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#### Article

# The impact of earnings management on the value of companies: The role of ownership structure

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### The Impact of Earnings Management on the Value of Companies – The Role of Ownership Structure

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#### ABSTRACT

The aim of our paper is to test whether there is a relationship between earnings management and the market value of companies with different ownership structures. Additionally, we examined whether ownership control determines earnings management. Our study was conducted on 632 non-financial companies listed on the Warsaw Stock Exchange between 2013 and 2020. We have assessed panel data models showing that there is no relationship between earnings management and company value. However, there is a negative and statistically significant relationship for companies without a majority direct investor. We also showed that, despite the different impact of manipulation on company value, there are no statistically significant differences in earnings management between companies with different ownership structures. The originality of our study lies in conducting an analysis of earnings management taking into account the degree of ownership control.

#### JEL Classification: G10, G30, M42

Keywords: earnings management, M-score, market value, corporate finance.

#### INTRODUCTION

Financial statements are the primary source of information on the financial standing of companies. They are used by investors to make decisions on the capital market. There is therefore a temptation for managers to use earnings management (Kukreja et al., 2020). The key determinant of earnings management is stock market pressure (Dechow & Skinner, 2000). There is solid evidence that managers manipulate earnings to meet financial analysts' expectations

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(Burgstahler & Dichev, 1997; Degeorge, Patel, & Zeckhauser, 1999) because negative earnings surprises lead to substantial negative price reactions, especially for growth firms (Skinner & Sloan, 2002). Chu et al. (2019) suggest that the pressure to maintain a reputation for beating analysts' expectations can encourage aggressive accounting and, ultimately, earnings manipulation. There is no clear answer as to whether earnings management has a positive or negative impact on the market valuation of companies. Magrath and Weld (2002), Yaping (2006), and Jiraporn et al. (2008) find that earnings management benefits the firm. The rationale behind this point of view is that earnings management reduces the volatility of earnings, which in turn, will lower the level of firm risks perceived by investors and increase the value of the firm. In this way, earnings management is a method of income smoothing. On the other hand, Beneish et al. (2013) provide empirical evidence that companies with a higher probability of accounting fraud earn lower returns on every decile portfolio sorted by size, book-to-market, momentum, accruals, and short interest. The explanation for this may be that fraudulent financial reporting imposes huge costs on financial markets. These accounting misrepresentations increase transaction costs by eroding investor confidence in the integrity of the capital markets. Interesting conclusions regarding earnings management are provided by the results of a study by Kałdoński & Jewartowski (2017) conducted on 356 non-financial companies listed on the Warsaw Stock Exchange in the period 2005-2015. These researchers indicate, based on Jensen's (2005) hypothesis, that companies whose stocks are overvalued have a greater tendency to manage earnings. Among the factors influencing the use of earnings management, great attention is paid to the ownership structure (Habib et al., 2022). Some studies provide evidence for a negative and significant impact of institutional investors on earnings management (Susanto et al., 2021). Other studies indicate that the presence of large investors favors earnings management (Dong et al., 2020). Kałdoński et al. (2020) note that the link between shareholder structure and earnings management is not clear-cut. However, institutional investors holding stable equity stakes play an important monitoring role in reducing real earnings management by managers pressured by capital market forces to 'meet or beat' earnings targets (Kałdoński et al., 2020).

Therefore, the aim of our paper is to answer the question of whether there is a relationship between shareholder structure and earnings management. We also test whether the relationship between earnings management and the market value of a company depends on the ownership structure. To achieve this objective, two research hypotheses were formulated. The first assumes that there is a negative relationship between earnings management and market value. The second one states that shareholding structure determines earnings management.

Our study covers non-financial companies listed on the Warsaw Stock Exchange (WSE). In the study, we used data for the years 2013–2020, which were sourced from the BvD ORBIS database. The original sample included 632 companies.

#### 2. LITERATURE REVIEW

Earnings management essentially consists in the improvement of reporting data (Dalnial et al., 2014), which is reflected in the overstatement of assets, sales, and profits or the understatement of liabilities, expenses, or losses (Charalambos, 2002). Manipulation within financial statements is not necessarily related to accounting fraud. Fraud involves deliberate misrepresentation or omission of values or information in the financial statements, i.e. illegal actions. In the case of practices the essence of which is not a violation of accounting standards, but actions based on principles derived from accounting standards to conceal the economic content of the actual results, one can speak of earnings management (Rezaee, 2005). The level of earnings management in Poland compared to other countries is high, as is evident from both Kliestik et al.'s (2021) study

for the V4 group of countries (Poland, Slovakia, Czechia, Hungary) and He et al.'s (2017) results for 29 developed countries and emerging markets.

Managers manipulate revenues using 'accounting choices' that are reflected in discretionary (unexpected) accruals that typically inflate current earnings without affecting current cash flows (changing the depreciation rate of assets, delaying asset write-offs, or (under)provisioning for bad debt expenses may underlie non-cash income-increasing/decreasing strategies). This form of manipulation is known as accrual-based earnings management. They also can make real 'operational decisions' (involving cuts in R&D spending, price discounts accelerating sales, changes in credit policy, overproduction decreasing the cost of goods sold) that typically affect both earnings and cash flows. This practice is known as real earnings management (Kałdoński et al., 2020).

According to many researchers (Badertscher, 2011; Cohen & Zarowin, 2010; Roychowdhury, 2006; Schipper, 1989), real earnings management is more value destroying than the accrualbased earnings management. Most researchers agree that real earnings management can destroy a company's long-term ability to generate earnings because it is a departure from optimal operational decisions (Badertscher, 2011; Cohen & Zarowin, 2010; Roychowdhury, 2006; Sakaki et al., 2017). Badertscher (2011) analyzes the US overvalued firms' choices of different earnings management types (mechanisms). He presents evidence that the longer the firm is overvalued, the greater is the amount of total earnings management, which supports Jensen's theory (Jensen, 2005). Jensen (2005) predicts that equity overvaluation could induce managers to engage in activities that can sustain the inflated stock price in the short run but can destroy shareholder value in the long run. Studies conducted before Jensen's also support his theory, though indirectly, at least in terms of the pressure that managers are under when trying to meet (or beat) capital market participants' expectations reflected in analysts' forecasts (Kałdoński & Jewartowski, 2017). Liao (2014) has shown that stock crash is often preceded by earnings management due to overvaluation of company stock.

There is an ongoing debate on whether earnings management affects long-term operating performance and firm value, but the majority of academics treat it mostly as detrimental because it helps managers obtain some private gains at the cost of shareholders (Schipper, 1989). On the other hand, earnings management can be valuable when it conveys forward-looking, value-relevant information, by removing some of the noise in a truth-telling report of short-term earnings (Ronen & Yaari, 2008). Research results (Shan, 2015) show that the negative impact of value relevance for the companies engaged in earnings management is greater than for the companies without earnings management. The research results reported for the Polish capital market suggest that the difference between abnormal returns between firms with lower and higher discretionary accruals was not immense in many investment periods (Lizińska & Czapiewski, 2018).

Considering the results of this research, we want to demonstrate what is the relationship between earnings management and the value of companies listed on the WSE. In accordance with previous research, we formulate the following hypothesis: there is a negative relationship between earnings management and company value.

Among the factors influencing the use of earnings management, a crucial role is played by the ownership structure (Habib et al., 2022). Kałdoński and Jewartowski (2017) provide consistent evidence that institutional shareholders holding a large amount of stock mitigate real earnings management behavior, which suggests that these institutions are interested in long-term performance and act as a monitor. While the desire to attract external financing at a low cost is an important motivator for earnings manipulation (Dechow et al., 1996), Beneish (1999) argued that the cost of external financing is a weaker incentive to manage earnings than the managers' desire to sell their equity at higher prices. A study (Campa, 2019) conducted on 6,407 French non-financial companies for the period 2009–2016 shows that the stimulus for earnings management is the deterioration of the financial situation of companies, with these practices being more prevalent among listed companies than among non-listed entities.

Darmawan et al. (2019) showed for Indonesia Stock Exchange during the period of 2013 to 2017 that accrual earnings management measured by discretionary accruals did not affect the value of the firm. Real earnings management was found to have a negative effect on firm value. Abbas and Usman (2019) investigated the behavior of earnings management for Pakistani non-financial listed firms for the period of 15 years for 2003–2017 and found a positive relation between aspects of real and accrual earnings management and firm value variables.

In contrast, the results of research conducted for French companies for the period 2008–2012 indicate that earnings management has a negative impact on market quotations (Bouaziz et al., 2020). This means that the market value of companies decreases when managers undertake earnings management. These studies also reveal that the relationship between shareholder activism and earnings management has no effect on market performance. Thus, shareholder activism turns out to be an ineffective mechanism that does not change accounting choices, particularly in relation to earnings management. This research points to the inability of activist shareholders to define and implement strategies within their proposals, namely 'lack of monitoring competence'.

The value effect, operationalized as the ratio of market value to book value of shares, has a significant impact on a firm's earnings management practices. In the earnings management literature, it is used to operationalize a firm's growth potential. Research has shown that high-growth firms are more likely to engage in earnings management in order to maintain their profit stream (Lee et al., 2006). Research results for companies listed on the Bombay Stock Exchange exhibit lower (higher) returns for the upward (downward) real earnings management. Additionally, these results show a premium for the stocks that experienced downward earnings management (Bansal et al., 2021).

The scale and form of earnings management are determined by a number of factors, among which the ownership structure plays an important role (Habib et al., 2022). Susanto et al. (2021) show that the effect of institutional ownership on earnings management is significant and negative. The effect of managerial ownership on earnings management is not significant. This shows that institutional shareholders want the management to report the state of financial performance, especially earnings, in accordance with the actual situation. Institutional investors are considered more experienced and can perform a better analysis so that the management finds it difficult to manipulate them. Therefore, managers tend to avoid earnings management practices and higher quality earnings (Susanto et al., 2021). According to Piosik and Genge (2020), the presence of institutional investors diminishes accrual-based upward earnings management prior to mergers and acquisitions. On the other hand, Kałdoński et al. (2020) find no linkage between real earnings management and institutional ownership in Poland. However, a weak negative association is reported between earnings management and long-term institutional ownership. Additionally, the relationship between institutional ownership and real earnings management is negative for single-class shares (firms under intense capital market pressure), but insignificant for dual-class shares. Similarly, research by Grabiński and Wójtowicz (2021) based on Polish companies listed on WSE in 2015-2018 does not support negative linkage between institutional ownership and real earnings management.

Liu and Lu (2007) find a positive and significant association between the level of ownership concentration and earnings management practices. Therefore, the concentrated ownership reduces the quality of financial reporting. Therefore, firms with concentrated ownership have a tendency to manipulate accounting data (Wang, 2006).

D'Onza and Lamboglia (2011) examine the relationship between corporate governance characteristics and financial statement frauds in Italy using logit regression analysis. The research covers a period of 11 years (2001–2011) and shows a significant positive relationship between concentrated ownership and financial reporting fraud in the Italian context.

The empirical results of research on China's capital market indicate that institutions with high shareholding concentration give managers incentives to manipulate discretionary accruals for short-term profitability (Hsu & Wen, 2015). Dong et al. (2020) find that Chinese firms with more influential largest shareholders are more prone to real earnings management. Accordingly, our second hypothesis is that there is an influence of ownership structure on the scale of earnings manipulation.

In the face of the complexity of the earnings management strategies used and the various channels of their impact on the market valuation of companies, methods that allow the identification of such practices play an important role. Among them, the best known are: the aggregated accruals Jones model (Jones, 1991), the modified Jones model (Dechow et al., 1995), the earnings distribution model (Burgstahler & Dichev, 1997), specific accrual models (McNichols & Wilson, 1988) or the M-score model (Beneish et al., 2013). The most popular of these is the M-score model, which uses eight financial indicators to create a synthetic measure used to identify companies manipulating financial statements.

There are many studies indicating the effectiveness of using the M-score model to detect earnings management. For example, a study conducted in Italy by Paolone and Magazzino (2014) on 1,809 industrial companies listed on the Italian stock exchange between 2005 and 2012 shows that half of them have a high probability of earnings manipulation. Maniatis (2022), based on a study of companies making up the main index on the Athens Stock Exchange, found that nearly one-fifth of them manipulated earnings in 2017–2018. Mahama (2015) indicated that users of Enron's financial statements, using the Beneish model, could have detected warning signs indicating manipulation of that company's results earlier (as early as in the beginning of 1997). Anh and Linh (2016) indicate, based on a 2013–2014 study of 229 non-financial companies listed on the HOSE in Vietnam, that 48.4% of them are involved in earnings management. Similarly, Hołda (2020) points out, using the example of more than 30 companies listed on the Warsaw Stock Exchange, that the Beneish model accurately identifies manipulators among them. Golec (2019) noted that the correctness of the classification of companies as manipulators by using the Beneish model in the Polish capital market is higher than in the case of research conducted for the UK market. These results justify the use of M-score in Polish conditions.

#### 3. METHODS AND DATA

Two hypotheses are posed in the study. The first hypothesis assumes the existence of a negative relationship between manipulation of financial results and company value. To verify it, we used panel data models with two alternative measures quantifying enterprise value – i.e., the ratio of market value to book value of enterprise equity (P/BV) and Q-Tobin ratio, determined as the ratio of market capitalization to book value of enterprise assets – as explanatory variables. We used the M-score, a measure of financial performance manipulation, as the main explanatory variable of the model. The M-score was determined according to the following formula (Beneish 1999):

$$M = -4.84 + 0.920*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI - 0.172*SGAI + 4.679*TATA - 0.327*LEVI$$
(Eq. 1)

where:

Table 1

Patios of M score

- DSRI Days Sales in Receivables Index
- GMI Gross Margin Index
- AQI Asset Quality Index
- SGI Sales Growth Index
- DEPI Depreciation Index
- SGAI Sales, General, and Administrative Expenses Index
- LEVI Leverage Index
- TATA Total Accruals to Total Assets

The method of determining the indicators included in the M-score is shown in Table 1.

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Ratio	Formula
DSRI	Net receivables <sub>t</sub> / Sales <sub>t</sub> ) / (Net receivables <sub>t-1</sub> / Sales <sub>t-1</sub> )
GMI	$ [(Sales_{t-1} - Cost of goods sold_{t-1}) / Sales_{t-1}] / \\ [(Sales_t - Cost of goods sold_t) / Sales_t] $
AQI	$ [1 - (Current Assets_t + PP\&E_t)/Total Assets_t] / [1 - (Current Assets_{t-1} + PPE_{t-1}) / Total Assets_{t-1}] $
SGI	Sales <sub>t</sub> / Sales <sub>t-1</sub>
DEPI	$[Depreciation_{t-1} / (Depreciation_{t-1} + PP\&E_{t-1})] / \\ [Depreciation_t / (Depreciation_t + PP\&E_t)]$
SGAI	$(SGA Cost_t / Sales_t) / (SGA Cost_{t-1} / Sales_{t-1})$
LEVI	[(Current Liabilities <sub>t</sub> + Total Long Term Debt <sub>t</sub> ) / Total Assets <sub>t</sub> ] / [(Current Liabilities <sub>t-1</sub> + Total Long Term Debt <sub>t-1</sub> ) / Total Assets <sub>t-1</sub> ]
TATA	[(Change in Current Assets – Change in Cash) – (Change in Current Liabilities – Change in Current maturities of Long Term Debt – Change in Income Tax payable) – Depreciation and Amortization <sub>t</sub> ] / Total Assets <sub>t</sub> ]

Source: Beneish (1999)

Additional control variables of the estimated models are measures that characterize the financial condition of companies from Altman's four-factor model. These measures are:

- X<sub>1</sub>-Working Capital/Total Assets;
- X<sub>2</sub>-Retained Earnings/Total Assets;
- X<sub>3</sub>-Earnings before Interest and Taxes/Total Assets;
- X<sub>4</sub>- Equity Book Value/Total Liabilities

The study was carried out taking into account the division of enterprises according to the criterion of ownership concentration. The division of enterprises was based on Moody's *Independence Indicator*, which distinguishes five categories of entities denoted by the letters A, B, C, D, U. Letter A is attached to any company with known recorded shareholders none of which

having more than 25% of direct or total ownership. Letter B stands for any companies with known recorded shareholders none of which with an ownership percentage (direct, total or calculated total) over 50%, but having one or more shareholders with an ownership percentage above 25%. Letter C is used to denote entities with a recorded shareholder with a <u>total</u> or a calculated total ownership over 50%. Letter D is allocated to any company with a recorded shareholder with a direct ownership of over 50%. Branches, foreign companies and marine vessels are also attributed indicator 'D'. Letter U is used to indicate entities whose status is unknown. All entities with such status were omitted from the study.

The positive verification of the hypothesis that there is a varying effect of earnings management on the value of companies gives grounds to expect that the propensity of managements to manipulate financial results will vary between companies depending on the extent of ownership control. This gives grounds for formulating the second hypothesis according to which there is an influence of ownership structure on the scale of earnings manipulation. To verify this hypothesis, as before, the collective of the surveyed enterprises was divided using the criterion of ownership concentration. For each of the four groups of enterprises, the median M-score was determined. Subsequently, using the Kruskal-Wallis test, we tested the hypothesis of equality of M-score distributions in each of the four groups. This allowed us to answer the question of whether the degree of ownership concentration determines earnings management. For the research described above, we used data from companies listed on the WSE between 2013 and 2020, excluding financial companies. We obtained the data from the BvD ORBIS database. The original collection included 632 companies. However, due to data shortages, the number of companies was reduced. Descriptive statistics for the variables used are presented in Table 2.

Variable	Ν	Mean	S.D.	Min	0.25	Mdn	0.75	Max
Pbv	3748	3.74	30.00	-284.09	0.57	1.13	2.50	967.74
Q	4036	4.54	139.64	0	0.29	0.57	1.31	8803.89
М	2041	-1.59	8.52	-16.11	-3.08	-2.64	-2.11	90.69
x1	4091	0.17	0.22	-0.16	0.01	0.14	0.33	0.57
x2	4088	-0.18	0.64	-2.38	-0.18	0.02	0.11	0.42
x3	4092	0.01	0.24	-1.43	-0.01	0.04	0.09	0.61
x4	3899	7.23	23.40	0.03	0.55	1.28	3.61	181.28

 Table 2

 Descriptive statistics of the studied variables

Source: Author's calculation

#### 4. RESULTS

The first stage of the study served the purpose of answering the question of whether there is a relationship between the scale of earnings manipulation, as measured by the M-score, and the value of companies. In addition, we analyzed whether the strength of this relationship depends on the degree of ownership control. We conducted the study using two alternative variables describing enterprise value P/BV and Tobin's Q. In both cases, we used panel data models with random effects. Model selection was based on the use of the Hausman test. The estimation results for all the companies studied (ABCD) indicate that there is no statistically significant relationship between earnings management and the value of companies (Table 3). Our results show that the scale of earnings manipulation can negatively affect the value of companies as measured by the P/BV ratio – but this applies to companies with weak ownership control. This effect is strongest among companies in which no shareholder owns more than 25% of the shares (subsample A). It is also noticeable among entities that do not have a direct majority shareholder (subsamples AB, ABC).

Dep var.: P/BV	А	В	С	D	AB	ABC	ABCD
М	-0.3270**	-0.01179	-0.0080	-0.0400	-0.0712*	-0.0710*	-0.0580
	(0.1277)	(0.02958)	(0.0112)	(0.1135)	(0.0386)	(0.0377)	(0.0654)
x1	-28.6468***	-3.3957	-0.3732	-29.1532***	-14.1518***	-13.9592***	-6.5684
	(6.8443)	(2.1153)	(0.9342)	(7.2914)	(2.8777)	(2.7925)	(4.1983)
x2	-0.3359	-2.3497**	-0.062452	-5.8825	-1.3251	-1.3372	-0.1971
	(2.7442)	(0.9417)	(0.5398)	(3.9167)	(1.2293)	(1.1947)	(1.9122)
x3	11.6941**	5.8127**	0.8504	-15.4613	7.2656***	7.2557***	-23.1206***
	(5.8390)	(2.3888)	(0.7720)	(9.5823)	(2.7323)	(2.6636)	(4.6260)
x4	0.3541***	0.1047***	0.4547 <sup>***</sup>	4.0832***	0.2924***	0.2921***	$0.7088^{***}$
	(0.03743)	(0.0318)	(0.0768)	(0.1222)	(0.0234)	(0.0223)	(0.0409)
Cons.	4.4951 <sup>*</sup>	2.1329***	1.2900	-5.0495**	2.9037***	2.8629***	1.3365
	(2.4800)	(0.5330)	(1.0252)	(2.0817)	(0.9318)	(0.8954)	(1.1668)
R2 within	0.2143	0.0297	0.6237	0.7235	0.1336	0.1333	0.1983
R2 between	0.1651	0.0391	0.0006	0.4694	0.1281	0.1286	0.1045
R2 overall	0.1757	0.0318	0.0319	0.5993	0.1286	0.1286	0.1391
N. obs	418	737	49	668	1155	1204	1872
N. companies	81	143	9	145	224	233	378

 Table 3

 Model estimation results – P/BV: dependent variable

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01, the deviations of the estimators (standard errors) are given in brackets

Source: Author's calculation

Analyses in which we used the Q-Tobin ratio as a quantifying variable for company value lead to similar conclusions (Table 4). In this case, too, there is a negative relationship between the scale of earnings manipulation and the value of the company for enterprises in which no shareholder owns more than 25% (subsample A). This relationship is even stronger than in the case of a study based on the P/BV variable. Similarly, the relationship between value and a measure measuring the scale of earnings manipulation is also noticeable in the group of entities with no direct owner with a controlling stake (subsamples AB, ABC).

Dep. var.: Q-Tobin	A	В	С	D	AB	ABC	ABCD
М	-0.1147***	0.0006	-0.0027	-0.0070	-0.0205*	-0.0204*	-0.0163
	(0.0429)	(0.0026)	(0.0045)	(0.0272)	(0.0108)	(0.0105)	(0.0190)
x1	-8.3517***	0.1662	-0.3870	-7.5535***	-3.5278 <sup>***</sup>	-3.4739***	-0.8699
	(2.2106)	(0.2378)	(0.2523)	(1.6787)	(0.8214)	(0.8003)	(1.1772)
x2	0.53174	-0.3194***	-0.0342	1.4243	0.2590	0.2523	0.8168
	(0.8461)	(0.1153)	(0.1105)	(0.9211)	(0.3598)	(0.3508)	(0.5423)
x3	2.1953	0.6218 <sup>***</sup>	0.6415 <sup>**</sup>	-24.5301***	0.77514	0.7775	-12.7684 <sup>***</sup>
	(1.8978)	(0.2267)	(0.2843)	(2.2333)	(0.7682)	(0.7505)	(1.3330)
x4	0.1762 <sup>***</sup>	0.0671 <sup>***</sup>	0.2927 <sup>***</sup>	1.3573 <sup>***</sup>	0.1506 <sup>***</sup>	0.1506 <sup>***</sup>	0.2834 <sup>***</sup>
	(0.0127)	(0.0036)	(0.0275)	(0.0290)	(0.0070)	(0.0068)	(0.0117)
Cons.	1.7824 <sup>**</sup>	0.7161 <sup>***</sup>	0.1459 <sup>**</sup>	-0.7779	1.0839***	1.0607 <sup>***</sup>	$0.6659^{**}$
	(0.8463)	(0.1123)	(0.0587)	(0.4792)	(0.3141)	(0.3026)	(0.3253)
R2 within	0.3087	0.3174	0.8035	0.855	0.2704	0.2703	0.2908
R2 between	0.3318	0.4208	0.797	0.6686	0.2943	0.295	0.2609
R2 overall	0.3827	0.4306	0.8639	0.7738	0.365	0.3652	0.2722
N. obs	457	794	49	698	1251	1300	1998
N. companies	87	153	9	150	240	249	399

 Table 4

 Model estimation results – Q-Tobin ratio: dependent variable

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01, the deviations of the estimators (standard errors) are given in brackets

Source: Author's calculation

The next step of our analysis was to answer the question of whether managers of companies with lower levels of shareholder control have a higher propensity for earnings management. To answer this question, we calculated the medians of the M-score for each of the groups of companies distinguished by Moody's *Independence Indicator*, and then used the Kruskal-Wallis test. Our results, presented in Table 5, show that the medians of the M-score for each group of companies differ slightly. The results of the Kruskal-Wallis test show that the degree of control over companies does not affect the magnitude of the earnings management phenomenon. Thus, there is no evidence of a relationship between the degree of ownership control and earnings management.

#### Table 5

M-score medians for ownership concentration subsamples

Value of M-score					
Subsample	Median				
A	-2.62				
В	-2.66				
С	-2.55				
D	-2.68				
Kruskal-Wallis equality-of-populations rank test	p = 0.4425				

Source: Author's calculation

#### **5. CONCLUSIONS**

According to previous literature, earnings management can result in suboptimal utilization of companies' resources, which leads to a reduction in their fundamental value (e.g. Badertscher, 2011; Cohen & Zarowin, 2010; Roychowdhury, 2006; Sakaki et al., 2017). The analyses we conducted partially support this view. We observed a strong negative relationship between P/BV and the Tobin's Q ratio and the value of the M-score in the group of companies with weak ownership control (that is, companies in which the leading shareholder does not own more than 25% of the shares – subsample A in our research). In contrast, in the group of companies with large shareholders (subsample B) or majority shareholders (subsamples C and D), the value of M-score does not have a significant impact on the market valuation of companies. In the case of companies with fragmented shareholding, financial statements are more significant for investors as they are the primary source of information about the condition of the company. In such a situation, earnings management undermines investor confidence in management. Therefore, higher M-score values lower the market valuation. On the other hand, if there are large investors in the company, as insiders they can use other internal sources of information besides financial statements. In such a situation, earnings manipulation will have little impact.

As the capital market reaction to financial performance manipulation is stronger for entities with weak ownership control, managers of such companies should manage earnings to a lesser extent. On the other hand, companies with strong control should be characterized by higher levels of manipulation. However, based on our analysis, we could not confirm the results obtained by Dong et al. (2020) according to which the presence of a large investor favors earnings management. Similarly to Kałdoński et al. (2020), we do not find a linkage between earnings management and ownership in Poland, although their study only looked at real earnings management and the ownership structure was reflected by the presence of institutional investors.

In our study, ownership structure is based on a breakdown that takes into account the extent of control over the company as measured by Moody's *Independence Indicator*. The lack of a clear link between the presence of strong investor and earnings management may be due to the balancing of two effects. The first is due to the pressure that large investors put on managers (Dechow & Skinner, 2000). The second is related to the professionalism of large investors, so the management finds it difficult to manipulate them. Therefore, managers tend to avoid earnings management practices (Susanto et al., 2021).

Our results suggest that managers of entities with weak ownership control should anticipate a negative capital market reaction to earnings management as – in their case – investors are more distrustful and react more strongly to manipulation.

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