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AN ASSESSMENT OF THE APPLICATION OF EARNINGS MANAGEMENT OBJECTIVES AND INSTRUMENTS IN FINANCIAL REPORTING – EVIDENCE OF SURVEY RESEARCH RESULTS

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Abstract

The study contains an overview of earnings management tools of reporting entities and capital groups in Poland. Relations between the phenomenon of earnings management and financial reporting policy have been analysed. A research problem related to the significance and application of particular earnings management tools as perceived by practitioners (accountants, executive board members, specialists) has been discussed. Selected tools of earnings management, usually linked with operations, are perceived to be used more intensively. The conducted analysis shows that in the opinion of the surveyed respondents the most effective instrument influencing the desired level of results presented in a financial statement is carrying out transactions under conditions which ensure the achievement of a reported goal. This applies also to capital groups, in which transactions effected between group units were indicated as the ones used to the greatest extent.

Keywords: comprehensive income, earnings management, financial reporting policy, instruments (tools) of earnings management
JEL classification: M41, M21

1. INTRODUCTION

The relevant literature describes extensively various instruments used in order to shape the position and performance of reporting entities emerging from financial statements and their analysis. Barriers of the process of shaping position and performance stem from regulations of financial reporting. By specifying possible alternative solutions, the accounting regulations point to possibilities and limitations in shaping an entity's image, in terms of both substance and procedures. Financial reporting standards and regulations define the so-called selection variants and additional conditions for their application. Earnings management involves various objectives and tools. Some of them are included in the scope

of financial reporting policy. Therefore, the manner and scale of using the accessible instruments of the financial reporting policy in order to influence the values which characterise the financial condition of an entity depend on knowledge, experience and professional commitment of accountants responsible for drawing up a financial statement, the members of the entity's executive board as well as on the goals and motivation for influencing the financial statement form.

Since 1994 regulations for financial reporting in Poland have been subjected to the process of standardisation and harmonisation and as a result, compliance of Polish solutions with the International Accounting Standards and the International Financial Reporting Standards (IAS and IFRS) has been successfully achieved in many areas. This provides new possibilities of shaping an entity's position and performance within the framework of its financial reporting policy.

One of the two major objectives of the study is to present the selected theoretical and practical problems of the application of earnings management tools included in the financial reporting policy of reporting units.

A starting point for the survey research is to check the extent to which objectives and tools of earnings management are used by practitioners (accountants, executive board members, experts) in the financial reporting policy and evaluate how they perceive them on the basis of their knowledge and experience. It is therefore an enquiry of earnings management tools awareness among accounting teams and executive boards of economic units in Poland.

A question that also arises is whether the manner and intensiveness of using earnings management instruments depend on such variables as the executive board goals, size and type of activity, capital structure (of single entity or capital group) or the stance of the evaluating person. The second main objective of the paper is to analyse the perceived intensity of usage of major tools of earnings management. Consequently, we intend to identify relations of the perceived intensity of implementation of particular tools of earnings management with the business characteristics of the companies. In contrast to many publications based on archival approach, the perceived earnings management characteristics are not clear. We also plan to describe the links between declared objectives of earnings management and the usage of earnings management tools.

In order to reach the research objectives we will test the following hypotheses empirically:

H1: We identify a wide range of tools of earnings management but the tools related to operations (current operating assets, operating revenues and costs) are the most broadly used instruments of earnings management. Various tools of earnings management are not perceived as applied with similar intensity.

Research in this domain is acceptable even though some accounting methods are broadly criticised but they are not necessarily considered the most popular earnings management tools (for example fair value of assets). Badertscher (2011, pp.1491-1518), Barth *et al* (2012) as well as Liu *et al* (2013, pp. 49-54) indicate the influence of fair value accounting on earnings management. Many pieces of research relate to long-lived assets revaluation issues (for tangibles: Cotter *et al*, 1998, pp. 157-179; Elliott *et al* (1988, pp. 117-134); Elliot *et al* (1996, pp.135-155); Francis *et al* (1996, pp.117-134); Riedl (2004, pp. 823-852), for goodwill: Hayn *et al* (2006, pp. 223-265). However, significant correlations between fair value accounting and earnings management do not necessarily mean that they are widely used.

H2: Business characteristics of the company are strongly linked with the perceived intensity of using particular tools of earnings management. Such variables i.e., company size, legal form, equity structure and consolidation have an influence on the choice of particular earnings management tools (Burgstahler *et al*, (2006, pp. 983-1016); Sarkar *et al*,, (2008, pp. 517-551) and Piosik , (2013, p. 181). These relations may be twofold. They may stem from the ability to use particular tools of earnings management. For instance, the magnitude of long-term tangible assets enables the entity to apply the following tools of depreciation methods, assessment of residual value or expected period of economic usefulness as effective for the purposes of earnings management. On the other hand, business characteristics may provide incentives to use some tools or influence objectives of earnings management. For example, senior management of a limited liability company with a stable equity structure may be less inclined to use various tools of earnings management than in the case of a stock joint company.

H3: The financial reporting system is expected to influence the perceived usage or intensity of applying chosen tools of earnings management. We are especially concerned with a comparative analysis of two financial reporting systems, i.e. IAS/IFRS and the Polish Accounting Act. Archival research gives evidence of the reduction of earnings management magnitude while adapting IFRS (Barth *et al*, 2008, pp. 467-498). Particular research in some countries does not always follow this principle, for example in Poland (Piosik , 2013, p. 181).

H4: The same tools of earnings management may be used for different general objectives of earnings management. It is therefore not always expected to associate particular earnings management tools with particular general objectives of earnings management. For example, long-lived assets impairments may be possibly used in *big bath* (Riedl, 2004, pp. 823-852) *as well as in income smoothing* (Piosik *et al*,, 2010, pp. 139-166).

2. FINANCIAL REPORTING POLICY VERSUS EARNINGS MANAGEMENT

Financial reporting policy is defined and interpreted in different ways. Some controversies may appear in relation to the understanding of such notions as: financial reporting policy, accounting principles, accounting policy and their references to the issue of earnings management. As far as the aim of this study is concerned, a key issue is to define the notion of ”financial reporting policy”. The term ”policy” is defined as ”the plan of action, statement of aims and ideals” (Oxford Advanced Dictionary, 1987, p.646).

Financial reporting policy is a part of the area of accounting policy, focused on information presented in financial reports. The financial reporting policy is understood as a set of adopted rules, methods, options of shaping business transactions and estimates due to which the adequate quality of a financial statement can be achieved while maintaining the reporting entity interests related to its image in the financial statement. Options of action should also be understood as carrying out transactions which adequately shape the comprehensive income of an economic unit. This meaning of financial reporting policy coincides with the notion of ”earnings management” (EM). It should be emphasised, however, that ”earnings management” defines a certain strategy adopted by the executive board of a unit in order to achieve the desired total results; it goes beyond the problems

regulated by accounting regulations and at the same time, is strictly related to creative accounting.

Earnings management may be defined as ”reasonable and legal management decision-making and reporting intended to achieve stable and predictable financial results” (Mckee, 2005, p.2). According to another definition presented in the subject literature, “earnings management occurs when managers use judgement 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 reported accounting numbers” (Healy *et al*, 1999, pp.365-383). J. Spohr (2005, pp.12-14) remarks that the definitions of EM agree on the point that managerial intent is a prerequisite for earnings management, “but whether this intent should be opportunistic in nature is not totally clear”.

EM offers various instruments aimed at reporting a desired level of comprehensive income. Some of them will be presented subsequently in this study. EM, among others, akes use of financial reporting policy instruments. On the other hand, shaping of a transaction can be an example of a tool going beyond the financial reporting policy (e.g. price decisions, decisions regarding the term of transaction, terms of payment). It is sometimes indicated that earnings management should be divided into accounting and economic earnings management (Mckee, 2005, p.5-8). It should be emphasised that in this case the financial reporting policy is a part of EM and its tools are included in EM tools. Within the framework of the main goals we may point to examples of detailed objectives:

- influencing the change of financial analysis indicators,
- adopting a particular direction of profit division (covering a loss),
- maximising executive board members’ remunerations,
- hiding the effects of erroneous decisions of the executive board,
- reducing tax burdens,
- creating an appropriate image of the entity for its creditors, clients.

The scope of the financial reporting policy instruments practically coincides with the scope of the rights of choice (Jermakowicz *et al*,, 2011, p. 46).

A definition which coincides with the financial reporting policy is the one in which it is understood as ”options determined by certain interests, complying with certain principles, rules and conventions regarding the registration, recognition and evaluation of the elements described in the accounting model, writing and presenting the financial statements” (Ristea, 2000 cited by Cernusca, 2011, p.25).According to International Accounting Standard 8 (IAS 8), the financial reporting policy (accounting policy) is “the specific principles, bases, conventions, rules and practices applied by an entity to create and present the annual financial statements (…)”.

In our opinion, the essence and sense of the financial reporting policy is making choices and taking action within the scope of law-regulated accounting, aimed at triggering a particular effect in a form of the image of an economic entity in the financial statement, that is following a particular strategy adopted by the entity’s management. Within the framework of the adopted strategy, entities apply accounting principles.

The approach to the financial reporting policy in a large sense has been applied in the basic legal act that regulates accounting in Poland – the Accounting Act (UoR). Following UoR, the financial reporting policy means ”solutions selected and used by an entity which are permitted by law, including the ones defined in IAS, ensuring the required quality of financial statements (art. 3, § 11 of the UoR).

The financial reporting policy includes all lawful actions and choices of a unit, the aim of which is to adequately shape the values characterising the unit's situation on the basis of the financial statement that it has prepared. Implementing an adequate financial reporting policy, which ensures obtaining a desired effect in the form of reported items management, requires knowledge of balance sheet law and accounting theory.

It should be emphasised that characteristic features of the financial reporting policy include:

- creating alternatives in the area by allowing different variants,
- striving to influence stakeholders' decisions and opinions,
- maintaining a real image of the economic entity (Walińska, 2005).

3. FINANCIAL REPORTING POLICY INSTRUMENTS IN ACCOUNTING EARNINGS MANAGEMENT

A special problem is related to business practice within the scope of establishing, presenting and interpreting comprehensive income and various possibilities of its shaping (Dumitrana *et al*, 2010, pp. 27-28; Moldovan *et al*, 2010, pp. 52-55). Survey research carried out in economic units in Romania prove quite a low awareness of the possibilities provided by the financial reporting policy as a part of accounting policy (Popa *et al*, 2011, pp. 646-649). When drawing up a financial statement, nearly half of the surveyed respondents did not take into consideration its qualitative attributes. Investigationinto selected problems of the financial reporting policy reveal a lack of skills to properly interpret the effects of using particular tools of the financial reporting policy. The surveyed practitioners (certified accountants) were asked questions classified into thematic groups related to the application of financial reporting policy tools. The answers were grouped into categories: correct, incorrect or lack of answer (or unintelligible answer). The conducted research indicates that a large number of the surveyed respondents were not acquainted with the financial reporting policy instruments and they did not even know the principles of proper current and balance sheet valuation of assets and liabilities.

The main goals of the financial reporting policy include for example:

- influencing behaviour of financial statement users,
- tax policy implementation (Kaczmarek, 2008, pp.215-217).

Special instruments used to shape expenses are impairments assets. By using these instruments it is possible to report higher operating costs, while by "reversing" a write-down, that is by restoring its previous status, one can report higher revenues for a particular period (excluded for goodwill).

Allowances are most frequently made on short-term receivables. The financial accounting regulations also allow revaluation write-downs on stocks, financial assets. Write-offs due to permanent loss of value are made on noncurrent assets.

Another instrument that shapes comprehensive income is the creation and release of provisions for liabilities. Particularly important in this case are the manner of evaluation and the moment of creation and possible release of reserves. An additional effect of this tool's application is a change in capital structure, which is desired by the executive board.

The level of reported expenses is influenced by the choice of depreciation rates and methods, the effect of which is the "appropriate" fluctuation of depreciation costs over time. Selection of solutions regarding depreciation in Poland involves a decision

whether the entity adopts separate solutions for business and tax purposes or whether it follows tax solutions.

Another financial reporting policy instrument related to comprehensive income is the selection of methods for carrying out evaluation of some asset elements (e.g. historical cost or fair value). In the context of this tool, it is particularly important whether the unit draws up a financial statement according to the Accounting Act or IAS/IFRS, as IAS/IFRS introduce additional tools for shaping comprehensive income by means of balance sheet evaluation methods based on the fair value parameter. Procházka presents opinions about the idea and role of fair value in the context of economy (2011, pp. 71-86). The adoption of a particular strategy by the entity's executive board in order to influence comprehensive income (EM) requires a parallel use of various financial reporting policy instruments as well as additional operating and financial actions which go beyond this policy. Investors frequently think that entities having an "unstable" financial result over a period of a few years, that is having a result characterised by abrupt (sudden) increases or drops in profits or increases in losses, are more risky in investment terms (Schneider *et al*, 2012, pp. 4-6).

Income smoothing is a strategy which consists in the executive board's striving to obtain stable profit, frequently combined with reporting a stable rising trend. It shows that the entity's results are characterised by a stable growth, and the unit as being safer to invest in, which reduces the cost of capital and increases the market value of shares (Healy *et al*, 1999, pp. 365-383).

In the event of a significant increase in the reported income we can talk about aggressive accounting. Subject literature quotes the results of research indicating that members of economic units' management boards are frequently interested in income smoothing because of their remunerations and bonuses. A stable economic growth resulting from financial statements is frequently a condition for increasing their remunerations (Bergstresser *et al*, 2006 cited by Schneider *et al*, 2012, pp.4-6).

EM may take a form of deliberate underestimation of income in favourable years and its overestimation in worse years, which may result in reporting of a more stable income. The consequence of this is shifting the income earned in a given reporting period to subsequent periods in order to improve the results e.g. by creation and release of reserves for liabilities.

Horváth and Spirollari indicate the problem that the degree of insider ownership influences positively firms' performance. It is connected with agency theory (2012, p. 471).

The level of revenues is influenced by decisions connected with e.g. the date of invoice issuance (issuing an invoice in the same financial year increases the result reported in the financial statement). In the event of a negative financial result a key issue may turn out to be the total result structure from the point of view of income statement reading (statement on comprehensive income). Its source is important for the interpretation of the result, i.e., operating activities or other activities. In case of total loss, the management may strive to report the best possible result on basic operating activity and shift the reported costs to the segment of other operating activity or extraordinary events (according to IAS/IFRS, extraordinary losses and profits are not reported in the statement on comprehensive income-they are elements of operating results).

In subject literature there are also other EM objectives listed:

- increasing the reported loss,
- improving the structure and value of assets,

- avoiding reduction of profits in relation to the previous period.

A special problem is related to business practice within the scope of establishing, presenting and interpreting comprehensive income and possibilities of its shaping.

Survey research carried out in economic units in Romania proves quite a low awareness of the possibilities provided by the financial reporting policy as a part of accounting policy (Popa *et al*, 2011, pp.646-649). When drawing up a financial statement, nearly half of the respondents did not take its qualitative attributes into consideration.

The conducted research indicates that a large number of the respondents are not acquainted with the financial reporting policy instruments and they do not even know the principles of proper current and balance sheet valuation of assets and liabilities.

From the point of view of the applied financial reporting policy tools, the balance sheet law in force is of considerable importance. The experiences related to the introduction of IAS/IFSR (Karatzimas *et al*, 2011, p. 308) in Greece indicate that the biggest changes in the financial reporting policy concerned such instruments as:

- valuation of tangibles at fair value (IAS 16),
- change in depreciation rates of tangible assets (IAS 16),
- differentiation of depreciation rate for intangibles (IAS 38).

These changes were common for the manufacturing and the commercial sector in Greece.

4. METHODOLOGY OF RESEARCH

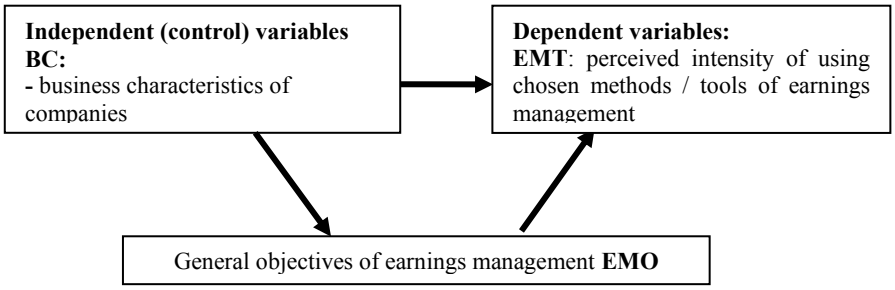
Taking into account the hypotheses formulated above we have determined the research design comprising of three groups of variables:

a) Variables describing business characteristics and accounting regulations *BC*.

b) Variables measuring the intensity of using particular tools of earnings management *EMT*.

c) Variables measuring the general objectives of earnings management *EMO*.

A comprehensive structure of the research is presented in Figure no. 1:



Source: [own work]

Figure no. 1 Comprehensive structure of the research

In order to test the hypotheses we have accepted the following research stages:

a) Choosing methods of data collection.
b) Identifying relevant variables.
c) Selecting quantitative methods of data analysis.
d) Presenting descriptive statistics for collected data.

e) Analysing equality of distributions of perceived intensity of using chosen earnings management tools.
f) Testing relations between the tools of earnings management and business characteristics of reporting entities.
g) Analysing perceived preference for the chosen objectives of earnings management.
h) Analysing relations between the perceived intensity of earnings management tools *EMT* and objectives of earnings management *EMO.*
i) Analysing links between consolidation of financial statements and chosen earnings management tools or objectives.
j) Drawing up conclusions and findings.

Data collection was based on surveys. We sent questionnaires to companies in March 2012. After 2 rounds of reminders 82 questionnaires were received in May 2012. Number of questionnaires: sent 250, received 82, rejected because majority of answers were missed 17, analysed 65.

In Table 1 we explain the relevant variables used in the survey which are divided into three parts, and with abbreviations used for these variables. In part 1.1 we present the background information which includes business characteristics of reporting entities or respondents. In particular, we enquired about the legal form of a reporting entity *FORM*, size of a company measured in total assets *SIZE_A*, headcount of employees *SIZE_E* and revenue *SIZE_R* as well as median out of three *SIZE_M*. We also checked whether the financial statements were audited *AUD_R*, and if the company published the consolidated financial statement *CONS*.

Part 1.2 of Table 1 comprises of a list of earnings management tools used by reporting entities *EMT* and their perceived significance measured in ordinal scale.

In part 1.3 of Table 1 we present a list of variables describing the perceived preferences of objectives of earnings management practice *EMO*. Six basic variables are used: avoiding accounting loss *LOSS_A*, big bath *BBATH*, aggressive accounting *AG_ACC*, avoiding the reduction of earnings *ER_A*, improvement of the structure of assets *SVA*, and income smoothing *INC_SM*. We also apply the second variant of *EMO* variables calculated in ordinal scale from 1 to 6 and in order to describe the strength of *EMO.* The variables begin with the letter *R*.

Table no. 1 Variable definition

1.1. Background information: Business characteristics of reporting entity or respondent (*BC*)	
FORM	= legal form of reporting entity:
JSC	= joint-stock company
LLC	= limited liability company
OC	= other form of company based on commercial code
S.C.	= stock company owned by state (100% of equity)
OTC	= other form of reporting entity
FC	= a variable equal to 1 if foreign capital is engaged in reporting entity; 0 otherwise,
SIZE_E	= size of company measured using headcount of employees
1	= not more than 50

2	= from 51 to 100 employees
3	= from 101 to 200
4	= from 201 to 500
5	= above 500
SIZE_A	= size of company measured according to total assets
1	= not more than 500 000 PLN
2	= above 0.5M to 1 M PLN
3	= above 1 M to 20 M PLN
4	= above 20 M to 100 M PLN
5	= above 100 M to 250 M PLN
6	= above 250 M PLN
SIZE_R	= size of company measured according to total revenues
1	= not more than 500 000 PLN
2	= above 0.5M - to 1 M PLN
3	= above 1 M to 20 M PLN
4	= above 20 M to 100 M PLN
5	= above 100 M to 250 M PLN
6	= above 250 M PLN
AUD_R	= variable equal to 1 if financial statement is audited; 0 otherwise,
CONS	= variable equal to 1 if reporting entity publishes consolidated financial statement; 0 otherwise,
FUNC	= function/duty of respondent
C	= CEO, CFO or similar
D	= director/ middle level manager
S	= specialist
OTF	= other function
RS	Reporting system used
UoR	= Polish Act of Financial Reporting
IFRS	= International Financial Reporting Standards
DC	= variable equal to 1 if only obligatory information is disclosed in a statement of financial position or statement of comprehensive statement; 0 otherwise
1.2. *EMT:* Methods/techniques of earnings management; respondents assessed perceived intensity of each method/technique using ranks from 0 to 3	
	3 - used intensively, 2 - used with moderate intensity, 1 - unimportant, 0 - not applicable
DEPR	= depreciation used for financial reporting is different than for taxable income,

DEPR_G	= depreciation of goodwill
RES_FA	= residual value of long-term depreciable assets
REV_NA	= revaluation of non-financial long-term assets
IMP	= impairment of non-financial long-term assets
FV_FA	= fair value of financial assets
FV_IP	= fair value of investment property
IALL	= allowance for inventory
RALL	= allowance for receivables
GALL	= warranty reserves
E_RES	= reserves for employee benefits
IT_ACC	= deferred income tax
O_RES	= other reserves
LT_CONTR	= long-term contracts and other methods of revenue recognition
ST	= structuring of business transactions in order to achieve earnings management objectives
O_SAL	= gain/loss on sales of long-term assets
FI_REC	= classification / reclassification of financial investments
HACC	= hedge accounting methods
DEPR_GL	= depreciation of goodwill arising on consolidation
IMP_G	= impairment of goodwill arising on consolidation
IMP_NG	= negative goodwill accounting
IMP_GE	= methods and estimates used in testing impairment for goodwill arising on consolidation
STG	= business transactions among companies in the group
SLC	= level of significance for eliminations and corrections arising on consolidation
COCG	= change in structure of capital group of companies (including sale of units)
OMT1	= other tools of earnings management 1
OMT2	= other tools of earnings management 2
OMT3	= other tools of earnings management 3
1.3. *EMO*: objectives earnings management	
LOSS_A	= variable equal to 1 if avoidance of accounting loss was expected; 0 otherwise,
BBATH	= variable equal to 1 if big bath was expected; 0 otherwise,
AG_ACC	= variable equal to 1 if aggressive accounting was expected; 0 otherwise,
ER_A	= variable equal to 1 if avoidance of earnings reduction was expected; 0 otherwise,

SVA	= variable equal to 1 if improvement of structure of assets was expected; 0 otherwise,
INC_SM	= variable equal to 1 if income smoothing was expected; 0 otherwise,
RLOSS_A	= ranks for avoidance of accounting loss, from 1 to 6
RBBATH	= ranks for big bath
RAG_ACC	= ranks for aggressive accounting
RER_A	= ranks for avoidance of earnings reduction
RSVA	= ranks for improvement of structure of assets
RINC_SM	= ranks for income smoothing

Source: [own work]

5. DESCRIPTIVE STATISTICS

The background information, including business characteristics of the surveyed reporting entities are presented in Table 2. Out of 65 reporting entities we identified 52% of limited liability companies *LLC*, 31% of joint-stock companies *JSC* and 6% of state-owned companies *SC*. A share of companies with the engagement of foreign capital *FC* equals to 25%. Other business entities form 11% of the total sample. The headcount of employees *SIZE_E* does not exceed 50 workers for 46% of the companies. A share of companies employing 51-100 people is equal to 18%. Taking into account total assets, 61% of companies control resources from PLN 1 M to PLN 100 M. The financial statements of 63% of respondents are audited *AUD_R* but only 35% of the sample publishes consolidated financial statements *CONS*. Only 13% of questionnaires were completed by senior managers or directors and 35% by specialists. The majority of companies, amounting to 75%, follow the rules of the Polish Accounting Act *UoR*, and the remaining 25% follow rules of the IFRS. Nearly all respondents (95%) disclose only obligatory information in the statements of financial position or statements of comprehensive income.

Table no. 2 Descriptive statistics of the relevant background variables (BC)

***BC* variables**	**N**	**Mean**	**Median**	**Mode**	**N (Mode)**	**Lower quartile**	**Upper quartile**	**Standard deviation**
FC	64	0.250	0	0	48	0.0	0.5	0.44
SIZE_E	65	2.246	2	1	30	1.0	3.0	1.45
SIZE_A	65	3.231	3	3	25	3.0	4.0	1.26
SIZE_R	65	3.169	3	3	35	3.0	4.0	1.21
SIZE_M	65	3.123	3	3	29	3.0	4.0	1.17
AUD_R	65	0.631	1	1	41	0.0	1.0	0.49
CONS	65	0.354	0	0	42	0.0	1.0	0.48
DC	65	0.954	1	1	62	1.0	1.0	0.21

Source: [own work]

Table no. 3 Frequency of distribution of earnings management methods/tools (EMT variables)

Measures	**Rank**	***DEPR***	***DEPR_G***	***RES_FA***	***REV_NA***	***IMP***	***FV_FA***	***FV_IP***	***IALL***	***RALL***
Median		2	1	1	0	1	1	1	2	2
Mode		3	0	1	0	1	0	1	2	3
		23	30	27	36	28	27	27	25	24
Frequency	0	10	30	18	36	14	27	21	22	7
	1	18	23	27	21	28	20	27	10	11
	2	14	4	13	3	17	7	7	25	23
	3	23	8	7	5	6	11	10	8	24
Frequency %	0	15.4	46.2	27.7	55.4	21.5	41.5	32.3	33.8	10.8
	1	27.7	35.4	41.5	32.3	43.1	30.8	41.5	15.4	16.9
	2	21.5	6.2	20.0	4.6	26.2	10.8	10.8	38.5	35.4
	3	35.4	12.3	10.8	7.7	9.2	16.9	15.4	12.3	36.9
Measures	Rank	*GALL*	*E_RES*	*IT_ACC*	*O_RES*	*LT_CONTR*	*ST*	*O_SAL*	*FI_REC*	*HACC*
Median		1	2	2	2	1	2	1	1	1
Mode		0	2	2	3	1	3	1	1	1
		32	32	28	30	30	22	34	34	29
Frequency	0	32	14	13	10	24	17	11	25	27
	1	21	9	15	13	30	14	34	34	29
	2	8	32	28	12	8	12	19	6	8
	3	4	10	9	30	3	22	1	0	1
Frequency %	0	49.2	21.5	20.0	15.4	36.9	26.2	16.9	38.5	41.5
	1	32.3	13.8	23.1	20.0	46.2	21.5	52.3	52.3	44.6
	2	12.3	49.2	43.1	18.5	12.3	18.5	29.2	9.2	12.3
	3	6.2	15.4	13.8	46.2	4.6	33.8	1.5	0.0	1.5

Source: [own work]

In Table no. 3 we present the distribution of the perceived intensity of using chosen earnings management tools applying ordinal scale (from 0 to 3), where 3 means that the tool is adapted largely. The median and mode of the perceived intensity of using chosen earnings management tools are also disclosed. Maximum median of the analysed variables is 2 (perceived usage of the tool with moderate intensity) and refers to the following list of variables: depreciation *DEPR*, allowance for inventory *IALL*, allowance for receivables

RALL, reserves for employee benefits *E_RES*, deferred income tax *IT_ACC*, other reserves *O_RES*, and structuring business transactions *ST*. We have identified no tool of earnings management which is perceived as used intensively in terms of median equal to 3. Median of some variables equals to 1, which indicates the tools are not important for earnings management purposes: depreciation of goodwill *DEPR_G*, residual value of long-term depreciable assets *RES_FA*, impairments of non-financial long-term assets *IMP*, fair value of financial assets *FV_FA*, fair value of investment property *FV_IP*, warranty reserves *GALL*, long-term contract and other methods of revenue recognition *LT_CONTR*, sales of other assets *O_SAL*, classification of financial investments *FI_REC*, and hedge accounting *HACC*. Revaluation of non-financial long-lived assets is the only earnings management tool which has received median equal to 0. That is expected because the majority of respondents used the Polish Accounting Act and the upward revaluation of operating long-lived assets is very limited and requires issuing special governmental regulations.

Descriptive statistics describing objectives of earnings management *EMO* are displayed in Table 4. Three objectives of earnings management processes, out of six tested, have been indicated in approximately 50% of companies: loss avoidance *LOSS_A* (52%), aggressive accounting *AG_ACC* (49%), and avoidance of earnings reduction *ER_A* (48%). Two objectives have been indicated by the majority of companies: improvement of structure of assets SVA (72%), as well as income smoothing INC_SM (60%). Big bath has been indicated only in 6% of the sample.

We have also analysed the strength of the particular earnings management objectives, measured in ordinal scale ranked from 1 to 6. The results are displayed in Table 4, part 4.2. The part 4.2 has been prepared on the basis of 60 observations because in some questionnaires these questions remained unanswered.

Table no. 4 Descriptive statistics for the variables measuring objectives of earnings management EMO

4.1.	**Rank**	***LOSS_A***	***BBATH***	***AG_AAC***	***ER_A***	***SVA***	***INC_SM***
Frequency	0	31	61	33	34	18	26
	1	34	4	32	31	47	39
Frequency %	0	47.7	93.8	50.8	52.3	27.7	40.0
	1	52.3	6.2	49.2	47.7	72.3	60.0
4.2.		*RLOSS_A*	*RBBATH*	*RAG_AAC*	*RER_A*	*RSVA*	*RINC_SM*
Frequency	1	20	43	10	12	10	12
	2	11	6	5	10	7	6
	3	6	5	8	13	9	10
	4	9	0	12	15	13	13
	5	7	2	11	9	15	14
	6	7	4	14	1	6	5
Frequency %	1	33.3	71.7	16.7	20.0	16.7	20.0

	2	18.3	10.0	8.3	16.7	11.7	10.0
	3	10.0	8.3	13.3	21.7	15.0	16.7
	4	15.0	0.0	20.0	25.0	21.7	21.7
	5	11.7	3.3	18.3	15.0	25.0	23.3
	6	11.7	6.7	23.3	1.7	10.0	8.3

Source: [own work]

6. RESEARCH RESULTS

6.1. Earnings management tools

In the hypothesis H1 we presume that the perceived intensity of earnings management tools related to operations of the company and to operating assets is higher than the intensity of tools related to other activities of the reporting entities.

In order to check the hypothesis we have used two statistics. A Kruskal-Wallis *H* test has been used in order to check whether distributions of ranked perceived intensity of using chosen tools of earnings management are different. The results of the non-parametric *H* test are not tabulated. The results of the *H* test indicates that the distributions of *EMT* variables are significantly different and we have confirmed differences in the perceived intensity of particular earnings management tools at $p = 0.01$. The following earnings management tools are perceived to be used with moderate intensity: depreciation *DEPR*, allowance for inventory *IALL*, allowance for receivables *RALL*, reserves for employee benefits *E_RES*, deferred income tax *IT_ACC*, other reserves *O_RES*, and structuring business transactions *ST*. All of the tools are related to operations. The tools related to financial assets are used with low intensity. We have also performed a pairwise comparison for the Kruskal-Wallis *H* test and presented the results in Table 5. The pairwise comparison generally confirms the differences of distributions among the variables. The differences especially concern the variables characterised by median 2 while comparing it with variables for which median is equal to 1. Some results of the analysis of *EMT* variables related to operations are different. Some earnings management tools connected with operations are perceived to be used with low intensity or not used at all: residual value of long-term depreciable assets, impairments of non-financial long-term assets, warranty reserves, long-term contract and other methods of revenue recognition.

We can identify the ranked perceived intensity of *EMT* variables for individual respondents and that is why we have tested whether the chosen tools of earnings management are equally preferred, using Friedman non-parametric tests, detecting differences in treatments across the multiple test attempts. The results of this test are not tabulated. The distributions of *EMT* variables are significantly different at $p = 0.01$. According to the mean of ranks, the descending order of the perceived intensity of using chosen earnings management tools is as follows: *RALL* (13.7); *O_RES* (13.4); *DEPR* (12.3); *E_RES* (11.7); *ST* (11.4); *IT_ACC* (11.2); *IALL* (10.2); *IMP* (9.8); *O_SAL* (9.4); *RES_FA* (8.9); *FV_IP* (8.6); *FV_FA* (8.5); *DEPR_G* (7.4); *LT_CONTR* (7.3); *GALL* (7.2); *HACC* (7.0); *FI_REC* (6.6); *REV_NA* (6.4).

The order does not describe the statistical significance of the differences between the individual variables (see Table no. 5).

*Table no. 5 Pairwise comparison of EMT variables for Kruskal-Wallis test**

Variable	*DEPR*	*DEPR_G*	*REV_NA*	*FV_FA*	*PV_IP*	*RALL*	*GALL*	*E_RES*	*IT_ACC*	*O_RES*	*LT_CONTR*	*ST*	*FI_REC*	*HACC*
DEPR		**0.000**	**0.000**	**0.018**	0.097	1.000	**0.000**	1.000	1.000	1.000	**0.001**	1.000	**0.000**	**0.000**
DEPR_G	**0.000**		1.000	1.000	1.000	**0.000**	1.000	**0.006**	**0.029**	**0.000**	1.000	**0.020**	1.000	1.000
RES_FA	0.351	1.000	0.722	1.000	1.000	**0.004**	1.000	1.000	1.000	**0.018**	1.000	1.000	1.000	1.000
REV_NA	**0.000**	1.000		1.000	1.000	**0.000**	1.000	**0.000**	**0.000**	**0.000**	1.000	**0.000**	1.000	1.000
IMP	1.000	1.000	0.103	1.000	1.000	**0.042**	0.929	1.000	1.000	0.163	1.000	1.000	0.825	1.000
FV_FA	**0.018**	1.000	1.000		1.000	**0.000**	1.000	0.243	0.805	**0.000**	1.000	0.604	1.000	1.000
PV_IP	0.097	1.000	1.000	1.000		**0.001**	1.000	1.000	1.000	**0.004**	1.000	1.000	1.000	1.000
IALL	1.000	1.000	0.057	1.000	1.000	0.077	0.567	1.000	1.000	0.283	1.000	1.000	0.501	0.706
RALL	1.000	**0.000**	**0.000**	**0.000**	**0.001**		**0.000**	1.000	1.000	1.000	**0.000**	1.000	**0.000**	**0.000**
GALL	**0.000**	1.000	1.000	1.000	1.000	**0.000**		**0.001**	**0.005**	**0.000**	1.000	**0.003**	1.000	1.000
E_RES	1.000	**0.006**	**0.000**	0.243	1.000	1.000	**0.001**		1.000	1.000	**0.016**	1.000	**0.001**	**0.001**
IT_ACC	1.000	**0.029**	**0.000**	0.805	1.000	1.000	**0.005**	1.000		1.000	0.066	1.000	**0.004**	**0.007**
O_RES	1.000	**0.000**	**0.000**	**0.000**	**0.004**	1.000	**0.000**	1.000	1.000		**0.000**	1.000	**0.000**	**0.000**
LT_CONTR	**0.001**	1.000	1.000	1.000	1.000	**0.000**	1.000	**0.016**	0.066	**0.000**		**0.047**	1.000	1.000
ST	1.000	**0.020**	**0.000**	0.604	1.000	1.000	**0.003**	1.000	1.000	1.000	**0.047**		**0.003**	**0.005**
O_SAL	1.000	1.000	0.236	1.000	1.000	**0.017**	1.000	1.000	1.000	0.070	1.000	1.000	1.000	1.000
FI_REC	**0.000**	1.000	1.000	1.000	1.000	**0.000**	1.000	**0.001**	**0.004**	**0.000**	1.000	**0.003**		1.000
HACC	**0.000**	1.000	1.000	1.000	1.000	**0.000**	1.000	**0.001**	**0.007**	**0.000**	1.000	**0.005**	1.000	

*Significant at p = 0.05 marked bold

Source: [own work]

6.2. Relations between the tools of earnings management EMT and business characteristics of reporting entities

At this stage of research we analyse relations between the perceived intensity of usage *EMT* with business characteristics of the reporting entities. The variables describing the intensity of usage of earnings management tools are expressed at ordinal level (from 0 to 3). In analysing the associations we use various statistical tests, dependent on the scale of variables describing the business characteristics of the companies. For dummy *EMT* variables we use a Mann-Whitney *U* test: *FC, AUD_R, CONS, RS, DC*. For nominal *EMT* variables we use a Kruskal-Wallis *H* test: *FORM, FUNC*. For the ordinal level, a Spearman rank-order correlation coefficient is applied: *SIZE_E, SIZE_A, SIZE_R and SIZE_M*.

*Table no. 6 Mann-Whitney U test for EMT variables according to BC groups**

	In view of variable *AUD_R*			**In view of variable CONS**			**In view of variable RS**			**In view of variable DC**			
		N =24	N = 41		N = 42	N =23		N = 49	N =16			*N =62*	*N =3*
EMT	*Z*	*AUD = 0*	*AUD = 1*	*Z*	*CONS = 0*	*CONS = 1*	*Z*	*UoR*	*IAS/ IFRS*	*Z*	*p*	*DC=1*	*DC=0*
Variables		*Me*	*Me*		*Me*	*Me*		*Me*	*Me*			*Me*	*Me*
DEPR	**-3.109**	1.0	2.0	**-3.367**	1.0	3.0	-1.952	1.0	2.0	***-2.036***	***0.042***	*2.0*	*3.0*
DEPR_G	**-3.152**	0.0	1.0	**-4.420**	0.0	1.0	**-3.746**	0.0	2.0	***-2.670***	***0.008***	*1.0*	*3.0*
RES_FA	**-2.309**	1.0	1.0	**-3.822**	1.0	2.0	**-3.069**	1.0	2.0	*-1.204*	*0.229*	*1.0*	*2.0*
REV_NA	-1.638	0.0	1.0	-1.476	0.0	1.0	**-3.158**	0.0	1.0	*-0.018*	*0.986*	*0.0*	*0.0*
IMP	**-3.621**	1.0	2.0	**-2.499**	1.0	2.0	**-2.685**	1.0	2.0	*-1.407*	*0.159*	*1.0*	*2.0*
FV_FA	**-2.459**	0.0	1.0	**-2.845**	0.5	2.0	**-2.973**	1.0	2.5	*-1.621*	*0.105*	*1.0*	*2.0*
FV_IP	**-2.716**	0.5	1.0	**-2.356**	1.0	1.0	**-3.188**	1.0	2.5	*-1.591*	*0.112*	*1.0*	*2.0*
IALL	**-2.165**	1.0	2.0	**-1.997**	1.0	2.0	-1.140	1.0	2.0	*1.006*	*0.315*	*2.0*	*0.0*
RALL	**-3.340**	2.0	3.0	**-2.300**	2.0	3.0	-1.694	2.0	2.5	***-2.011***	***0.044***	*2.0*	*3.0*
GALL	-0.806	0.0	1.0	**-3.052**	0.0	1.0	**-3.305**	0.0	1.0	*-0.102*	*0.919*	*0.5*	*1.0*
E_RES	**-3.721**	1.0	2.0	**-2.508**	2.0	2.0	**-2.563**	2.0	2.0	*0.017*	*0.987*	*2.0*	*2.0*
IT_ACC	**-4.391**	1.0	2.0	**-3.896**	1.0	2.0	**-3.304**	1.0	2.0	*-0.924*	*0.355*	*2.0*	*2.0*

	In view of variable *AUD_R*			**In view of variable CONS**			**In view of variable RS**			**In view of variable DC**			
		N =24	N = 41		N = 42	N =23		N = 49	N =16			*N =62*	*N =3*
O_RES	**-4.171**	1.0	3.0	**-3.269**	2.0	3.0	-1.628	2.0	3.0	*-1.729*	*0.084*	*2.0*	*3.0*
LT_CONTR	**-2.345**	0.0	1.0	**-2.426**	0.5	1.0	**-2.792**	1.0	1.0	*-0.644*	*0.519*	*1.0*	*1.0*
ST	**-3.254**	0.5	2.0	**-4.303**	1.0	3.0	**-3.677**	1.0	3.0	*-1.104*	*0.270*	*2.0*	*3.0*
O_SAL	-0.852	1.0	1.0	0.294	1.0	1.0	-0.184	1.0	1.0	*-1.341*	*0.180*	*1.0*	*2.0*
FI_REC	**-2.805**	0.0	1.0	**-3.522**	0.0	1.0	**-2.274**	1.0	1.0	*-1.346*	*0.178*	*1.0*	*2.0*
HACC	**-3.022**	0.0	1.0	**-3.215**	0.0	1.0	**-2.288**	1.0	1.0	*-1.213*	*0.225*	*1.0*	*2.0*

*Distributions of variables are different at $p < 0.5$ marked in bold

Source: [own work]

The results of the Mann-Whitney *U* test are presented in Table 6. Three dummy variables out of five, describing business characteristics, proved to be significant for indicating differences in the ranked distribution of the perceived intensity of earnings management tools: *AUD_R, CONS,* and *RS*. With respect to the consolidation (vs. non-consolidation) of financial statements we observe statistically different distributions of *EMT* variables and significantly higher median values for *EMT* variables among all the analysed variables, excluding only two of them: *REV_NA* and *O_SAL*. The companies drawing up consolidated financial statements use earnings management tools more intensively. A similar situation concerns the financial statements audited. All variables have different distributions for audited companies and median ranks of *EMT* variables are higher than in the case of non-audited statement, excluding three variables: *REV_NA, O_SAL and GALL*. Financial reporting system is also linked with the perceived intensity of using earnings management techniques. Reporting entities following *IFRS/IAS* have statistically different distributions of perceived ranks of intensity of earnings management tools and higher medians than companies following the *Polish Accounting Act,* excluding some basic *EMT* variables related to operations: *DEPR, IALL, RALL, O_RES* and *O_SAL*.

The size of reporting entities has been measured using 4 variables using rank level: *SIZE_E, SIZE_A, SIZE_P* and median *SIZE_M*. In table 7 we include Spearman rank correlation coefficients between variables describing size of companies and perceived intensity of using earnings management tools. Coefficients significant at $p = 0.05$ are marked in bold. It is worth indicating that Spearman correlation coefficients are positive, proving a positive relation between size of companies and intensity of using earnings management tools, excluding one variable, *O_SAL*, which is however not significant. Sometimes the statistical significance depends on size measurement but using the median rank of size a positive relation between the size of companies and *EMT* variables relates to: *DEPR, IMP, FV_FA, FV_IP, IT_ACC, O_RES, ST, FI_REC*. When we measure the size using headcount the list increases: *DEPR_G, RES_FA, GALL, E_RES*. There are some variables not correlated significantly, however, these variables have been proved to be not significant tools of earnings management.

*Table no. 7 Spearman rank correlation coefficient between size of reporting entities and EMT variables**

Variable	***SIZE_E***	***SIZE_A***	***SIZE_R***	***SIZE_M***
SIZE_E	1.000	**0.601**	**0.556**	**0.644**
SIZE_A	**0.601**	1.000	**0.803**	**0.934**
SIZE_R	**0.556**	**0.803**	1.000	**0.879**
SIZE_M	**0.644**	**0.934**	**0.879**	1.000
DEPR	**0.343**	**0.431**	**0.453**	**0.440**
DEPR_G	**0.393**	0.212	0.167	0.214
RES_FA	**0.268**	**0.260**	0.198	0.221
REV_NA	0.074	0.096	0.223	0.142
IMP	0.165	**0.365**	**0.443**	**0.413**
FV_FA	0.228	**0.314**	0.225	**0.323**

FV_IP	**0.297**	**0.354**	0.134	**0.316**
RALL	0.162	**0.252**	0.183	0.232
GALL	**0.321**	0.119	0.192	0.141
E_RES	**0.258**	0.136	0.221	0.211
IT_ACC	**0.476**	**0.515**	**0.482**	**0.520**
O_RES	**0.297**	**0.389**	**0.385**	**0.435**
ST	**0.273**	**0.307**	**0.258**	**0.271**
FI_REC	0.236	0.151	**0.302**	**0.249**
* Coefficients significant at p = 0.05 marked in bold				

Source: [own work]

The remaining *EMT* variables, comprising of *FORM* and *FUNC* have been analysed using a Kruskal-Wallis *H* test. In Table no. 8 we present results of the *K-W* test in order to analyse whether the companies of different legal form differ in the perceived intensity of using earnings management tools. We have put a mean rank of particular *EMT* variables for each legal form of company and a *p* value for both the *H* test and the test of median. The general conclusion is that the distributions of many *EMT* variables (13 out of 18 exactly) are significantly different for various legal forms of companies and the second conclusion is that the joint-stock companies generally demonstrate higher perceived intensity for nearly all the *EMT* variables than the entities of other legal forms. The joint-stock companies outperform the limited liability companies in the view of perceived intensity of *EMT* taking into account some variables related to operations: *DEPR, DEPR_G, IT_ACC, ST* and financial ones: *FV_FA, FV_IP*, and *HACC*.

We have found no significant differences of distribution of *EMT* variables concerning different functions of respondents at $p = 0.05$, excluding one variable (*GALL*). The results are not tabulated.

Table no. 8 Kruskal-Wallis H test for analysing links between form of company and EMT variables

EMT	***DEPR***	***DEPR_G***	***RES_FA***	***IMP***	***FV_FA***	***FV_IP***	***RALL***	***E_RES***	***IT_ACC***	***O_RES***	***LT_CONTR***	***ST***	***FI_REC***	***HACC***
	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank	Mean rank
OTC	28.1	38.8	15.1	12.8	19.9	17.0	19.3	28.8	14.0	17.5	26.0	20.0	35.1	32.6
LLC	27.8	24.8	29.3	29.2	28.2	27.3	31.0	28.3	29.9	30.0	29.9	28.0	29.8	28.5
JSC	46.7	47.9	42.5	43.8	44.6	45.6	41.1	41.1	45.1	44.4	43.2	47.3	42.1	44.5
OC	14.8	24.3	38.7	29.0	45.0	40.7	29.2	28.8	23.5	36.5	21.5	38.8	32.7	32.7
S.C.	27.5	28.8	30.8	34.5	19.9	29.0	25.8	39.6	24.8	14.4	24.0	12.9	13.0	14.0
K-W p	**p =.0013**	**p =.0001**	**p =.0221**	**p =.0070**	**p =.0025**	**p =.0015**	p =.1062	**p =.1065**	**p =.0026**	**p =.0021**	**p =.0277**	**p =.0002**	**p =.0131**	**p =.0031**
Me	**p = .0119**	**p = .0411**	p = .2655	p = .1298	**p = .0154**	p = .1288	**p = .0482**	p = .4542	p = .6583	**p = .0018**	p = .6165	**p = .0062**	p = .3617	**p = .0144**
Pairwise comparison	*	*	-	#	*	*	-	-	*	!	-	*	!	*

* LLC is significantly different from JSC							
# JSC is significantly different from OTC							
! JSC is different from S.C.							
- no significant differences in pairwise comparison							

Source: [own work]

6.3. Objectives of earnings management

While analysing the descriptive statistics depicting the preference for the chosen objectives of earnings management *EMO* (Table no. 4) we have identified three out of six objectives of earnings management which have been indicated in approximately 50% of companies: loss avoidance *LOSS_A* (52%), aggressive accounting *AG_ACC* (49%), and avoidance of earnings reduction *ER_A* (48%). We have analysed relations between the frequency of indicating the occurrence of particular earnings management objectives (*EMO* variables equal to 0 *or* 1) and business characteristics of companies. The methods of the analysis depend on the scales accepted to describe the variables for business characteristics.

For dummy and nominal variables we use a chi-square test: *FC*, *AUD_R, CONS, RS, DC, FORM,* and *FUNC*. For ordinal level a Mann-Whitney *U* test is (*SIZE)* used. We analysed the results of the chi-square test for dummy and nominal variables. We have not identified any variables describing business characteristics of companies which are significantly associated with indicating the individual earnings management objectives. We have also carried out a Mann-Whitney *U* test in order to assess if the indicated earnings management objectives are linked with companies' size but we have found no links (results not tabulated).

6.4. Relations between the perceived intensity of earnings management tools EMT and objectives of earnings management EMO

One of the crucial research questions is to find out whether the perceived intensity of using particular earnings management tools *EMT* is linked with the objectives of earnings management *EMO*. The basic measures of *EMO* used in the research are dummy variables, equal to 1 if the objective was indicated by the respondent, and 0 otherwise. We have checked the results of the Mann-Whitney *U* test, assessing the significance of the differences between the distributions of perceived intensity of using earnings management tools *EMT* for the opposing indications of particular objectives of earnings management *EMO*: avoiding accounting loss *LOSS_A*, big bath *BBATH*, aggressive accounting *AG_ACC*, avoiding reduction of earnings *ER_A*, improvement of the structure of assets *SVA*, income smoothing *INC_SM*.

Additionally, we have checked whether the perceived intensity of earnings management tools is associated with the degree of priority of particular earnings management objective (*RLOSS_A, RBBATH, RAG_ACC, RER_A, RSVA, and RINC_SM*). The relations have been examined using a Spearman rank correlation coefficient. The results are displayed in Appendix 1..

Indication of aggressive accounting behaviour is positively linked with the perceived intensity of using some earnings management tools: *IALL, ST, HACC*. It is worth indicating that the degree of priority for aggressive behaviour is additionally positively linked with *DEPR, DEPR_G, RES_FA, E_RES*, and *O_RES*. As far as the remaining *EMO* variables are concerned we do not observe significant relations between *EMO* variables and *EMT* or the results are ambiguous, taking into account the results of the *U* test and the Spearman correlation. Loss avoidance is linked positively with the higher perceived intensity of structuring business transactions and taking into account the *U* test.

6.5. Consolidated financial statements

We have used a Friedman non-parametric test in order to check whether the companies publishing consolidated financial statements prefer to use the selected tools of earnings management. The results of the tests are not tabulated. Similarly as in the whole sample, we have found evidence for *CONS* = 1 that analysed tools of earnings management are not equally preferred at $p = 0.01$. *EMT* variables which have received the highest mean rank are as follows: *O_RES*, *ST*, *DEPR*, *RALL*, *STG*, *IT_ACC*, *IMP_G*, *IMP_GE*, *DEPR_GL*, *E_RES*. Four out of ten *EMT* variables with the highest mean rank are applied only in the companies which prepare consolidated statements. We can therefore conclude that the companies publishing consolidated statements apply earnings management tools only for consolidated statements as well as other tools available for all the companies.

The next stage of the research is to analyse the relations between the company's business characteristics and the intensity of perceived usage of earnings management tools from the perspective of companies publishing consolidated financial statements (*CONS* = 1). The results are not tabulated. The differences cover *EMT* variables related to investments. Companies using IFRS/IAS indicated significantly more intensive usage of fair value for financial investments and investment property. The companies following the Polish Accounting Act do not find it important. An interesting issue is that the groups following the Polish Accounting Act evaluated negative goodwill as an important tool of earnings management.

7. CONCLUSIONS, FINDINGS, VERIFICATION OF HYPOTHESES

Information on the financial results of an economic unit is becoming increasingly important in global economy. The main sources of such information are financial statements. For this reason, the users of statements are interested in objective and reliably reported data, while on the other hand, the managerial staff (sometimes also the owners) are interested in presenting the most favourable information. The effect of striving to influence the reported comprehensive income is the earnings management strategy, which consists of various tools.

The majority of the respondents pointed to the following instruments as the ones used to a large and medium extent:

- write-off, including the differentiation of tax and balance sheet solutions,
- write-off to receivables and stocks,
- creation and release of reserves, especially different ones.

The most seldom used instruments include: hedge accounting, reclassification of financial instruments, residual value of fixed assets and income recognition principles.

A regularity emerging from the analysis is the dependence between the size of an enterprise and the number and degree of financial reporting policy tools application on the other side.

The bigger a unit, the more instruments were used to a large and medium extent. The surveyed respondents in the units which keep accounting books on the basis of IAS also pointed to a higher degree of the application of these tools. Respondents surveyed in capital groups usually listed the same instruments as the ones employed in parallel single enterprises and groups. Other important elements in consolidated financial statements included write-downs on the company's value, on the negative value of the company as

well as measurement methods and estimates adopted for testing the loss of the company's value. A change of the group structure was not quoted as significant.

The analysis of answers regarding the objectives of earnings management indicates that entities most frequently adopt a strategy of reporting a more stable profit and avoid reporting a loss. Also the goal related to the improvement of the structure and value of assets was quoted. Some of the respondents pointed to high ranks of parallel objectives. On the other hand, the surveyed respondents did not mention the objective of increasing the reported losses.

The survey results presented in this study prove that the surveyed employees of financial-accounting teams as well as managerial staffs demonstrate quite a low awareness of the possibilities to shape comprehensive income. The answers provided may indicate that this group of practitioners knows the instrument of earnings management, but fails to apply it.

Hypotheses verification

H1 verification: Distributions of the perceived ranked intensity of using particular techniques of earnings management are not equal. The selected tools, usually linked with operations or operating assets, are perceived to be used statistically more intensively and broadly: allowance for receivables, reserves, depreciation, structuring of business transactions and deferred income. The perceived intensity of using tools related to financial assets is low. However, we observe that some tools related to operations are not intensively used, including warranty reserves, long-term contracts and methods of revenue recognition. Such methods as impairments of long-term tangible assets and sales of long-term assets are somewhere between high and low intensity. We have therefore moderate evidence supporting the hypothesis that earnings management tools related to operations are broadly used, however the perceived intensity of using tools related to operations is also different.

H2 verification: Generally, the companies drawing up consolidated financial statements, audited companies, reporting entities following *IFRS/IAS* have statistically different distributions of perceived ranks of intensity of earnings management tools and higher medians of ranks. The size of the company is usually positively correlated with the perceived intensity of using earnings management techniques. We have not found evidence for significantly different distribution of *EMT* variables as far as engagement of foreign capital is concerned. The conclusion is that the distributions of many *EMT* variables are significantly different for various legal forms of companies, and the joint-stock companies demonstrate generally higher perceived intensity for nearly all *EMT* variables than the entities of other legal form. We have found no significant differences of distribution of *EMT* variables in respect to the position of respondents. The research gives strong evidence that business characteristics of the company are strongly linked with the perceived intensity of using particular tools of earnings management.

H3 verification: The financial reporting system is linked with the perceived intensity of using earnings management techniques. Reporting entities following *IFRS/IAS* have statistically different distributions of perceived ranks of intensity of earnings management tools and higher medians than the companies following the *Polish Accounting Act,* excluding some basic *EMT* variables related to operations: depreciation, allowance for inventory, allowance for receivables, other reserves and sales of fixed assets.

H4: We have identified three objectives of earnings management out of six which have been indicated in approximately 50% of companies: loss avoidance (52%), aggressive accounting (49%), and avoidance of earnings reduction (48%). Two objectives have been

indicated by the majority of the companies: improvement of assets structure and income smoothing (60%). Indicating earnings management objectives is not linked with the companies' business context. Indication of aggressive accounting behaviour is positively linked with the perceived intensity of using some earnings management tools: allowance for inventory, structuring business transactions, and hedge accounting. The priority for aggressive behaviour is also positively linked with depreciation of goodwill, reserves, and residual value of depreciable assets. As far as the remaining objectives of earnings management are concerned we do not observe significant associations between objectives and tools of earnings management or the results are ambiguous, taking into account the results of various tests.

Some of the answers given by the surveyed respondents show a lack of understanding of the problem, as it is suggested by the "not applicable" answers or the circling of contradictory answers. In many cases the weights attached to the tools did not coincide with the use type and degree listed in the previous table.

The survey results presented in this study prove that the surveyed employees of financial-accounting teams as well as managerial staff demonstrate quite a low awareness of the possibilities of shaping comprehensive income. The provided answers may indicate that this group of practitioners knows the instrument of earnings management, but fails to apply it. This might result from an attachment to previously applied solutions and a reluctance to introduce changes, in particular among senior workers.

However, this may also prove a lack of awareness of the possibilities provided by the financial reporting regulations and earnings management tools.

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Appendix 1

*Spearman rank correlation coefficient between EMT variables and EMO**

Variable	*RLOSS_A*	*RBBATH*	*RAG_AAC*	*RER_A*	*RSVA*	*RINC_SM*
DEPR	0.223	-0.121	**0.376**	**0.396**	-0.049	0.080
DEPR_G	0.051	-0.135	**0.277**	**0.332**	0.137	0.043
RES_FA	0.085	**-0.311**	**0.297**	**0.343**	0.065	0.133
REV_NA	-0.075	-0.022	0.119	0.001	-0.143	-0.001
IMP	-0.184	-0.010	0.115	0.220	-0.048	0.135
FV_FA	0.069	-0.101	0.199	0.144	-0.028	0.161
FV_IP	0.110	0.041	0.214	0.066	-0.021	0.161
IALL	0.042	**-0.260**	**0.471**	0.181	-0.107	0.085
RALL	0.033	-0.193	0.192	0.170	-0.081	0.046
GALL	0.144	-0.066	0.220	0.148	-0.013	0.215
E_RES	0.082	-0.118	**0.325**	0.175	-0.168	0.177
IT_ACC	0.017	0.019	0.155	0.157	-0.014	0.078
O_RES	0.060	-0.205	**0.271**	0.180	-0.071	0.033
LT_CONTR	-0.027	0.058	0.205	0.198	-0.140	-0.010
ST	**0.338**	-0.247	**0.285**	0.162	-0.186	-0.074
O_SAL	**-0.272**	-0.040	0.216	-0.044	0.039	-0.003
FI_REC	-0.051	-0.259	0.248	0.138	0.125	0.039
HACC	0.016	-0.037	**0.283**	0.096	-0.177	-0.074

* Coefficients significant at p = 0.05 marked in bold

Source: [own work]