

Sosnowski, Tomasz

Working Paper

Earnings Management in the Private Equity Divestment Process on Warsaw Stock Exchange

Institute of Economic Research Working Papers, No. 118/2017

Provided in Cooperation with:

Institute of Economic Research (IER), Toruń (Poland)

Suggested Citation: Sosnowski, Tomasz (2017) : Earnings Management in the Private Equity Divestment Process on Warsaw Stock Exchange, Institute of Economic Research Working Papers, No. 118/2017, Institute of Economic Research (IER), Toruń

This Version is available at:

<https://hdl.handle.net/10419/219940>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/3.0/>



Institute of Economic Research Working Papers

No. 118/2017

**Earnings Management in the Private Equity Divestment Process on
Warsaw Stock Exchange**

Tomasz Sosnowski

Article prepared and submitted for:

**9th International Conference on Applied Economics Contemporary Issues in Economy,
Institute of Economic Research, Polish Economic Society Branch in Toruń, Faculty of
Economic Sciences and Management, Nicolaus Copernicus University, Toruń, Poland,
22-23 June 2017**

Toruń, Poland 2017

© Copyright: Creative Commons Attribution 3.0 License

Earnings Management in the Private Equity Divestment Process on Warsaw Stock Exchange

Tomasz Sosnowski¹

Abstract

Research background: Prior studies suggest that companies which go public manage earnings in order to inflate the issue price. However, for PE funds the use of such activity can be costly in terms of the reputation capital as they are repetitive stock market players.

Purpose of the article: The main aim of the study is to empirically investigate the use of pre-IPO earnings management by private equity funds in the process of divestment conducted on a stock exchange.

Methodology/methods: I provide comparisons between PE-backed companies and firms with a similar initial market value and growth potential, using the method of single-linkage clustering to build the study sample. In order to assess the pre-IPO earnings management I apply the discretionary accruals model of Larcker and Richardson [2004].

Findings & Value added: I do not find evidence that the presence of PE fund among the shareholders of the company in the period preceding first listing of shares on a stock market constrains the use of earnings management prior to the IPO. The difference between the discretionary accruals in PE-backed and matched companies, when controlling for the market value and book-to-market ratio, is statistically insignificant.

Keywords: *Initial public offering, IPO, Private equity, Earnings management*

JEL Classification: *G24, G32, G34*

Introduction

The stock exchange enables private equity (PE) funds to implement the divestment process and to sell shares of companies from their investment portfolio. Although the final sale of the company's shares may occur even several years after the first listing on the stock market, this type of exit from investment is known as the initial public offering (IPO). However, the stock exchange is not just a place where PE funds can cash out their best and successful investment, but also a place to create and accumulate good reputation. A large stream of studies suggests that companies conducting the initial public offering (IPOs) engage in the earnings management in order to inflate the issue price (Teoh et al., 1998, pp. 1935-1974). However, while such activities may generate benefits for sellers of shares at a going public event, in the long run they will result in the subsequent negative changes in the company's performance and value (DuCharme et al., 2004, pp. 27-49). Thus, the use of earnings management is beneficial only for a selected group of stakeholders. Especially for PE funds that are repetitive stock market players who accumulate the reputation capital such a strategy of the wealth transfer from less informed stock investors may be very risky.

The main aim of this study is to investigate the use of pre-IPO earnings management by PE funds in the process of divestment conducted on a stock exchange. Some studies suggest that PE funds may take advantage of the privileged position, preferring their own needs above the interests of other groups of shareholders, both present and future (Liu, 2014, p. 173). Due to the significant information asymmetry, the time around IPO is ideal to take this type of action (Teoh et al., 1998, p. 1937). Thus, in this paper I address the question whether the presence of

¹ University of Lodz , Department of Business Analysis and Strategy, Faculty of Economics and Sociology, E-mail: tomasz.sosnowski@uni.lodz.pl.

a PE fund in the company's ownership affects the scale of earnings management prior to the IPO. The incentive to manage earnings in order to increase the sale price is particularly high. Without a doubt, PE funds have the purpose, opportunity and ability to undertake such activities. Nevertheless, literature emphasizes the key role of PE funds in the supervisory process and their beneficial effect on the applied corporate governance standards (Hochberg, 2012, p. 430). Moreover, the significance of divestments undertaken by the IPO in building reputation capital of PE funds is highlighted (Nahata, 2008, pp. 127–151).

To fulfill the aim of the paper I posit the hypothesis that the scale of earnings management in the period preceding the IPO in the PE-backed companies is lower in comparison to the non-PE-backed companies that go public. For PE funds the good reputation is essential to build a stable and strong position in the very competitive private equity market. The market evaluates the achievements of individual funds through the track record of the portfolio companies. Since the increase in the share price triggered by the earnings management is only temporary and does not cause a lasting increase in the value of the company (DuCharme et al., 2004, pp. 27-49), engaging in upward window dressing around the IPO may negatively affect how the PE fund is perceived by the market participants. The loss of trust and positive opinion can significantly hinder or even prevent the divestments on the public securities market in the future. Thus, it is in the interest of the fund to establish the appropriate corporate governance solutions, oriented towards accumulation of the reputation capital and preventing the use of aggressive earnings management prior to the introduction of the company's shares to the stock trading (Hochberg, 2012, p. 430).

Literature review

Although earnings management is widely discussed in literature, there is no agreement among researchers about the essence and purpose of such activities. Healy and Wahlen (1999, p. 368) emphasize that this practice occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on the reported accounting numbers. Therefore, this practice can be useful in reducing the cognitive value of reported earnings and may lead to the wealth transfer in favor of better-informed groups, mainly managers and original shareholders, at the expense of other users of financial statements (Grabiński, 2016, p. 33).

In spite of the fact that earnings management is mainly seen as if sneaky managers pulling the wool over the eyes of naive owners by manipulating accruals (Wójtowicz, 2015, p. 142), such actions may not always be perceived negatively and result from opportunistic actions. It can be used to increase the informativeness of the company's financial results, so that the internal, true and important for external users information is provided to the public (Subramanyam, 1996, pp. 249-281).

While growing literature shows the use of it by the IPO firms, only a few studies directly investigate the role of PE funds in financial reporting quality. Examining the quality of profits in PE-backed IPOs Morsfield and Tan (2006) document that the presence of funds among company owners is associated with the lower level of discretionary accruals. They suggest that PE fund's involvement in the company and the incentives to monitor its business effectively constrains the earnings management actions. Also, Hochberg (2012, pp. 429-480) points out that the PE fund's presence reduces the level of window dressing in the firm at IPO and such companies are more likely to be conservative and less aggressive in terms of earnings management than similar non-PE-backed firms.

Although many papers emphasize the positive certification and monitoring roles played by PE funds, there is also a growing body of literature, which seems to question that findings.

The study of Darrough and Rangan (2005, p. 1-33) shows that the portfolio companies of PE funds strive to present higher reported earnings to the public by reducing R&D expenditures in the year of the IPO. Wongsunwai (2013, pp. 296-324) emphasizes the importance of reputational concerns for the financial reporting strategy and points that only portfolio companies of higher-quality PE funds, which are willing to protect the standing they have, constrain aggressive earnings management prior to the IPO. Hu et al. (2012, pp. 251-268) provide evidence that the participation of the PE fund lowers earnings management in the period preceding IPO and increases earnings management in the post-IPO year in order to increase the accounting earnings in the time in which the lock-up period expires.

Methodology

Study sample

Empirical studies undertaken in order to verify the hypothesis of a different scale of earnings management in the IPO process of the PE funds' portfolio and other firms have been conducted on a group of companies whose first listing of shares on the Warsaw Stock Exchange took place between 2005 and 2015. The analyzed firms have their headquarters in Poland and their IPO includes the sale of primary or secondary shares. In the first stage, out of all companies that met the above selection criteria I identify those, in which IPO is conducted because of the divestment process of the PE funds. In total, 38 companies meet this criterion.

In the next stage of research I distinguish companies, which constitute the control sample. I use the following criteria for selecting these companies:

- the initial market value of the company (MV),
- the company's initial book-to-market ratio (BV/MV).

Then I use cluster analysis in order to assign companies similar to those which are backed by PE funds. I use the method of single-linkage clustering on a set of standardized data, where the distance between the grouped objects is expressed by the Euclidean metric. The application of these procedures allows me to identify companies with a similar initial market value and growth potential. As a result I select, for further empirical analysis, a total of 76 companies, which are divided into two equal groups (see Table 1):

Table 1. Some descriptive statistics of the initial market value (MV) and book-to-market ratio (BV/MV) of both samples.

| Specification | MV (in thousands PLN) | | BV/MV | |
|---------------------------|--------------------------|----------------|----------------|----------------|
| | PE sample | Matched sample | PE sample | Matched sample |
| Mean | 327196.5 | 287112.8 | 0.2209 | 0.2286 |
| Std. dev. | 293972.3 | 340979.9 | 0.2201 | 0.2180 |
| Lower quartile | 85844.2 | 98427.8 | 0.0851 | 0.0912 |
| Median | 266145.5 | 211670.9 | 0.1569 | 0.1587 |
| Upper quartile | 415476.5 | 332203.5 | 0.3040 | 0.3063 |
| Number of companies | 38 | 38 | 38 | 38 |
| Kolmogorov-Smirnov Z test | p-value>0.1000 | | p-value>0.1000 | |

Source: own study.

What is especially important, p-values corresponding to the Kolmogorov-Smirnov Z test of difference in the distribution cross pairwise subsamples do not indicate that these two groups, in terms of both MV and BV/MV ratio, differ from each other in a statistically significant way.

Earnings management detection

In order to investigate the application of earnings management in a given firm I use the discretionary accruals (DACC). First, it is necessary to disaggregate total accruals (TACC), which is the difference between the net earnings and cash flow from operation, into two components: the discretionary and non-discretionary part. In most empirical studies on earnings management to estimate the value of discretionary accruals, the model developed by J. Jones is applied, which assumes that non-discretionary accruals result from the changes in sales ($\Delta SELES$) and gross property, plant and equipment (PPE), or its modified formula of Dechow et al. (1995, pp. 193-225), which additionally takes into account fluctuations in trade receivables (ΔAR). However, Ball and Shivakumar (2008, pp. 324-349) emphasize the significant limitations of these models and their application leads to an overestimation of discretionary accruals. Therefore, I use Larcker and Richardson (2004, p. 634) extension of a modified Jones (1991, pp. 193-228) model, which is more suitable for assessing accruals for fast-growing companies. They add the company's BV/MV ratio to the standard model, which refers to the growth option and cash flows from operations (OCF) to control the influence of the firm's operating performance. In general, the model is estimated as follows:

$$\frac{TACC_t}{TA_{t-1}} = \beta_0 \left(\frac{1}{TA_{t-1}} \right) + \beta_1 \left(\frac{\Delta SALES_t - \Delta AR_t}{TA_{t-1}} \right) + \beta_2 \left(\frac{PPE_t}{TA_{t-1}} \right) + \beta_3 (BV/MV_t) + \beta_4 \left(\frac{OCF_t}{TA_{t-1}} \right) + \varepsilon_t$$

and the residual value from this model is discretionary accruals. TA_{t-1} is the total assets at the beginning of the year t, β_0, \dots, β_4 are the regression coefficients, and ε_t is the error term in a regression equation, while t refers to the fiscal year before the IPO year.

To eliminate the heterogeneity of the sample I follow Ecker et al. (2013, pp. 190–211) and combine companies into a relatively homogeneous sets of observations according to their size measured by lagged total assets. First, I divide all 221 new stock companies into 10 subsamples of firms of a similar size, and then I estimate the structural parameters of the accruals model separately for each decile group.

Empirical results

As an overall view, I first report the mean and median of some characteristics of the companies included in the study sample and comparison results. Table 2 indicates that there are some differences between the two groups of companies. Especially, when the floatation structure is considered.

Table 2. Characteristics of companies qualified to the research sample

| Specification | Mean | | t-test of difference in means | Median | | Wilcoxon rank-sum test of difference in medians |
|-------------------------------|-----------|----------------|-------------------------------|-----------|----------------|---|
| | PE sample | Matched sample | p-value for t-statistics | PE sample | Matched sample | p-value for z-statistics |
| Panel A: Firm characteristics | | | | | | |
| SALES | 209.25 | 165.06 | 0.5802 | 82.81 | 84.45 | 0.4268 |
| EAT | 17.35 | 8.17 | 0.2449 | 8.10 | 5.34 | 0.2342 |
| OCF | 11.96 | 6.40 | 0.2382 | 3.68 | 4.11 | 0.4268 |
| ASSETS | 158.41 | 156.70 | 0.9770 | 105.33 | 79.92 | 0.6217 |
| DR | 0.4973 | 0.5786 | 0.2963 | 0.5203 | 0.6186 | 0.2342 |

| | | | | | | |
|--|--------|--------|--------|--------|--------|--------|
| ROA | 0.1447 | 0.1424 | 0.9495 | 0.1072 | 0.0872 | 0.6969 |
| AGE | 22.37 | 23.50 | 0.8295 | 15.00 | 16.00 | 0.7711 |
| Panel B: IPO transaction characteristics | | | | | | |
| IPO PROCEEDS | 86.55 | 60.85 | 0.1984 | 52.33 | 36.20 | 0.4030 |
| PRIMARY PROCEEDS | 21.18 | 39.98 | 0.0204 | 12.13 | 29.19 | 0.0176 |
| SECONDARY PROCEEDS | 65.37 | 20.88 | 0.0198 | 33.79 | 0.00 | 0.0005 |
| PRIMARY PORTION | 0.1646 | 0.2595 | 0.0242 | 0.1257 | 0.2608 | 0.0037 |
| SECONDARY PORTION | 0.2240 | 0.0921 | 0.0023 | 0.2176 | 0.0000 | 0.0003 |

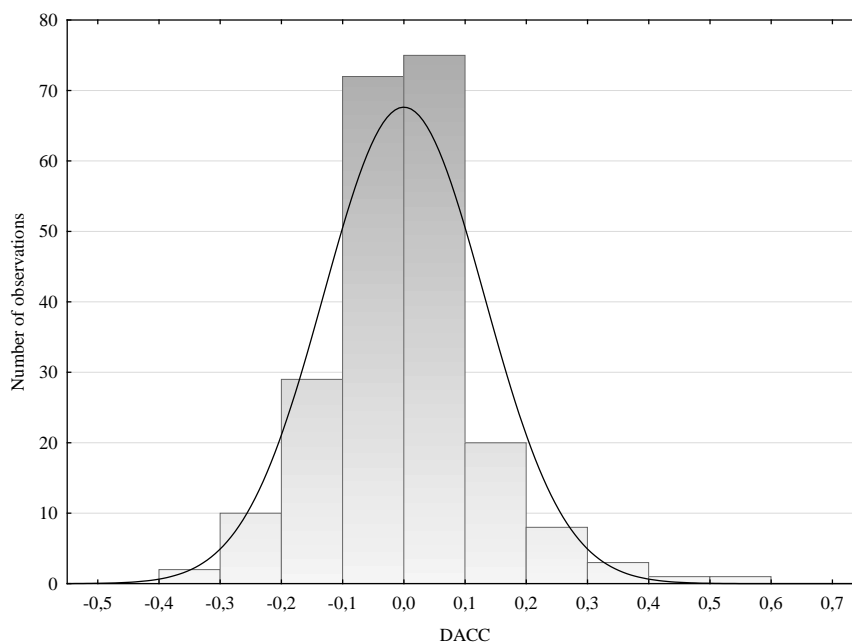
SALE is total sales. EAT is earnings after taxes. OCF is operating cash flow. ASSETS is total assets. DR is debt to total assets. ROA is earnings after taxes to total assets. AGE is firm age at the IPO. IPO (PRIMARY, SECONDARY) PROCEEDS is the number of total (primary, secondary) shares sold in IPO times the offer price [in million PLN]. PRIMARY (SECONDARY) PORTION is the ratio of new (existing) shares sold in the IPO relative to the total number of shares pre-IPO.

Source: own study.

The information in Table 2 indicates that the size of the primary and secondary portion as well as corresponding proceeds are significantly different between PE-backed IPOs and the matched sample but the difference in the total amount of money collected is statistically insignificant.

To analyze whether the presence of a PE fund among the company's shareholders affects the quality of financial reporting of companies conducting IPO, which is expressed in earnings management, first, I estimate the value of discretionary accruals for all 221 IPOs qualified for the study sample. Figure 1 shows the results of these calculations.

Figure 1. Distribution of discretionary accruals for the total sample of 221 IPOs



Source: own study.

The scale of earnings management is diversified among the whole sample although it is dominated by companies in which the ratio of discretionary accruals scaled to total assets

varies between -0.1 and 0.1, i.e. a double peak is observed in the histogram. Then one can see the small advantage of companies deliberately reporting lower financial results, i.e. with negative discretionary accruals.

Next, I turn my attention strictly to the issue of earnings management in PE-backed companies and the matched sample. Table 3 presents descriptive statistics and results of the analysis.

Table 3. Summary statistics of discretionary accruals for PE-backed IPOs and matched sample

| Specification | Mean | Std. dev. | Lower quartile | Median | Upper quartile | Min | Max |
|--|--------|-----------|----------------|---------|----------------|---------|---------|
| PE sample | 0,0129 | 0,1177 | -0,0503 | 0,0094 | 0,0474 | -0,2871 | 0,3525 |
| Matched sample | 0,0218 | 0,1605 | -0,0976 | -0,0025 | 0,0967 | -0,2266 | 0,5974 |
| t-statistic, t-test of difference in means | | | | | | | 0,2754 |
| p-value from a t-test statistic | | | | | | | 0,7838 |
| z-statistic, Wilcoxon rank-sum test of difference in medians | | | | | | | 0,8152 |
| p-value from a Wilcoxon rank-sum test statistic | | | | | | | -0,2337 |

Source: own study.

In the PE-backed IPOs the average discretionary accruals scaled to total assets amount to 0.0129 and it is slightly smaller as compared to the matched sample in which the mean is at the level of 0.0218. In turn, the median of discretionary accruals is lower in the matched sample and amounts to -0.0025 in comparison to PE-backed companies with the median of 0.0094. However, both the t-test and the Wilcoxon test show the lack of the statistical significance of the observed differences. In the matched sample I observe greater differentiation of the analyzed category. In this group of IPOs DACC varies between -0.2266 and 0.5974 and from -0.0976 in the first quartile to 0.0967 in the third quartile. Overall, my findings do not indicate that the presence of PE funds among the shareholders of the company in the period preceding the process of going public has a significant impact on the scale of earnings management prior to the IPO and are not in line with the hypothesis I posit.

Conclusions

In this paper I investigate the issue of the PE funds' impact on the quality of financial reporting in the companies that go public and I draw the following main conclusion. In contrast to previous studies I do not provide evidence that companies using PE financing have less aggressive financial reporting. The analysis shows that the difference between the level of discretionary accruals in PE-backed and other companies, when controlling for the market value and book-to-market ratio, is statistically insignificant.

However, there are several limitations to the results presented in this study. First, the Polish private equity market is relatively small in comparison to the developed markets of Western Europe and the US, so the study sample size is considerably reduced. Then, I analyze earning management using only the discretionary accruals. The issue of the real earnings management activities used by managers of PE-backed and other companies in the period preceding IPO is an interesting research area.

References

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

- Darrrough, M., & Rangan, S. (2005). Do Insiders Manipulate Earnings When They Sell Their Shares in an Initial Public Offering? *Journal of Accounting Research*, 43(1). DOI:10.1111/j.1475-679x.2004.00161.x.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting review*, 70(2).
- DuCharme, L. L., Malatesta, P. H., & Sefcik, S. E. (2004). Earnings management, stock issues, and shareholder lawsuits. *Journal of Financial Economics*, 71(1). DOI:10.1016/s0304-405x(03)00182-x.
- Ecker, F., Francis, J., Olsson, P., & Schipper, K. (2013). Estimation sample selection for discretionary accruals models. *Journal of Accounting and Economics*, 56(2-3). DOI:10.1016/j.jacceco.2013.07.001.
- Grabiński K. (2016). Wpływ kryzysu gospodarczego na aktywne kształtowanie wyniku finansowego w europejskich spółkach giełdowych. *Zeszyty Teoretyczne Rachunkowości*, 87(143).
- Healy, P. M., & Wahlen, J. M. (1999). A Review of the Earnings Management Literature and Its Implications for Standard Setting. *Accounting Horizons*, 13(4). DOI:10.2308/acch.1999.13.4.365.
- Hochberg, Y. V. (2012). Venture Capital and Corporate Governance in the Newly Public Firm. *Review of Finance*, 16(2). doi:10.1093/rof/rfr035
- Hu, Z., Cai, W., Han, J., & Sa, R. (2012). An empirical study of the effect of venture capital participation on the accounting information quality of IPO firms. *China Journal of Accounting Research*, 5(3). doi:10.1016/j.cjar.2012.08.004
- Jones, J. J. (1991). Earnings Management During Import Relief Investigations. *Journal of Accounting Research*, 29(2). DOI:10.2307/2491047.
- Kaplan, S. N., Martel, F., & Strömberg, P. (2007). How do legal differences and experience affect financial contracts? *Journal of Financial Intermediation*, 16(3). doi:10.1016/j.jfi.2007.03.005
- Larcker, D. F., & Richardson, S. A. (2004). Fees Paid to Audit Firms, Accrual Choices, and Corporate Governance. *Journal of Accounting Research*, 42(3). DOI:10.1111/j.1475-679x.2004.t01-1-00143.x.
- Liu, X. (2013). Venture capitalists and portfolio companies' real activities manipulation. *Review of Quantitative Finance and Accounting*, 43(1). doi:10.1007/s11156-013-0369-5
- Morsfield, S. G., & Tan, C. E. (2006). Do Venture Capitalists Influence the Decision to Manage Earnings in Initial Public Offerings? *The Accounting Review*, 81(5). doi:10.2308/accr.2006.81.5.1119
- Nahata, R. (2008). Venture capital reputation and investment performance. *Journal of Financial Economics*, 90(2). DOI:10.1016/j.jfineco.2007.11.008.
- Schipper, K. 1989. Commentary on earnings management. *Accounting Horizons* (December).
- Subramanyam, K. (1996). The pricing of discretionary accruals. *Journal of Accounting and Economics*, 22(1-3). doi:10.1016/s0165-4101(96)00434-x
- Teoh, S. H., Welch, I., & Wong, T. (1998). Earnings Management and the Long-Run Market Performance of Initial Public Offerings. *The Journal of Finance*, 53(6). DOI:10.1111/0022-1082.00079.
- Wójtowicz P. (2015), Earnings management to achieve positive earnings surprises in case of medium size companies listed in Poland, *International Journal of Accounting and Economics Studies*, 3(2). DOI:10.14419/ijaes.v3i2.5258
- Wongsunwai, W. (2012). The Effect of External Monitoring on Accrual-Based and Real Earnings Management: Evidence from Venture-Backed Initial Public Offerings. *Contemporary Accounting Research*, 30(1). doi:10.1111/j.1911-3846.2011.01155.x