

CONTEMPORARY PRACTICES IN FINANCE AND ACCOUNTING

Influence of Economy Growth on Earnings Quality of Listed Companies in Poland

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Abstract

Earnings is one of the most aggregated and most important financial performance measures used by decision makers. It seems probable that some companies may try to smooth earnings in order to present a ‘better’ financial situation especially in the periods of economic slowdown. However, earnings management means that the reported earnings are not of high quality.

On the grounds of scientific literature, there is still a need to verify by designed investigations the influence of different determinants of earnings quality, such as regulations, economic condition, and motivation systems.

The aim of the paper is to find out whether an economic condition influences earnings quality. The study was performed on the sample of 312 companies listed on Warsaw Stock Exchange and the GDP growth rate was chosen as a proxy of an economic condition. The study has revealed that earnings quality proves to be higher in the years of high growth rate of GDP in Poland. This may suggest that earnings reflect quite well economic performance of companies which strongly correlates with overall economic situation measured by GDP growth.

Keywords: earnings quality, earnings management, earnings persistence, accruals, economic condition.

Introduction

Earnings is one of the most aggregated and most important pieces of data for decision makers. It is used for both company valuation purposes and management performance evaluation purposes.

Financial statements, according to IAS (International Accounting Standard) 1 (2011) should provide high quality information about financial situation and financial results (as well as cash flows) which is useful to a wide range of users. The objective of financial reporting itself is also defined by Financial Accounting Standards Board (Conceptual Framework, 2010) as aiming ‘to provide financial information about the reporting entity that is

useful to existing and potential investors (...) in making decisions about providing resources to the entity’. The significance of earnings is also strengthened by IAS 33 that is devoted to the measurement and disclosure of information about earnings per share (EPS ratio). That is why earnings seems to be an important factor used by investors in order to make business decisions. EPS ratio has been one of the most often presented ratios at different financial analyses since 1960s. Although IAS 33 does not deal directly with earnings, as it focuses mainly on the denominator of EPS ratio, there are other reasons to deal with the problem of earnings quality. The ability to influence earnings seems to be a negative phenomenon, leading to the situation that financial statements do not provide reliable information. Erickson, Hanlon and Maydew (2006, p. 113) claim that ‘understanding the underlying forces that gave rise to the alleged frauds is a necessary precursor for effectively preventing future occurrences’.

Although the height of earnings itself is dependent on the choices made by companies in the area of accounting policy, some companies may have incentives to choose such solutions that lead to lowering of earnings quality. ‘Earnings quality’ and ‘earnings management’ are the terms quite widely discussed in literature (e.g., Schipper and Vincent, 2003; Ronen and Yaari, 2008) and there are many definitions of these terms, we discuss in the next part of the article.

Due to extensive literature studies conducted by a number of authors (e.g., Demski, 2002; Dechow and Schrand, 2004; Erickson, Hanlon and Maydew, 2004; Ronen and Yaari, 2007) there is a demand for earnings management studies. There exist several research questions regarding determinants of earnings quality. There is a need to continue investigations to find out whether earnings quality is influenced by:

- regulations (especially accounting standards),
- economic condition,
- motivation systems (compensation contracts of managers).

An economic condition seems to be a very important factor that influences financial results of companies. That is why it is considered that there are less incentives for

managers to 'manage' earnings under a good economic condition. In other words, economic slowdown should decrease earnings quality.

Despite the fact that the assumption about relation of economic condition and earnings management seems to be quite natural, the authors of the current article have tried to verify it statistically. The aim of the study is to verify whether economic conditions influence earnings quality. The hypothesis posed in the paper is: a high growth rate of GDP has a positive effect on earnings quality.

In order to verify above hypothesis the current investigation has measured the following proxies of earnings quality of Polish companies: earnings persistence and accruals magnitude. It has also looked into the height of special items, following the studies of Donelson, Jennings and McInnis (2011) and Michalak, Waniak-Michalak and Czajor (2012).

The paper is organized as follows. At first, the term 'earnings quality/earnings management' is analysed, then literature review and proxies and determinants of earnings quality are presented. Further, a research plan and a sample composition are outlined. Then, research results are presented; the paper ends with conclusion. Finally, the limitations of the research and possible future studies are pointed out.

Ambiguity of 'earnings quality' and 'earnings management'

From the perspective of potential investors, high-quality earnings should provide reliable information useful for their decisions about the allocation of their capital. In other words, high-quality earnings should not be 'managed' in any way that may mislead decision makers. That is why 'earnings quality' and 'earnings management' are often used interchangeably – earnings management is usually associated with low-quality earnings.

Earnings management may be defined as 'a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gains' (Schipper, 1989). Healy and Wahlen (1999) perceive earnings management with altering financial statements in order to mislead some stakeholders about the economic performance of the company or to influence contractual outcomes that depend on the reported accounting numbers. That is why earnings management negatively correlates with earnings quality. It should be mentioned that the definition of Healy and Wahlen (1999) do not set a clear difference between earnings management and normal activities, whereas Dharan (2003, p. 1) asks, 'how to distinguish between earnings manipulation that ultimately proves to be fraudulent and the day-to-day struggles of managers to keep costs within budgets or to get revenues to meet desired sales targets'. Moreover, Ronen and Yaari (2008) claim that earnings management can be beneficial (white), pernicious (black), or neutral (grey).

Beneficial earnings management appears when it signals long-term value. Beneish (2001, p. 3) conceives it as 'a mean for managers to reveal to investors their private expectations about firm's future cash flows'.

Pernicious earnings management conceals short- or long-term value. In other words, earnings management is the choice of the accounting policy to achieve desired objectives (Scott, 2003).

Neutral earnings management occurs when it reveals a short-term true performance.

Proxies and determinants of earnings quality

Defining earnings quality is not the only problem. Even if it is agreed what 'earnings quality' or 'earnings management' is, there is still one important question, how earnings quality should be measured. Due to extensive literature review the present article lists several proxies of high quality earnings: persistence of earnings, magnitude of accruals, smoothness, timely loss recognition, abnormalities of earnings distribution, and lack of external indicators of earnings misstatements.

In the present study, the two first proxies have been used.

Persistence as a proxy for earnings quality derives from the perspective of decision usefulness. Schipper and Vincent (2003) believe that its usefulness is conceptually grounded (and empirically proved) on positive relation between earnings persistence and the correlation between returns and earnings. Theoretically, as stated above, persistent earnings are more useful in valuation of firms. Assuming that investors make decisions on the basis of companies' value (or the possibility of companies to generate value for them in future), then earnings are of higher quality if they are more persistent (Michalak, Waniak-Michalak and Czajor, 2012).

The second proxy correlates with the first one. Therefore, extreme accruals are a sign of lower earnings quality because they represent less persistent earnings. On the basis of former studies (Dechow, 1994; Fairfield, Sweeney and Yohn, 1996; Sloan, 1996; Penman and Sougiannis, 1998; Barth, Cram and Nelson, 2001; Nissim and Penman, 2001; Fairfield, Whisenant and Yohn, 2003; Richardson et al., 2005), it may be concluded that, in general, earnings are more persistent than cash flows. However, when it comes to the components of earnings, its cash flows component is more persistent than accrual one.

Earnings may be claimed to reflect not only operating activity of a company but also its ability to create value. Then earnings should be easily convertible into cash flows if they are to be used as an indicator of value creation. When considering the quality of earnings as their ability to predict future cash flows (and companies' value), there are also different opinions based on researches conducted by their authors. Penman and Sougiannis (1998) have found that models that apply simple forecasting assumptions based on earnings provide better forecast of market value than models based on dividend or cash flow forecasts. However, other researchers, i.e. Barth et al. (2001) and Finger (1994) have proven that current cash flows are better predictors of future cash flows, especially in the short term. The results seem to be inconclusive due to different variable definitions and research designs.

Following the proxies of earnings quality it is worth considering the determinants of earnings and accruals. Dechow, Ge and Schrand (2010) have observed that earnings depend on firm's economic performance as well as on the accounting systems that measure it; however it is very hard to distinguish one from another. Schipper and Vincent (2003) also believe that the persistence of earnings is a function of accounting standards implementation and entity's business model as well as its operating environment.

Donelson, Jennings and McInnis (2011) have found that one of the factors that influences diminished persistence of earnings is special items. The authors conclude that there is no evidence that specific accounting standards require companies to report special items. Instead, they have found the evidence that changes in economic activity lead to a significant increase in special items. Therefore, it may imply that a worsening economic situation influences earnings persistence (for example, companies may try to report higher profit by selling fixed assets).

Economic slowdown as an incentive for earnings management

Worsened economic conditions influence economic performance of companies. Economic crisis that plagues most economies in the world seems to lead also to the diminished quality of earnings (measured by persistence and the magnitude of abnormal accrual). As most companies and industries depend on the overall economic conditions, companies' performance measured by earnings should go down in the times of economic crisis. Lower financial results which are disclosed in financial statements may then have a 'snowball effect' on a company. Stock prices fall down not only as a result of economic slowdown, but also due to a disclosure of worsening financial performance. Then stock prices fall down again, and a company may face difficulties with raising funds, taking credits (or is charged on higher interests) and financial situation of a company gets worse than before publishing a financial report.

The impact of worsened economic conditions on the propensity of managers to smooth earnings and decrease the quality of earnings may be two-way.

On the one hand, there probably exists motivation for income smoothing (or other form of earnings management) during periods of economic slowdown. In particular, there are the following motifs for income smoothing practices from the management point of view:

1. Increasing management compensation, as many compensation schemes are based on pay for performance rules and are positively associated with various measures of earning persistence (see Balsam, 1998; Baber et al., 1998; Nwaeze et al., 2006; O'Byrne and Young, 2009).
2. Stabilizing or increasing company valuation by making earnings more predictable by financial analysts; companies that are able to meet or beat prior

earnings or analysts' forecasts are rewarded with higher valuations (Barth et al., 1999).

Income smoothing should be reflected in the worsened earnings quality.

On the other hand, Dechow, Ge and Schrand (2010) have pointed out the following advantages of high earnings quality:

1. Lesser risk of litigation (especially in US), as Gong et al., (2008) have found negative relation between earnings quality and litigation propensity.
2. A lower quality of earnings (measured by abnormally high accruals) increase likelihood of modified audit opinions, as aggressive earnings management seems to be of concern to auditors and regulators (Krishnan, 2003; Nelson, Elliott and Tarpley, 2003).
3. High earnings quality (or even more broadly, high quality accounting information) should lead to reduced information asymmetry and improved investment efficiency (Biddle and Hilary, 2006).
4. Low quality of earnings may result in firing executives of companies (Desai et al., 2006).
5. Earnings persistence is negatively correlated with the cost of equity capital (Francis et al., 2004) as well as with the cost of debt capital (Francis et al., 2005).
6. High quality earnings reduce analysts' forecasts errors.

Advantages mentioned above may suggest that managers prefer not to smooth earnings despite lower financial results. Moreover, during the time of economic crises the management has less incentives to smooth the earnings as they can blame external conditions (external crises) for the worsened economic performance. This does not prove that in the periods of economic slowdown the quality of earnings should be as high as in the periods of a steady growth of economy (or even higher). In the periods of economic collapse there should be also an increase in the scale of one-time special items like:

- asset sale,
- liability reversal,
- litigation,
- impairment of assets/write down of assets,
- restructuring,
- employee benefits.

In the times of economic crisis it could be more common for companies to experience impaired assets, sell an asset before it is used up or to lay off companies. Such events will lead to increased special items which may reduce earnings quality.

Nevertheless, Donelson et al. (2011) claim that there has been a steady increase in the frequency of special items over many years. They have also discovered that the incidence of loss special items is rising over time more rapidly than the incidence of gain special items. This implies that the quality of earnings is decreasing over time. Similar conclusion may be derived from the findings of Dichev and Tang (2008).

Considering determinants of earnings quality, indicated in this paper, it is necessary to find the main reason for increasing numbers of special items. The primary reason, according to studies of Donelson et al.

(2011) is the changes in economic activity and not changes in the existing or implemented accounting standards. This suggests that economic growth correlates more with the quality of earnings than implementation of IFRS.

There are many studies that adversely explain the impact of economic situation on the quality of earnings. Lin and Shih (2002) have found pervasive earnings management in firms during the recession in 1990-1991. Their observations support the hypothesis of Healy (1985) who argues that managers try to manipulate earnings in the periods of economic downturns if real earnings are too low for them to receive a bonus. Similar remarks may be concluded from the studies of Holthausen et al. (1995), Gaver et al. (1995) and Guidry et al. (1999). Despite the result of their findings, Lin and Shih (2002) claim that managers try to manipulate earnings even in the periods of strong economic growth although there is a different direction of such manipulation. In periods of a very strong economic growth, managers may reserve some earnings for the future (when economic situation may get worse). However, the extent of earnings management is reasonably higher during the recession.

A correlation between real economic performance and earnings management has also been confirmed by Jin (2005) who discovers that the extent of earnings management may be predicted from real economic activity. In his opinion, the aggregate extent of earnings management is bigger during recession than during expansion. Similarly to the observation of Lin and Shih (2002), Jin (2005) points out that the relation between earnings management and a real GDP growth is not linear. Earnings management decreases with a real GDP growth up to a certain point and then it increases with GDP growth.

On the contrary, Conrad et al., (2002), Cohen and Zarowin (2007) claim that firms have a greater tendency to earnings management during a good economic situation. Their claim is derived from the observations that investors' reaction to earnings disappointment is more adverse during

economic upturn. Findings of Conrad et al. (2002) motivated the studies conducted also by Rajgopal et al. (2007) who have confirmed that earnings management is higher when the economy is up.

Comparing different results of different studies it appears that the extent of earnings management depends on analysts and investors as well as expectations about earnings during bad and good economic situation. This means that a general incentive for managers is trying to meet or beat different earnings benchmarks (e.g. Bartov et al., 2002; Matsumoto, 2002; Brown and Caylor, 2006; Choi et al., 2006; Graham et al., 2006).

To conclude the theoretical study, the authors assume that earnings management is greater during economic slowdown. This means that the quality of earnings should be higher in the periods of the real GDP growth. The assumptions have been also partially based on the theory of agency, stating that managers can try to manipulate earnings in order to prevent themselves from potential penalties due to weak financial performance (see e.g., Hermalin, 2005). Poor financial results may occur more often in the periods of economic slowdown than when the economy is up.

Research methodology

The authors have constructed a hypothesis for the current research: high growth rate of GDP has a positive effect on earnings quality.

In order to see whether it could be verified, and if it could be found which type of factors has a bigger impact on earnings quality, a study has been conducted to compare earnings quality in the periods of economic slowdown (when the growth of GDP was smaller than 2%) and the quality of earnings in the periods of economic boom (when the GDP growth rate was higher than 5%).

Poland's GDP growth rates in the covered period are presented in Table 1.

Table 1

Real GDP growth rate – volume percentage change on previous year

Year	Poland's GDP
1999	4,5
2000	4,3
2001	1,2
2002	1,4
2003	3,9
2004	5,3
2005	3,6
2006	6,2
2007	6,8
2008	5,1
2009	1,6
2010	3,9
2011	4,5

Source: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb020>

Table 2

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,352 ^a	0,124	0,123	0,1640620

a. Predictors: (Constant), DGDP, EARN_t

Table 3

Model summary (continued)

Change Statistics		
R Square Change	F Change	Sig. F Change
0,124	86,389	0,000

Table 4

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0,004	0,007		0,580	0,562
	EARN_t	0,300	0,027	0,298	11,09	0,000
	DGDP	0,059	0,010	0,167	6,214	0,000

a. Dependent Variable: EARN_t+1

GDP growth is, of course a very crude proxy of economic conditions in which companies have to operate. Although Lucas (1977) has suggested the possibility of a unified theory of business cycles that could be applied to all countries, independently of political and institutional structure, and studies of Backus and Kehoe (1992) support that view, there are other studies, supporting the contrary opinion – that business cycles are not all alike. It seems that not all industries follow the same cycle as the overall economy does.

Berman and Pflieger (1997) have conducted studies to identify the industries (and occupations) in the United States that are most prone to business cycles. They claim that different industries react in different ways to business cycle fluctuations of the United States economy. The following industries correlate with business cycle fluctuations most: household furniture, motor vehicles and equipment, retail trade, and household appliances. Braun and Larrain¹ (2005) have discovered that industries which are more dependent on external sources of capital as well as industries producing durable goods are more sensitive on recession.

The present research sample comprises 3279 firm-year observations for 312 firms that prepared financial

consolidated financial statements and were listed on the Warsaw Stock Exchange. The sample covers all the listed companies that disclose consolidated financial statements apart from banks, insurance companies, and investments funds. Those companies have a different format of financial statements, as well as their business model is so different that companies are not comparable to companies from other sectors. The research uses the data from Notoria database, the database that covers the biggest amount of information on companies listed on the Warsaw Stock Exchange. The data used in the statistical data analysis were scaled by the average amount of assets. The period of the study embraces the years 1999-2011, but the periods of high and low economic growth cover only 7 years. GDP of Poland was higher than 5% only in year 2004, 2006, 2007 and 2008. Economic slowdown (measured by GDP) appeared in year 2001, 2002 and 2009.

Donelson, Jennings and McInnis (2011) have proposed a number of proxies reflecting the worsened economic conditions of companies. It included: decreasing number of workers, merger and acquisition activities, discontinued operations, decrease in sales and operation losses. Unfortunately such data (apart from decrease in sales and operating losses) is unavailable in the database Notoria used by authors.

¹ Their study covered several manufacturing industries in more than 100 countries over a period of about 40 years.

Operating accruals were calculated using the following formula:

$$OA = (NI - CFO) / AA, \quad (1)$$

where:

OA – operating accruals,
 NI – net income,
 CFO – cash flow from operations,
 AA – average assets.

Net income has been taken from the profit and loss statement (Notoria Item 166) CFO stands for cash flow from operating activities (Notoria Item 169), reported in cash flow statement. Average assets have been calculated as an average of total assets at the beginning and end of the period taken from balance sheet (Notoria Item 29).

The authors have also treated, as signs of high earnings quality, their high correlation with net cash flow and cash flow from operations. Following the reasoning of Donelson et al. (2011) and Dichev and Tang (2008), they also investigate the percentage of firms with large special items that may negatively influence earnings quality and decrease the correlation between revenue and expense.

Research results

The first step of the analysis was to measure earnings persistence in the period of high and low growth rate of

GDP. The researchers estimated persistence of earnings using the following regression model:

$$EARN_{t+1} = \alpha + \beta EARN_t + \varepsilon_t, \quad (2)$$

In order to find out whether there is an impact of high GDP growth rate, they introduced a dummy variable – DGDP, equal to 0 in the periods of economic slowdown and 1 in the periods of high GDP growth rate. Then, the regression model was used in the study as follows: $EARN_{t+1} = \alpha_1 + \alpha_2 DGSP + \beta EARN_t + \varepsilon_t$.

The results of the estimation of the regression model are presented in Tables 2, 3 and 4.

R² value is for the model and is unsatisfactory which implies that other factors apart from last year earnings are important for explaining the given year earnings. The model is statistically significant at 0.001 level. The standardized beta coefficient for earnings from the previous year equals 0.298 which is rather low in comparison with studies of other researchers i.e. persistence in the study of Dechow and Ge (2006), where level earnings persistence coefficient was 0.696. The reason for such difference may be: different sample (country, sector and size difference) and different period 1988-2002, which was the period of quite high economic growth in U.S. Moreover, in the case of the current study, the periods of low and high GDP growth rate are short and mixed (the period of steady low GDP amounts only to 2 years, and period of high GDP lasted continuously for only 3 years).

Table 5

Descriptive statistics of variables in the periods of high and low GDP growth

	EARN_LGDP	EARN_HGDP	OA_LGDP	OA_HGDP	SI_LGDP	SI_HGDP	
N (valid)	523	695	523	695	523	695	
N (missing)	467	295	467	295	467	295	
Mean	.006785	.087835	-.066476	.035095	-.039680	.000694	
Median	.022629	.071217	-.061093	.007635	-.028582	-.016788	
Minimum	-1.2928	-.7273	-1.2226	-.7218	-.9646	-.9269	
Maximum	1.2068	1.1318	1.6941	1.0631	1.7488	.8616	
Percentiles	25	-0.021723	.027610	-.128197	-.06101	-.070096	-.039662
	50	.022629	.071217	-.061093	.007635	-.028582	-.016788
	75	.062360	.132088	-.002157	.106773	-.002011	.022841

Variable codes:

EARN_LGDP – Earnings in periods of low GDP growth
 EARN_HGDP - Earnings in periods of high GDP growth
 OA_LGDP – Operating accruals in periods of low GDP growth
 OA_HGDP – Operating accruals in periods of high GDP growth
 SI_LGDP – Special items in periods of low GDP growth
 SI_HGDP – Special items in periods of high GDP growth

Table 6

Correlations in the periods of low GDP growth

		EARN_LGDP	OA_LGDP	CF_LGDP	CFO_LGDP	SL_LGDP
EARN_LGDP	Pearson Correlation	1	0.708**	0.122**	0.263**	0.666**
	Sig. (2-tailed)		0.000	0.005	0.000	0.000
	N	523	523	523	523	523
OA_LGDP	Pearson Correlation	0.708**	1	-0.138**	-0.496**	0.629**
	Sig. (2-tailed)	0.000		0.002	0.000	0.000
	N	523	523	523	523	523
CF_LGDP	Pearson Correlation	0.122**	-0.138**	1	0.339**	0.062
	Sig. (2-tailed)	0.005	0.002		0.000	0.154
	N	523	523	523	523	523
CFO_LGDP	Pearson Correlation	0.263**	-0.496**	0.339**	1	-0.041
	Sig. (2-tailed)	0.000	0.000	0.000		0.354
	N	523	523	523	523	523
SL_LGDP	Pearson Correlation	0.666**	0.629**	0.062	-0.041	1
	Sig. (2-tailed)	0.000	0.000	0.154	0.354	
	N	523	523	523	523	523

**Correlation is significant at the 0.01 level (2-tailed).

Table 7

Correlations in the periods of high GDP growth

		EARN_HGDP	OA_HGDP	CF_HGDP	CFO_HGDP	SL_HGDP
EARN_HGDP	Pearson Correlation	1	0.354**	0.166**	0.378**	0.500**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	695	695	695	695	695
OA_HGDP	Pearson Correlation	0.354**	1	0.041	-0.732**	0.365**
	Sig. (2-tailed)	0.000		0.281	0.000	0.000
	N	695	695	695	695	695
CF_HGDP	Pearson Correlation	0.166**	0.041	1	0.080*	0.117**
	Sig. (2-tailed)	0.000	0.281		0.035	0.002
	N	695	695	695	695	695
CFO_HGDP	Pearson Correlation	0.378**	-0.732**	0.080*	1	0.003
	Sig. (2-tailed)	0.000	0.000	0.035		0.937
	N	695	695	695	695	695
SL_HGDP	Pearson Correlation	0.500**	0.365**	0.117**	0.003	1
	Sig. (2-tailed)	0.000	0.000	0.002	0.937	
	N	695	695	695	695	695

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

It should be highlighted, however, that a dummy variable DGDP is significant at 0.001 level and the standardized beta coefficient for a dummy variable equals to 0.167. Statistical significance and positive standardized beta coefficient show that there is a weak positive effect of high growth rate of GDP on earnings quality measured by earnings persistence.

In order to examine the impact of economic conditions on earnings quality, the researchers have also analysed the magnitude of and correlations between earnings, operating accruals, special items, and cash flows in the periods of high and low GDP growth. The results are presented in Tables 5, 6 and 7.

Analyzing earnings, operating accruals, and special items descriptive statistics it may be observed that mean and median of earnings is higher for years of high GDP. It is consistent with intuitive prediction that earnings are higher in the periods of economic boom. It can also be observed that means and medians of both operating accruals and special items are negative and their absolute values are higher in the periods of economic slowdown. This may be a sign of higher propensity to manage earnings in the periods of economic slowdown.

Results of the study show quite a big influence of GDP growth on correlations of earnings with cash flows and cash flow from operations. The correlation coefficient is

higher in the years with high GDP growth (0.166 and 0.378 in the years with high GDP growth in comparison with 0.122 and 0.263 in the years of low GDP growth). Increased correlations in the years of high GDP growth suggest higher earnings quality in such periods – as earnings of high quality should be close to cash flows.

Nonetheless, there is a significantly higher correlation of earnings with operating accruals as well as with special items in the years of low GDP growth. The results suggest that there is a bigger impact of special items on earnings when there is economic slowdown. Furthermore, it may be concluded that special items comprise mostly of negative items (like write-offs etc.). But such a significantly high correlation of earnings with operating accruals in the years of economic slowdown (especially when comparing with cash flow from operations) implies that there is a higher level of earnings management during the periods of weak economic condition. Consequently, it may be concluded that the quality of earnings is higher in the years of high GDP growth.

In order to check if the differences in the measured means of variables are statistically significant and to check the size of the difference, the authors have conducted paired samples t-test and calculated eta square. The results of the test are shown in Tables 8 and 9.

Table 8

Paired Samples Test for variables in periods of high and low GDP growth

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	EARN_LGDP - EARN_HGDP	-0.0804071	0.1700322	0.0077771	-0.0956887	-0.0651255	-10.339	477	0.000
Pair 2	OA_LGDP - OA_HGDP	-0.1126886	0.2353788	0.0107660	-0.1338432	-0.0915340	-10.467	477	0.000
Pair 3	CF_LGDP - CF_HGDP	-0.0351435	0.1716940	0.0078531	-0.0505744	-0.0197125	-4.475	477	0.000
Pair 4	CFO_LGDP - CFO_HGDP	0.0322815	0.1970464	0.0090127	0.0145720	0.0499910	3.582	477	0.000
Pair 5	SI_LGDP - SI_HGDP	-0.0488626	0.1300966	0.0059505	-0.0605550	-0.0371702	-8.212	477	0.000

Table 9

Eta square results

		Eta square
Pair 1	EARN_LGDP - EARN_HGDP	0.1831
Pair 2	OA_LGDP - OA_HGDP	0.1868
Pair 3	CF_LGDP - CF_HGDP	0.0403
Pair 4	CFO_LGDP - CFO_HGDP	0.0262
Pair 5	SI_LGDP - SI_HGDP	0.1239

The results of eta square show us that the differences in economic growth have the biggest influence on earnings and operating accruals whereas the differences in cash flows are of moderate effect. What is striking for this study is that the percentage of companies with large special items is much higher than in other investigations presented in literature.

Final conclusions

Earnings quality, which has been investigated deeply more and more, by researchers from different countries for more than 20 years, has three types of determinants. The first type is economic conditions and the way companies are able to compete in changing environment. The second type is different techniques of earnings management and earnings smoothing that company accountants and management utilize in order to meet and beat analysts' expectations concerning companies' earnings'. The third type of determinants is the changes in accounting regulations that shape the rules that companies use in order to prepare financial statements.

The study has tried to verify the hypothesis, whether a good economic condition (that is high GDP growth rate) has a positive effect on earnings quality.

It has been found that there is an impact of economic situation, and earnings quality proves to be higher in the years of high growth rate of GDP in Poland.

In the next stages of their study the authors would like to introduce the following improvements. The influence of economic condition on different industries, as in studies of Berman and Pfleeger (1997) or Braun and Larrain (2005), need to be taken into account.

Considering the effect of economic slowdown, it may be also useful to divide companies into two groups depending on their capital structure. Furthermore, if expectations of investors or owners are the most important incentive for earnings management, the companies form this study could be divided into many categories related with different categories of equity owners.

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Ekonominio augimo įtaka atskirų Lenkijos įmonių pajamų kokybei

Santrauka

Pajamos yra vienas svarbiausių informacijos šaltinių sprendimų priėmėjams. Jis naudojamas tiek įmonės veiklos, tiek ir valdymo efektyvumo vertinimo tikslams. Nors pajamos priklauso nuo įmonės pasirinkimo bendroje apskaitos politikoje, kai kurios įmonės gali turėti stimulą pasirinkti tokius sprendimus, kurie leistų mažinti pajamų kokybę.

Mokslinės literatūros analizės pagrindu suformuluoti tyrimo klausimai ar pajamų kokybė yra veikiami reglamentavimo (ypač apskaitos standartų), ekonominių sąlygų ir/ar motyvacijos sistemų (kompensaciniai susitarimai).

Tyrimui pasirinktas vienas iš veiksnių – ekonominės sąlygos. Tai potencialus veiksnys, lemiantis pajamų kokybę ir įtakojančias finansinius įmonių rezultatus. Dėl šios priežasties manoma, kad vadovai jaučia mažesnę stimulą „valdyti“ pajamas, jeigu ekonominės sąlygos yra geros. Kitais žodžiais tariant, ekonomikos lėtėjimas turėtų sumažinti pajamų kokybę.

Mokslinės literatūros analizės metu išskirta keletas aukštos kokybės pajamų identifikatorių: pajamų išsilaikymas (pastovumas), prieaugio dydis, vienodumas, prarasto laiko pripažinimas, pajamų paskirstymo nenormalumas, išorinių indikatorių dėl neteisingų pajamų trūkumas. Straipsnyje analizuojami du pirmieji identifikatoriai.

Pastovumas kaip kokybiškų pajamų identifikatorius yra kildinamas iš sprendimų naudos perspektyvos. Teorine prasme pajamų pastovumas yra naudingesnis vertinant pačias įmones. Antrasis identifikatorius – prieaugio dydis – koreliuoja su pirmuoju. Ypač didelis prieaugis yra mažesnės pajamų kokybės ženklas, kadangi jis reprezentuoja mažesnę atlyginimo pastovumą.

Straipsnyje siekiama patvirtinti ar paneigti hipotezę – didelis BVP augimas turi teigiamos įtakos pajamų kokybei. Šiuo tikslu siekiama palyginti atlyginimo kokybę ekonominio nuosmukio laikotarpiu su pajamų kokybe ekonominio pakilimo metu. Ekonominės sąlygos buvo vertinamos remiantis BVP augimo rodikliais.

Tyrimo imtis - 312 įmonės, kurios parengė finansines konsoliduotas ataskaitas ir buvo išvardintos Varšuvos vertybinių popierių biržoje. Tyrimo imtį sudarė visos išvardintos įmonės, kurios pateikia konsoliduotas finansines ataskaitas, išskyrus bankus, draudimo kompanijas ir investicinius fondus, kadangi šios įmonės turi kitokių finansinių ataskaitų formatus, taip pat jų verslo modelis yra skirtingas ir įmonės negali būti lyginamos su įmonėmis, atstovaujančiomis visai kitus sektorius. Duomenys, kurie buvo naudoti atliekant statistinių duomenų analizę, buvo suranguoti pagal vidutinį turto dydį. Tyrimo laikotarpis apėmė 1999–2011 metus, tačiau aukšto ir žemo ekonominio augimo laikotarpis apėmė tik 7 metus. Ekonominis pakilimas buvo pradėtas jausti 2004 metais ir 2006–2008 metais. Ekonominis lėtėjimas buvo matomas 2001, 2002 ir 2009 metais.

Siekiant iširti ekonominių sąlygų įtaką pajamų kokybei, buvo išanalizuota svarba ir koreliacija tarp uždarbio, prieaugio, specialiųjų jo straipsnių bei grynąjų pinigų srautų didelio ir žemo BVP augimo laikotarpiais.

Išanalizavus uždarbio, prieaugio ir specialiųjų straipsnių statistinius duomenis, nustatyta, jog uždarbio vidurkis ir mediana yra aukštesni aukšto BVP laikotarpiu. Atitinkamai galima prognozuoti, jog pajamos yra aukštesnės ekonominio pakilimo metu. Taip pat nustatyta, jog tiek prieaugio, tiek ir specialiųjų uždarbio straipsnių vidurkis ir mediana buvo neigiami ir jų absoliučios vertės buvo mažesnės ekonominio nuosmukio metu. Tai leidžia teigti, jog būtina valdyti pajamas ekonominio nuosmukio metais.

Šio tyrimo rezultatai parodė taip pat didelę BVP augimo įtaką pajamų koreliacijai su pinigų srautais ir srautais iš veiklos. Koreliacijos koeficientas yra aukštesnis tais metais, kai yra matomas didesnis BVP augimas, negu tuomet, kai BVP augimas mažas. Padidėjusi koreliacija spartaus BVP augimo metais leidžia numatyti, kad aukštesnė pajamų kokybė tokiu laikotarpiu yra artima grynąjų pinigų srautams.

Atsižvelgiant į tyrimo rezultatus, galima teigti, jog pajamų kokybė yra didesnė tais metais, kai yra fiksuojamas didžiausias BVP augimas Lenkijoje. Tokiu būdu pajamos gerai atspindi įmonių ekonominę būklę, o tai stipriai koreliuoja su visa ekonomine situacija, matuojama BPV augimo tempais. Analizuotų įmonių vadovai Lenkijoje, kaip parodė tyrimas, greičiau anonsuoja geresnius finansinius rezultatus ekonominio nuosmukio metu, nei didina pajamas stiprios ekonomikos sąlygomis.

Reikšminiai žodžiai: pajamų kokybė, pajamų valdymas, pajamų pastovumas, augimas, ekonominės sąlygos.

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