Earnings Management and the Long-Term Market Performance of Initial Public Offerings in Poland

Joanna Lizińska and Leszek Czapiewski

1 Introduction

Reported earnings are the kind of fundamental information about a company that is regarded as very important both for researchers as well as practitioners. Market reaction to announcements connected with a firm's profitability is usually strong (e.g. Hotchkiss and Strickland 2003; Francis et al. 2002; Bernard and Thomas 1989).

Earnings are very closely related to company growth prospects and their predictive power for future market equity prices is supposed to be quite strong (Chan et al. 2001). However, the quality of reported earnings differs significantly across companies. Many studies for developed markets have concluded that companies often report earnings in excess of cash flow as a consequence of accruals or real activities.

Along with various stringent accounting rules, managers are allowed to use their judgement to some extent in reporting company activities. Regulators leave considerable room for managerial discretion to make financial statements more informative. But such discretion also enables managing for the moment and thus misleading some groups of stakeholders. Window-dressing practices seem to be especially significant around important corporate events when firms are strongly motivated to boost their earnings. One such milestone in the corporate lifecycle is going public. IPO companies usually have a short financial history and suffer from scarcity of information about the issuer's intrinsic value. Following this, key accounting prospectus numbers such as earnings have a relatively strong influence on IPO pricing. On the other hand, monitoring procedures for public companies seem to be more efficient, making aggressive earnings management more difficult.

IPO firms commonly face closer scrutiny of reputation during the first period on the aftermarket. Bearing this in mind, aggressive around-IPO earnings management

J. Lizińska (✉) · L. Czapiewski
Corporate Finance Department, Poznań University of Economics and Business, Poznań, Poland
e-mail: joanna.lizinska@ue.poznan.pl; leszek.czapiewski@ue.poznan.pl

A. Bem et al. (eds.), *Finance and Sustainability*, Springer Proceedings in Business and Economics, https://doi.org/10.1007/978-3-319-92228-7_11

resulting in earnings reversals could undermine post-IPO performance. What is more, boosting earnings in one period, drains possible sources of earnings management in the future and positive accruals must ultimately reverse, which usually lowers reported profits thereafter. Hence, the consequences of earnings management around initial public offerings of equity (IPOs) for the long-term market value of equity are not obvious. The study discusses the ability of accruals to predict long-term stock underperformance after IPO for Poland, as an example of an emerging market.

The study was financed by the National Science Centre, Poland as a research project (2015/19/D/HS4/01950). The rest of the paper is structured as follows. In the following section, previous literature is discussed. Then, the sample and research methods are described with the emphasis on earnings management proxies and long-term performance measures. Section 4 concentrates on the pervasiveness of earnings management around IPO as discretionary accruals are tested. Section 5 discusses the explanatory power of earnings management for the long-term underperformance of IPO companies. The last section states the conclusions.

2 Literature Review

Previous studies for developed markets report that managers opportunistically manage earnings to influence IPO pricing (Friedlan 1994; Teoh et al. 1998a, b). On the other hand, Burgstahler et al. (2006) report that private firms exhibit higher levels of earnings management. Armstrong et al. (2015) find that discretionary accruals in the IPO year are not statistically different from zero. Ball and Shivakumar (2005 and 2008) and Venkataraman et al. (2004) argue that companies are supposed to report more conservatively around the IPO date because of better monitoring which increases the possibility of penalties for misreporting.

The discussion about the predictive power of accruals for returns is more general, not only connected with equity issuance. Sloan (1996) reported that companies with high accruals, experienced lower returns and underperformed companies with more conservative accruals. The discussion was then continued by Collins and Hribar (2000 and 2002), Xie (2001), Desai et al. (2004), and Francis et al. (2005).

Along with the discussion on earnings quality, the IPO long-term underperformance has been investigated. It appears to be an international phenomenon. It has been also well explored for Poland (Mizerka and Lizińska 2017; Lizińska and Czapiewski 2016). The explanation for the long-term underperformance is still discussed as started by Ritter (1991). One of the possible reasons of IPO underperformance in the aftermarket relates to earnings management by inflating accruals prior to the offer (Rangan 1998; Shivakumar 2000; Teoh et al. 1998a, b).

The relation between earning management and post-IPO equity returns was investigated for both initial (Teoh et al. 1998b) and seasoned equity offerings (Teoh et al. 1998c). Teoh et al. (1998a–c) reported a negative correlation between earnings management and post-issue equity performance. Fan (2007) reports that companies with low discretionary accruals at IPO have higher stock returns than aggressively managed earnings.

Armstrong et al. (2015) find no evidence for the relation between discretionary accruals (approximated by several measures) and post-IPO equity values, similarly to Ball and Shivakumar (2008). This was examined for emerging markets as well, e.g. Shen et al. (2014) examined the links between earnings management and Chinese IPO anomalies and find that firms with larger managed accruals tended to perform worse over a 3-year horizon.

Studies on earnings management by Polish companies without any connection to equity offerings include Gajdka (2012), Wyrobek and Stańczyk (2013), Wójtowicz (2010, 2015) and Piosik (2016). Only one piece of research for Poland relates earnings quality and initial public offerings but it concentrates on information risk (Truszkowski 2013).

The importance of country-specific factors emphasized by e.g. Burgstahler et al. (2006) and the contradictory results of prior studies on the relation between earnings quality around IPO and future stock returns makes empirical research for capital market in Poland interesting and results in a research contribution.

3 Sample and Methodology

The research sample involves equities listed on the Warsaw Stock Exchange (WSE), which is the main stock exchange in Poland. The data source was Ceduła, Notoria Serwis, the official site of the WSE (http://www.gpw.pl) and www.gpwinfostrefa.pl. The data allowed a comprehensive database with all the necessary data to be constructed, as the existing solutions did not have the satisfactory quality and comprehensiveness. The authors' own database covers financial statements and daily close prices with the necessary adjustments (dividends, splits and preemptive rights) for all WSE companies, also including delisted firms.

The sample encompassed non-financial initial public issues (IPOs) offered in the period 2000–2012 on the main Polish stock market. Only offerings completed by companies without a prior trading history on alternative markets were included. As some of the data were sometimes incomplete, IPOs with missing data were also excluded to fulfil the models' requirements. IPOs completed before 2000 were excluded as no reliable financial statements could be retrieved from the database, likewise equities offered after 2012 were omitted, as the aftermarket period was necessary to observe long-term performance. Market prices and financial statement data covered a longer period from 1998 to the middle of 2015 because of the models requirements.

Quality of earnings cannot usually be observed directly as firms do not boast about inflating earnings artificially. Earnings management proxies have to be involved instead. Companies use real activities manipulation and accrual-based techniques in managing earnings. We follow the earnings management definition of Healy and Wahlen (1999). Real activities manipulation is achieved by changing the execution of a given transaction. Accrual based management concerns presenting a given transaction in financial statements in a particular way (for definitions see e.g. Zang 2011, Cohen et al. 2008, Cohen and Zarowin 2010). Accruals are the difference between a

firm's accounting earnings and its cash flow. This paper presents the research results for the accrual-based approach surrounding IPO issues with a set of existing models. Following the literature, total accruals (*TACC*) were decomposed into discretionary and non-discretionary accruals (as in Jones 1991):

$$TACC_{it} = NDACC_{it} + DACC_{it}, \tag{1}$$

where: *NDACC*—non-discretionary ("normal") accruals; *DACC*—discretionary (abnormal) accruals.

The initial estimations of accruals proposed in the literature assumed that non-discretionary accruals are firm-specific and that the fluctuating level of total accruals is a result of the changing level of discretionary accruals (see DeAngelo 1986). Jones (1991) proposed a model that made it possible to check controlling for the changes in economic circumstances. She argued that the level of non-discretionary accruals can also vary over time. We apply the cross-sectional version of this model (see DeFond and Jiambalvo 1994; Subramanyam 1996; DuCharme et al. 2001) and non-discretionary accruals in the Jones model are as follows:

$$NDACC_{it}^{J} = \alpha_{i1}\left(\frac{1}{A_{i,t}}\right) + \alpha_{i2}\Delta REV_{i,t} + \alpha_{i3}PPE_{i,t} + \varepsilon_{i,t}, \tag{2}$$

where: *A*—total assets; ΔREV—change in revenues; *PPE*—gross property, plant and equipment; *t* all components are scaled by lagged assets.

The traditional Jones model may underestimate discretionary accruals if companies manage earnings by the time location of revenues. Hence, a modified estimation of accruals was proposed in an attempt to adjust for growth in credit sales and to reduce Type II errors. Non-discretionary accruals according to the modified Jones model are as in Dechow et al. (1995):

$$NDACC_{it}^{mJ} = \alpha_{i1}\left(\frac{1}{A_{i,t}}\right) + \alpha_{i2}(\Delta REV_{i,t} - \Delta REC_{i,t}) + \alpha_{i3}PPE_{i,t} + \varepsilon_{i,t}, \tag{3}$$

where: ΔREC—change in receivables; all components are scaled by lagged assets. The cross-sectional version of the modified Jones model was applied by i.a. Subramanyam (1996) or Guidry et al. (1999).

Another approach was proposed by Dechow and Dichev (2002) and modified by McNichols (2002). She argued that adding operating cash flow variables to the cross-sectional Dechow-Dichev regression significantly reduced measurement error. McNichols combines the determinants from both the Jones and the Dechow-Dichev models:

$$\begin{aligned} NDACC_{it}^{McN} = {} & \alpha_{i1}\left(\frac{1}{A_{i,t}}\right) + \alpha_{i2}CFO_{i,t-1} + \alpha_{i3}CFO_{i,t} + \alpha_{i4}CFO_{i,t+1} \\ & + \alpha_{i5}\Delta REV_{i,t} + \alpha_{i6}PPE_{i,t} + \varepsilon_{i,t} \end{aligned} \tag{4}$$

where: *CFO*—cash flow from operating activities; all components are scaled by lagged assets.

Some other studies also controlled for cash from operations in a different way to the McNichols model (see e.g. Rees et al. 1996; Hansen and Sarin 1996). As a result, we also incorporate operating cash flows in the variant proposed by Ball and Shivakumar (2005, 2006, and 2008) and estimate normal accruals as:

$$NDACC_{it}^{BS} = \alpha_{i1}\left(\frac{1}{A_{i,t}}\right) + \alpha_{i2}\Delta REV_{i,t} + \alpha_{i3}FAsset_{i,t} + \alpha_{i4}CFO_{i,t} + \alpha_{i5}DCFO_{i,t} + \alpha_{i6}CFO_{i,t} \cdot DCFO_{i,t} + \varepsilon_{i,t}, \quad (5)$$

where: *FAssets*—book value of fixed assets; *DCFO* takes the value 1 if $CFO < 0$; all components are scaled by lagged assets.

We run cross-sectional regressions for the four mentioned models for each of the industry groups on the Warsaw Stock Exchange. In all of the models, α_{i1}, α_{i2}... are firm-specific parameters estimated according to the ordinary least square regression. We get a_{i1}, a_{i2}... as the estimates of α_{i1}, α_{i2}... according to each of the models. A minimum of five companies was required to run the industry regression for IPO i in year t and get estimates based on the cross-sectional version. Besides, each IPO company was excluded from the industry group in regressions for other companies in that sector during the 2-year period after going public.

Abnormal (discretionary) accruals ($DACC_{i,t}$) for IPO firm i in year t were calculated as the difference between the real (actual) accruals and the estimated accruals ($NDACC_{i,t}$). Total real accruals were measured as the change in non-cash net working capital less the depreciation for company i in year t (as in Jones 1991 and Sloan 1996):

$$TACC_{it} = (\Delta CA_{it} - \Delta Cash_{it}) - \Delta CL_{it} - Depr_{it}, \quad (6)$$

where: *TACC*—total accruals for company; ΔCA—change in current assets, $\Delta Cash$—change in cash; ΔCL—change in current liabilities; *Depr*—depreciation; the change (Δ) is computed between time t and $t-1$. Lagged assets are used as the deflator to reduce heteroscedasticity in residuals for accruals and their components (Ronen and Yaari 2008).

Earnings management was approximated with discretionary accruals around the time of initial public offering, mainly for the year of going public (Y_0), for the two preceding years ($Y-2$ and $Y-1$) and for the consecutive years ($Y+1$ and $Y+2$).

Next, buy-and-hold abnormal returns (BHARs) were calculated to observe long-term IPO price behavior up to the fifth year after the offering and to simulate a real investing situation with buying a security at IPO date, holding it for a specified period of time and selling it afterwards.

The buy-and-hold return for IPO i for selected event windows ($BHR_{i,T}$) was defined as:

$$BHR_{i,T} = \prod_{t=1}^{T}(1 + R_{i,t}) - 1 \quad (7)$$

where R was the daily return in trading day t, and T was the trading session number with 1 assigned to the first day after going public. A year was assumed to have 252 trading days. The benchmark buy-and-hold return for IPO i ($BHR^{B}_{i,T}$) was defined as:

$$BHR^{WIG}_{i,T} = \prod_{t=1}^{T} \left(1 + R^{B}_{i,t}\right) - 1 \tag{8}$$

where $R^{B}_{i,t}$ was the daily return on the benchmark portfolio in trading day t for IPO i. The benchmark was the main market index for the Warsaw Stock Exchange, mainly the WIG index.

The buy-and-hold abnormal return for each IPO i and the selected event window ($BHAR_{i,T}$) was given by:

$$BHAR_{i,T} = BHR_{i,T} - BHR^{WIG}_{i,T} \tag{9}$$

The outliers of BHARs and DACCs were eliminated to minimize the potentially detrimental effect of extreme values. Outliers were found with the interquartile range (IQR). The lower bound was set as $Q_1 - 1.5 \cdot IQR$ and the upper bound as $Q_3 + 1.5 \cdot IQR$. The Cramér von Mises test was used to test the distribution normality of discretionary accruals and abnormal returns. Both a parametric and non-parametric tests were employed (Student t-test and Wilcoxon signed-rank test).

We then checked whether discretionary accruals were good predictors of subsequent equity performance in the aftermarket. IPO firms were divided into two groups based on IPO-year discretionary accruals. The subsample with DACCs below or equal to the median value of discretionary accruals was called "conservative" in comparison to the subsample with DACCs above the median value that was supposed to manage earnings "aggressively". Then, buy-and-hold abnormal returns were compared for both groups.

4 Earnings Management

Our findings suggest that accruals around initial public offerings in Poland were systematically opportunistic. As managers inflated earnings above cash flow around IPO, accruals rose. We find across multiple models that discretionary accruals in the IPO year were statistically different from zero.

The estimates of discretionary accruals are detailed in Table 1. The median values are presented on Chart 1. Positive and relatively high issue-year discretionary accruals indicate that earnings were much higher than cash flows. The level of abnormal accruals in the year before IPO was also relatively less negative in comparison to those reported 2 years before first public equity offering. It could suggest

Table 1 Earnings manipulation around IPO

	t-2	t-1	t0	t + 1	t + 2	t + 3	t + 4	t + 5
Panel A: Jones model								
Mean [%]	−0.0814	−0.0575	0.0595	−0.0274	−0.0298	−0.0186	−0.0123	−0.0138
Significance	*	*	*	*	*	*	*	*
Median [%]	−0.0380	−0.0193	0.0526	−0.0236	−0.0271	−0.0218	−0.0108	−0.0095
Significance	*	*	*	*	*	*	*	*
Normality	*	*						
% > 0	36	42	63	42	39	43	44	45
N	164	187	188	201	201	183	165	155
Panel B: Modified Jones model								
Mean [%]	−0.0728	−0.0371	0.0611	−0.0236	−0.0265	−0.0206	−0.0135	−0.0163
Significance	*	*	*	*	*	*	*	*
Median [%]	−0.0341	−0.0203	0.0584	−0.0159	−0.0312	−0.0199	−0.0134	−0.0099
Significance	*	*	*	*	*	*	*	*
Normality	*	*	*			*		*
% > 0	40	43	66	42	40	42	41	43
N	161	183	186	201	199	182	163	154
Panel C: McNichols model								
Mean [%]	−0.0628	−0.0258	0.0624	−0.0275	−0.0175	−0.0151	−0.0246	−0.0290
Significance	*		*	*	*		*	*
Median [%]	−0.0405	−0.0182	0.0461	−0.0156	−0.0171	−0.0165	−0.0212	−0.0194
Significance	*		*	*	*		*	*
Normality	*		*				*	
% > 0	42	45	65	48	42	46	42	43
N	72	177	178	197	180	166	149	138

(continued)

Table 1 (continued)

	t-2	t-1	t0	t + 1	t + 2	t + 3	t + 4	t + 5
Panel D: Ball-Shivakumar model								
Mean [%]	0.0099	0.0285	0.0734	−0.0086	−0.0158	−0.0195	−0.0029	−0.0057
Significance		*	*			*		
Median [%]	0.0198	0.0237	0.0854	0.0086	−0.0053	−0.0105	0.0013	−0.0041
Significance		*	*			*		
Normality	*		*	*	*		*	
% > 0	56	56	67	55	48	47	50	49
N	152	179	184	200	195	182	167	148

Note: Significance at a 10% (*) level

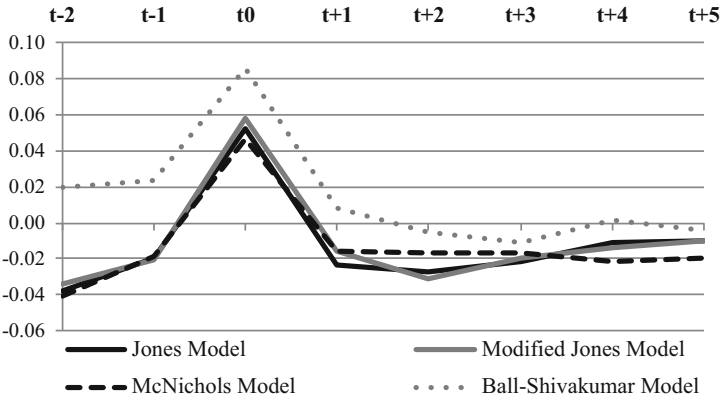

Chart 1 Earnings manipulation around IPO—comparison of models

that some companies inflated earnings much earlier. Positive accruals were followed by negative abnormal accruals in subsequent years.

The results are coherent with those of Friedlan (1994), Teoh et al. (1998a, b) that managers use accruals to inflate earnings around equity offerings. They are not in line with Armstrong et al. (2015) who find that abnormal accruals in the IPO year are not statistically different from zero and Ball and Shivakumar (2008) nor with Venkataraman et al. (2004) who argue that IPO firms report more conservatively.

5 Long-Term Market Performance

IPO companies were divided according to median value of abnormal accruals in the IPO year. Those with relatively low discretionary accruals are supposed to represent companies that didn't manage earnings or at least managed earnings more conservatively. Companies with high discretionary accruals are perceived as those that managed earnings more aggressively and boosted their accounting profits. Abnormal long-term market performance of IPO firms was observed for both groups.

Detailed results are given in Table 2. Chart 2 plots median values of discretionary accruals for both subsamples. Firms with higher IPO-year discretionary accruals earned more negative abnormal long-term returns. However, the difference between both subsamples was not immense. The research results for Poland may be interpreted as supporting the thesis about the predictive power of discretionary accruals around IPO for stock returns in the aftermarket.

Table 2 Long-term market performance according to earnings manipulation propensity

	Y1		Y3		Y5	
	Conservative	Aggressive	Conservative	Aggressive	Conservative	Aggressive
Panel A: Jones model						
Mean [%]	−11.29	−9.46	−26.77	−30.47	−37.85	−41.33
Significance	*	*	*	*	*	*
Median [%]	−14.26	−9.36	−27.79	−36.11	−50.04	−52.87
Significance	*	*	*	*	*	*
Normality	*			*	*	*
N	85	92	83	85	67	67
Panel B: Modified Jones model						
Mean [%]	−10.20	−10.92	−28.83	−31.09	−41.27	−39.52
Significance	*	*	*	*	*	*
Median [%]	−13.85	−9.85	−30.57	−36.40	−55.73	−51.87
Significance	*	*	*	*	*	*
Normality	*			*	*	*
N	86	90	82	84	65	69
Panel C: McNichols model						
Mean [%]	−10.20	−8.96	−26.29	−28.46	−34.21	−44.02
Significance	*	*	*	*	*	*
Median [%]	−14.50	−9.01	−28.55	−31.08	−45.77	−54.28
Significance	*	*	*	*	*	*
Normality	*			*	*	*
N	82	86	79	82	67	59

Panel D: Ball-Shivakumar model						
Mean [%]	−10.13	−9.67	−29.42	−26.53	−37.48	−42.59
Significance	*	*	*	*	*	*
Median [%]	−12.41	−9.93	−31.46	−29.04	−50.69	−52.13
Significance	*	*	*	*	*	*
Normality				*	*	*
N	87	87	81	83	63	67

Note: Significance at a 10% (*) level

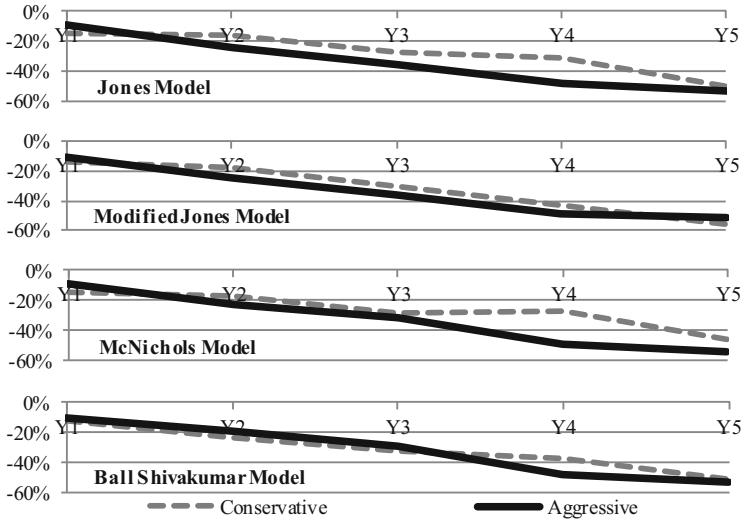

Chart 2 Long-term market performance according to earnings quality—comparison of models

6 Conclusion

The research focused on earnings that attract very intense attention among capital market participants. Quality of earnings has also been one of the most hotly discussed problems in the contemporary research on finance and accounting. IPO firms have a strong motivation to inflate earnings when they go public. They usually have short financial history and suffer from scarcity of information about financial fundamentals. In consequence, key accounting prospectus numbers such as earnings seem to have a strong influence on the IPO market pricing. On the other hand, public firms have to meet higher reporting standards and they face better monitoring and closer scrutiny pf reputation during the first period in the aftermarket. These are the arguments against boosting earnings artificially and attempting to mislead investors around the time of going public.

The research results reported for the Polish capital market suggest that firms engaged in more aggressive income-increasing earnings management in the IPO year and some companies inflated earnings with accruals even for the year prior to going public. IPO companies that managed earnings more aggressively reported more negative abnormal long-term returns according to the buy-and-hold strategy. However, the difference between abnormal returns between firms with lower and higher discretionary accruals was not immense in many investment periods.

The research results for Poland may be interpreted as supporting the thesis about the predictive power of discretionary accruals around IPO for stock returns in the aftermarket. However, the results on the market consequences of earnings management for the Polish capital market are of a preliminary nature and need to be continued. One of the future research directions may be checking if the differences

between long-term abnormal accruals are IPO-specific in Poland or whether it is an expression of a broader market anomaly and a more general question about the predictive power of earnings quality and cash flow for future equity prices.

References

Armstrong C, Foster G, Taylor D (2015) Abnormal accruals in newly public companies: opportunistic misreporting or economic activity? Manag Sci 62(5):1316–1338

Ball R, Shivakumar L (2005) Earnings quality in UK private firms: comparative loss recognition timeliness. J Account Econ 39:83–128

Ball R, Shivakumar L (2006) The role of accruals in asymmetrically timely gain and loss recognition. J Account Res 44(2):207–242

Ball R, Shivakumar L (2008) Earnings quality at initial public offerings. J Account Econ 45(2): 324–349

Bernard VL, Thomas JK (1989) Post-earnings-announcement drift: delayed price response or risk premium? J Account Res 27:1–36

Burgstahler DC, Hail L, Leuz C (2006) The importance of reporting incentives: earnings management in European private and public firms. Account Rev 81(5):983–1016

Chan K, Chan LK, Jegadeesh N, Lakonishok J (2001) Earnings quality and stock returns. (No. w8308). National Bureau of Economic Research. J Bus 79(3):1041–1082

Cohen DA, Dey A, Lys TZ (2008) Real and accrual-based earnings management in the pre-and post-Sarbanes-Oxley periods. Account Rev 83(3):757–787

Cohen DA, Zarowin P (2010) Accrual-based and real earnings management activities around seasoned equity offerings. J Account Econ 50(1):2–19

Collins DW, Hribar P (2000) Earnings-based and accrual-based market anomalies: one effect or two? J Account Econ 29:101–123

Collins DW, Hribar P (2002) Errors in estimating accruals: implications for empirical research. J Account Res 40:105–134

DeAngelo LE (1986) Accounting numbers as market valuation substitutes: a study of management buyouts of public stockholders. Account Rev 61:400–420

Dechow PM, Dichev ID (2002) The quality of accruals and earnings: the role of accrual estimation errors. Account Rev 77(s-1):35–59

Dechow PM, Sloan RG, Sweeney AP (1995) Detecting earnings management. Account Rev 70: 193–225

DeFond ML, Jiambalvo J (1994) Debt covenant violation and manipulation of accruals. J Account Econ 17(1):145–176

Desai H, Rajgopal S, Venkatachalam M (2004) Value-glamour and accruals mispricing: one anomaly or two? Account Rev 79(2):355–385

DuCharme LL, Malatesta PH, Sefcik SE (2001) Earnings management: IPO valuation and subsequent performance. J Account Audit Finance 16(4):369–396

Fan Q (2007) Earnings management and ownership retention for initial public offering firms: theory and evidence. Account Rev 82:27–64

Francis J, LaFond R, Olsson P, Schipper K (2005) The market pricing of accruals quality. J Account Econ 39(2):295–327

Francis J, Schipper K, Vincent L (2002) Expanded disclosures and the increased usefulness of earnings announcements. Account Rev 77(3):515–546

Friedlan JM (1994) Accounting choices of issuers of initial public offerings. Contemp Account Res 11(1):1–31

Gajdka J (2012) Kształtowanie zysków w przedsiębiorstwach w kontekście kryzysu finansowego. Zeszyty Naukowe Uniwersytetu Szczecińskiego, Finanse Rynki finansowe Ubezpieczenia, vol 51, pp 303–311

Guidry F, Leone A, Rock S (1999) Earnings-based bonus plans and earnings management by business-unit managers. J Account Econ 26:113–142
Hansen R, Sarin S (1996) Is honesty the best policy? an examination of security analyst behavior around seasoned equity offerings. Department of Finance, Insurance and Business Law, Pamplin College of Business, Virginia Tech
Healy PM, Wahlen JM (1999) A review of the earnings management literature and its implications for standard setting. Account Horiz 13(4):365–383
Hotchkiss ES, Strickland D (2003) Does shareholder composition matter? Evidence from the market reaction to corporate earnings announcements. J Financ 58(4):1469–1498
Jones JJ (1991) Earnings management during import relief investigations. J Account Res 29: 193–228
Lizińska J, Czapiewski L (2016) Is the IPO anomaly in Poland only apparent or real? In: Dudycz T, Osbert-Pociecha G, Brycz B (eds) The essence and measurement of organizational efficiency. Springer, Cham, pp 175–194
McNichols MF (2002) Discussion of the quality of accruals and earnings: the role of accrual estimation errors. Account Rev 77:61–69
Mizerka J, Lizińska J (eds) (2017) Pierwsze oferty publiczne w Polsce i na świecie. Kontrowersje wokół anomalii rynkowych. CeDeWu, Warszawa
Piosik A (2016) Kształtowanie wyniku finansowego przez podmioty sprawozdawcze w Polsce: diagnoza dobrej i złej praktyki w rachunkowości. Prace Naukowe/Uniwersytet Ekonomiczny w Katowicach
Rangan S (1998) Earnings management and the performance of seasoned equity offerings. J Financ Econ 50(1):101–122
Rees L, Gill S, Gore R (1996) Studies on recognition, measurement, and disclosure issues. J Account Res 34:157–169
Ritter JR (1991) The long-run performance of initial public offerings. J Financ 46(1):3–27
Ronen J, Yaari V (2008) Earnings management. Springer, New York
Shen Z, Coakley J, Instefjord N (2014) Earnings management and IPO anomalies in China. Rev Quant Finan Acc 42(1):69–93
Shivakumar L (2000) Do firms mislead investors by overstating earning before seasoned equity offerings? J Account Econ 29(3):339–371
Sloan R (1996) Do stock prices fully reflect information in accruals and cash flows about future earnings? Account Rev 71(3):289–315
Subramanyam KR (1996) The pricing of discretionary accruals. J Account Econ 22(1):249–281
Teoh S, Welch I, Wong TJ (1998a) Earnings management and the subsequent market performance of initial public offerings. J Financ 53:1935–1974
Teoh SH, Welch I, Wong TJ (1998b) Earnings management and the long-run underperformance of initial public offerings. J Financ 53:1935–1974
Teoh SH, Welch I, Wong TJ (1998c) Earnings management and the underperformance of seasoned equity offerings. J Financ Econ 50:63–99
Truszkowski J (2013) Wpływ ryzyka informacyjnego na długookresowe stopy zwrotu z akcji po pierwszych publicznych emisjach, PhD thesis at the Poznan University of Business and Economics
Venkataraman R, Weber J, Willenborg M (2004) What if Auditing was Not'Low-Margin Business'? Auditors and Their IPO Clients as a Natural Experiment. MIT Sloan Working Paper No. 4508-04
Wójtowicz P (2010) Wiarygodność sprawozdań finansowych wobec aktywnego kształtowania wyniku finansowego. Wydawnictwo Uniwersytetu Ekonomicznego w Krakowie, Kraków
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):141–147
Wyrobek JM, Stańczyk Z (2013) Kreowanie Obrazu Przedsiębiorstw w Polskiej Rachunkowości. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2290587
Xie H (2001) The mispricing of abnormal accruals. Account Rev 76:357–373
Zang AY (2011) Evidence on the trade-off between real activities manipulation and accrual-based earnings management. Account Rev 87(2):675–703