO events on the CEE stock exchanges are relatively few, and markets other than Poland are very poorly represented. Furthermore, the search for other factors that may affect the persistence of earnings around the IPO is very challenging. Corporate governance issues are particularly interesting, as the IPO period is rife with changes in this area. In addition, the methodology adopted in the study is heavily influenced by data availability limited to one year before the IPO. Breaking this barrier would make it possible to investigate associations between the quality of financial information and earnings management. In light of the results presented in this paper about the role of the cash and accrual component, studies on real earnings management can provide especially valuable insights.

References

Agarwal, A., Aggarwal, S. P., & Gupta, S. (2019). Sustainable earnings: a new eye for emerging finance. *Journal of Sustainable Finance & Investment*, *9*(4), 325–348. doi: 10.1080/20430795.2019.1619338.

Albu, N., Albu, C. N., & Gray, S. J. (2020). Institutional factors and the impact of International Financial Reporting Standards: the central and eastern european experience. *Accounting Forum, 44*(3), 184–214. doi: 10.1080/01559982.2019.1701793.

Alhadab, M., & Clacher, I. (2018). The impact of audit quality on real and accrual earnings management around IPOs. *British Accounting Review*, *50*(4), 442–461. doi: 10.1016/j.bar.2017.12.003.

Armstrong, C., Foster, G., & Taylor, D. (2016). Abnormal accruals in newly public companies: opportunistic misreporting or economic activity? *Management Science*, *62*(5), 1316–1338. doi: 10.1287/mnsc.2015.2179.

Ball, R., & Shivakumar, L. (2008). Earnings quality at initial public offerings. *Journal of Accounting and Economics*, *45*(2–3), 324–349. doi: 10.1016/j.jacceco.2007.12.001.

Benninga, S., Helmantel, M., & Sarig, O. (2005). The timing of initial public offerings. *Journal of Financial Economics*, *75*(1), 115–132. doi: 10.1016/j.jfineco.2003.04.002.

Boucher, C., & Kooli, M. (2022). Anatomy of money-losing IPOs. *Research in International Business and Finance*, *60,* 101623. doi: 10.1016/j.ribaf.2022.101623.

Brzeszczyński, J., Gajda, J., & Schabek, T. (2012). Earnings management in Polish companies. *Comparative Economic Research. Central and Eastern Europe*, *14*(3), 137–150. doi: 10.2478/v10103-011-0023-1.

Calegari, M., & Maretno, H. (2005). The persistence of earnings and corporate governance in IPO firms. *Journal of Global Business*, *16*(32), 47.

Callao, S., Jarne, J. I., & Wróblewski, D. (2017). Detecting earnings management investigation on different models measuring earnings management for emerging eastern european countries. *International Journal of Research - GRANTHAALAYAH*, *5*(11), 222–259. doi: 10.29121/granthaalayah.v5.i11.2017.2351.

Cherkasova, V., & Rasadi, D. (2017). Earnings quality and investment efficiency: evidence from Eastern Europe. *Review of Economic Perspectives*, *17*(4), 441–468. doi: 10.1515/revecp-2017-0023.

Cho, S. M., & Kang, S. A. (2019). The effect of accounting information quality and competition on investment inefficiency: evidence from Korea. *Asia-Pacific Journal of Accounting and Economics*, *26*(4), 489–510. doi: 10.1080/16081625.2017.1392879.

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: a review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, *50*(2–3), 344–401. doi: 10.1016/j.jacceco.2010.09.001.

Dechow, P. M., & Ge, W. (2006). The persistence of earnings and cash flows and the role of special items: implications for the accrual anomaly. *Review of Accounting Studies*, *11*(2–3), 253–296. doi: 10.1007/s11142-006-9004-1.

DuCharme, L. L., Malatesta, P. H., & Sefcik, S. E. (2004). Earnings management, stock issues, and shareholder lawsuits. *Journal of Financial Economics*, *71*(1), 27–49. doi: 10.1016/S0304-405X(03)00182-X.

Durana, P., Valaskova, K., Siekelova, A., & Michalkova, L. (2022). Appraisal of earnings management across the sectors. *Journal of Business Economics and Management*, *23*(2), 399–425. doi: 10.3846/jbem.2022.16563.

Ebaid, I. E. S. (2011). Persistence of earnings and earnings components: evidence from the emerging capital market of Egypt. *International Journal of Disclosure and Governance*, *8*(2), 174–193. doi: 10.1057/jdg.2010.29.

Fatma, N., & Hidayat, W. (2019). Earnings persistence, earnings power, and equity valuation in consumer goods firms. *Asian Journal of Accounting Research*, *5*(1), 3–13. doi: 10.1108/ajar-05-2019-0041.

Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005). The market pricing of accruals quality. *Journal of Accounting and Economics*, *39*(2), 295–327. doi: 10.1016/j.jacceco.2004.06.003.

Hutagaol-Martowidjojo, Y., & Widyanto, F. (2018). Earnings quality of Indonesian firms surrounding initial public offerings. *International Journal of Accounting, Auditing and Performance Evaluation*, *14*(1), 47–62. doi: 10.1504/IJAAPE.2018.089413.

Jamaani, F., & Ahmed, A. D. (2022). The psychological and economic roles of culture on global underpricing difference: a new hierarchical evidence. *Journal of Behavioral and Experimental Finance*, *33*, 100615. doi: 10.1016/j.jbef.2021.100615.

Jamaani, F., Alidarous, M., & Alharasis, E. (2022). The combined impact of IFRS mandatory adoption and institutional quality on the IPO companies' underpricing. *Journal of Financial Reporting and Accounting*. Avance online publication. doi: 10.1108/jfra-07-2021-0199.

Kiseľáková, D., Šofranková, B., Onuferová, E., & Čabinová, V. (2019). The evaluation of competitive position of EU-28 economies with using global multicriteria indices. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, *14*(3), 441–462. doi: 10.24136/eq.2019.021.

Kliestik, T., Belas, J., Valaskova, K., Nica, E., & Durana, P. (2021). Earnings management in V4 countries: the evidence of earnings smoothing and inflating. *Economic Research-Ekonomska Istraživanja*, *34*(1), 1452–1470. doi: 10.1080/1331677X.2020.1831944.

Krastev, V., Durana, P., & Valaskova, K. (2021). Earnings management under a global magnifier. *SHS Web of Conferences*, *92*, 02032. doi: 10.1051/shsconf/20219202032.

Lestari, S. P., & Khafid, M. (2021). The role of company size in moderating the effect of profitability, profit growth, leverage, and liquidity on earnings quality. *Accounting Analysis Journal*, *10*(2), 86–93.

Li, V. (2019). The effect of real earnings management on the persistence and informativeness of earnings. *British Accounting Review*, *51*(4), 402–423. doi: 10.1016/j.bar.2019.02.005.

Lizińska, J., & Czapiewski, L. (2018). Towards economic corporate sustainability in reporting: what does earnings management around equity offerings mean for long-term performance? *Sustainability*, *10*(12), 4349. doi: 10.3390/su10124349.

Lizińska, J., & Czapiewski, L. (2019). Is window-dressing around going public beneficial? Evidence from Poland. *Journal of Risk and Financial Management*, *12*(1), 18. doi: 10.3390/jrfm12010018.

Meluzin, T., Balcerzak, A. P., Pietrzak, M. B., Zinecker, M., Doubravsky, K. (2018a). The impact of rumours related to political and macroeconomic uncertainty on IPO success: evidence from a qualitative model. *Transformations in Business & Economics*, *17*(2), 148–169.

Meluzín, T., Zinecker, M., Balcerzak, A. P., & Pietrzak, M. B. (2018b). Why do companies stay private? determinants for IPO candidates to consider in Poland and the Czech Republic. *Eastern European Economics*, *56*(6), 471–503. doi: 10.1080/00128775.2018.1496795.

Meluzín, T., Zinecker, M., Balcerzak, A. P., Pietrzak, M. B., & Doubravský, K. (2021). Institutional settings and their impact on the IPO activity: an exploratory study based on qualitative modelling. *Acta Polytechnica Hungarica*, *18*(2), 215–235. doi: 10.12700/aph.18.2.2021.2.12.

Michalkova, L. (2021). Earnings quality and accruals over company´s life cycle. *SHS Web of Conferences*, *92*, 02043. doi: 10.1051/shsconf/20219202043.

Miloud, T. (2013). Earnings management and initial public offerings: an empirical analysis. *Journal of Applied Business Research (JABR)*, *30*(1), 117. doi: 10.190 30/jabr.v30i1.8288.

Nikbakht, E., Sarkar, S., Smith, G. C., & Spieler, A. C. (2021). Pre-IPO earnings management: evidence from India. *Journal of International Accounting, Auditing and Taxation*, *44*, 100400. doi: 10.1016/j.intaccaudtax.2021.100400.

Pincus, M., Rajgopal, S., & Venkatachalam, M. (2007). The accrual anomaly: International evidence. *Accounting Review*, *82*(1), 169–203.

Piosik, A., & Strojek-Filus, M. (2013). An assessment of the application of earnings management objectives and instruments in financial reporting – evidence of survey research results. *Annals of the Alexandru Ioan Cuza University - Economics*, *60*(2), 148–173. doi: 10.2478/aicue-2013-0022.

Setiawan, B., Saleem, A., Nathan, R. J., Zeman, Z., Magda, R., & Barczi, J. (2021). Financial market development and economic growth: evidence from ASEAN and CEE Region. *Polish Journal of Management Studies*, 23(2), 481–494. doi: 10.17512/pjms.2021.23.2.29.

Siekelova, A., Valaskova, K., & Machova, V. (2020). Earnings management initiatives and selected characteristics of an entity: a case study of the Visegrad Four. *Problems and Perspectives in Management*, *18*(3), 28–41. doi: 10.21511 /ppm.18(3).2020.03.

Sletten, E., Ertimur, Y., Sunder, J., & Weber, J. (2018). When and why do IPO firms manage earnings? *Review of Accounting Studies*, *23*(3), 872–906. doi: 10.1007/s11142-018-9445-3.

Sloan, R. (1996). Do stock prices fully reflect information in accruals and cash flows about future earnings? *Accounting Review*, *71*(3), 289–315.

Sosnowski, T. (2018). Earnings management in the private equity divestment process on Warsaw Stock Exchange. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, *13*(4), 689–705. doi: 10.24136/eq.2018.033.

Sosnowski, T. (2021). The credibility of earnings announced by new stock companies: accrual and real earnings management. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 16(3), 661–677. doi: 10.24136/eq.2021. 024.

Stevanović, S., Minović, J., & Marinković, G. (2021). Earnings and cash flow persistence: case of medium agriculture enterprises in Serbia. *Ekonomika Poljo-privrede*, *68*(1), 141–153. doi: 10.5937/ekopolj2101141s.

Valaskova, K., Adamko, P., Frajtova Michalikova, K., & Macek, J. (2021). Quo Vadis, earnings management? analysis of manipulation determinants in Central European environment. *Oeconomia Copernicana*, *12*(3), 631–669. doi: 10.24136/oc.2021.021.

Venkataraman, R., Weber, J. P., & Willenborg, M. (2008). Litigation risk, audit quality, and audit fees: evidence from initial public offerings. *Accounting Review*, *83*(5), 1315–1345. doi: 10.2308/accr.2008.83.5.1315.

Závodný, L. (2021). Relevance versus reliability trade-off in financial reporting among companies listed at Visegrad Group Stock Exchanges. *European Financial and Accounting Journal*, *16*(1), 7–24. doi: 10.18267/j.efaj.246.

Zhai, J., & Wang, Y. (2016). Accounting information quality, governance efficiency and capital investment choice. *China Journal of Accounting Research*, *9*(4), 251–266. doi: 10.1016/j.cjar.2016.08.001.

Annex

Table 1. Structure and characteristics of the study sample

Panel A: Sample structure

TRBC economic sector	N	Share	IPO year	N	Share	Country of headquarter	N	Share
Basic Materials	10	0.1205	2010	14	0.1687	Poland	72	0.8675
Consumer Cyclicals	18	0.2169	2011	14	0.1687	Czech Republic	2	0.0241
Consumer Non-Cyclicals	9	0.1084	2012	7	0.0843	Slovakia	1	0.0120
Energy	2	0.0241	2013	8	0.0964	Romania	5	0.0602
Healthcare	5	0.0602	2014	10	0.1205	Bulgaria	3	0.0361
Industrials	15	0.1807	2015	9	0.1084	Serbia	0	0.0000
Real Estate	5	0.0602	2016	12	0.1446			
Technology	13	0.1566	2017	5	0.0602			
Utilities	6	0.0723	2018	4	0.0482			
Total	83	1.0000		83	1.0000		83	

Panel B: Sample characteristics

	$t-1$			$t0$			$t+1$		
	Mean	Std. dev.	Median	Mean	Std. dev.	Median	Mean	Std. dev.	Median
Total Assets	305204.95	832661.72	50264.15	345323.47	911234.87	57403.62	365858.61	961703.05	73055.39
Total Equity	163718.39	468977.61	17970.13	189898.75	538686.11	27898.11	192041.46	534863.48	32636.38
Total Revenue	209401.11	538238.84	36723.19	230714.90	589902.87	41880.00	251709.70	644523.48	52533.00
NIBEI	14556.00	47527.07	2825.05	18978.70	60812.53	3696.28	14907.05	50711.16	3775.92
NIAT	15428.13	50552.24	2825.05	19764.53	62360.54	3705.69	15483.92	51558.04	4016.76
Debt/Assets	0.2178	0.1674	0.1950	0.1915	0.1578	0.1744	0.2044	0.1784	0.1874
ROA	0.1291	0.1680	0.0796	0.0924	0.1841	0.0656	0.0700	0.2109	0.0539
ROE	0.2563	0.2669	0.1822	0.1707	0.2741	0.1463	0.1237	0.2586	0.1214

Note: Balance sheet and income statement information in thousands of EUR.

Table 2. The role of pre-IPO earnings and earnings components in predicting future earnings

Panel A: The earnings autoregressive model

Dependent variable: NIBEI	t0			t+1			t+1			t+2			t+2			t+2		
	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.
Intercept	1180067	0.57	0.5702	2061169	0.63	0.5332	1452157	0.47	0.6397	6483176	1.35	0.1810	6199947	1.30	0.1978	2759790	0.84	0.4049
$NIBEI_{t-1}$	1.2228	29.20	0.0000	0.8825	13.24	0.0000				0.5021	5.26	0.0000						
$NIBEI_{t0}$							0.7089	14.53	0.0000				0.4008	5.42	0.0000			
$NIBEI_{t+1}$																0.7405	12.02	0.0000
Adj R^2	0.9122			0.6802			0.7194			0.2526			0.2642			0.6450		
F-statistic	852.61			175.41			211.19			27.70			29.36			144.55		
Prob (F-statistic)	0.0000			0.0000			0.0000			0.0000			0.0000			0.0000		

Dependent variable: NIAT	t0			t+1			t+1			t+2			t+2			t+2		
	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.
Intercept	1570014	0.74	0.4622	2260692	0.70	0.4882	1408668	0.46	0.6457	6074931	1.25	0.2139	5808576	1.19	0.2368	2580798	0.76	0.4516
$NIAT_{t-1}$	1.1793	29.33	0.0000	0.8571	13.95	0.0000				0.5406	6.00	0.0000						
$NIAT_{t0}$							0.7121	15.26	0.0000				0.4363	5.97	0.0000			
$NIAT_{t+1}$																0.7655	12.30	0.0000
Adj R^2	0.9129			0.7026			0.7388			0.3072			0.3046			0.6553		
F-statistic Prob	860.16			194.71			232.88			36.03			35.60			151.19		
(F-statistic)	0.0000			0.0000			0.0000			0.0000			0.0000			0.0000		

Table 2. Continued

Panel B: Model with components of earnings: *ACC* and *CFO*

Dependent variable: *NIBEI*	*t0*			*t+1*			*t+1*			*t+2*			*t+2*			*t+2*		
	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.
Intercept	94431	0.05	0.9582	296371	0.10	0.9171	661300	0.27	0.7915	3358773	0.89	0.3759	4492827	1.56	0.1229	2788060	0.83	0.4086
ACC_{t-1}	0.7903	8.96	0.0000	0.1795	1.29	0.2012				−0.6831	−3.76	0.0003						
CFO_{t-1}	1.0306	20.27	0.0000	0.5702	7.10	0.0000				−0.0240	−0.23	0.8191						
ACC_{t0}							0.1163	1.20	0.2337				−0.7763	−7.07	0.0000			
CFO_{t0}							0.4493	8.14	0.0000				−0.1145	−1.83	0.0711			
ACC_{t+1}																0.7478	5.16	0.0000
CFO_{t+1}																0.7439	8.61	0.0000
Adj R²	0.9346			0.7658			0.8178			0.5456			0.7327			0.6404		
F-statistic	587.28			135.04			185.06			48.42			109.29			71.35		
Prob (F-statistic)	0.0000			0.0000			0.0000			0.0000			0.0000			0.0000		

Dependent variable: *NIAT*	*t0*			*t+1*			*t+1*			*t+2*			*t+2*			*t+2*		
	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.	Coefficient	t-Stat	Prob.
Intercept	322743	0.18	0.8584	611521.9	0.21	0.8334	877166.4	0.35	0.7288	3310623	0.79	0.4306	4602859	1.45	0.1512	2743528	0.79	0.4311
ACC_{t-1}	0.7147	8.27	0.0000	0.2427	1.75	0.0843				−0.4411	−2.25	0.0275						
CFO_{t-1}	0.9887	21.03	0.0000	0.6051	8.01	0.0000				0.1383	1.29	0.1993						
ACC_{t0}							0.1170	1.14	0.2586				−0.7815	−6.15	0.0000			
CFO_{t0}							0.4571	8.14	0.0000				−0.0853	−1.23	0.2227			
ACC_{t+1}																0.8094	5.52	0.0000
CFO_{t+1}																0.7851	9.10	0.0000
Adj R²	0.9382			0.7664			0.8221			0.4930			0.7051			0.6513		
F-statistic	623.29			135.51			190.41			39.41			95.44			74.79		
Prob (F-statistic)	0.0000			0.0000			0.0000			0.0000			0.0000			0.0000		

Table 3. Association between the persistence of pre-IPO earnings and profitability

Panel A: Dependent variable: *NIBEI*

Variable	t0 Coefficient	t0 t-Statistic	t0 Prob.	t+1 Coefficient	t+1 t-Statistic	t+1 Prob.
Intercept	37883425	3.1187	0.0028	37341772	2.0809	0.0418
$NIBEI_{t-1}$	0.9450	8.6015	0.0000	1.2064	7.4332	0.0000
ROA_{t-1}	-22534118	-1.7699	0.0819	14801621	0.7869	0.4345
$NIBEI{\times}ROA_{t-1}$	1.2845	1.6426	0.1058	-3.1392	-2.7172	0.0086
Year				Yes		
Country				Yes		
Industry				Yes		
Adj R^2	0.9283			0.7750		
F-statistic	47.17			13.28		
Prob (F-statistic)	0.0000			0.0000		
N	83			83		

Variable	t0 Coefficient	t0 t-Statistic	t0 Prob.	t+1 Coefficient	t+1 t-Statistic	t+1 Prob.
Intercept	51642667	5.8072	0.0000	22129371	1.1539	0.2533
ACC_{t-1}	-0.1576	-1.0748	0.2870	0.8406	2.6584	0.0102
CFO_{t-1}	0.1369	1.1084	0.2724	1.0376	3.8968	0.0003
ROA_{t-1}	-10443499	-1.2854	0.2039	10909354	0.6226	0.5360
$ACC{\times}ROA_{t-1}$	2.4968	2.7057	0.0090	-2.4506	-1.2315	0.2232
$CFO{\times}ROA_{t-1}$	4.7907	8.3733	0.0000	-2.7746	-2.2489	0.0284
Year	Yes			Yes		
Country	Yes			Yes		
Industry	Yes			Yes		
Adj R^2	0.9688			0.7911		
F-statistic	102.73			13.42		
Prob (F-statistic)	0.0000			0.0000		
N	83			83		

Table 3. Continued

Panel B: Dependent variable: *NIAT*

Variable	t0 Coefficient	t0 t-Statistic	t0 Prob.	t+1 Coefficient	t+1 t-Statistic	t+1 Prob.	Variable	t0 Coefficient	t0 t-Statistic	t0 Prob.	t+1 Coefficient	t+1 t-Statistic	t+1 Prob.
Intercept	41878651	3.4440	0.0011	37649561	2.1137	0.0388	*Intercept*	52564677	5.8107	0.0000	26196053	1.3676	0.1768
NIAT$_{t-1}$	0.8687	8.8619	0.0000	1.1005	7.6641	0.0000	*ACC$_{t-1}$*	0.0255	0.2059	0.8376	0.8489	3.2432	0.0020
ROA$_{t-1}$	−25110790	−2.0065	0.0494	12190648	0.6650	0.5086	*CFO$_{t-1}$*	0.2916	2.8479	0.0061	1.0055	4.6371	0.0000
NIAT×ROA$_{t-1}$	1.6373	2.2535	0.0280	−2.6527	−2.4925	0.0155	*ROA$_{t-1}$*	−11983437	−1.4506	0.1524	8561139	0.4894	0.6264
							ACC×ROA$_{t-1}$	1.7633	1.8300	0.0725	−2.1229	−1.0405	0.3025
							CFO×ROA$_{t-1}$	4.0399	7.9809	0.0000	−2.5373	−2.3672	0.0213
Year	Yes			Yes				Yes			Yes		
Country	Yes			Yes				Yes			Yes		
Industry	Yes			Yes				Yes			Yes		
Adj R^2	0.9342			0.7934				0.9696			0.8009		
F-statistic	51.59			14.69				105.79			14.19		
Prob (F-statistic)	0.0000			0.0000				0.0000			0.0000		
N	83			83				83			83		