

# Accounting Conservatism in Transitional Economies

## Evidence of the influence of institutional factors in Eastern Europe

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### Executive summary

Prior research shows that accounting conservatism exists in mature economies. However there is not too much research about accounting conservatism in transitional economies. This paper analyses the influence of institutional and political factors on accounting conservatism in Eastern European countries which have already joined the European Union. I researched the levels of unconditional and conditional conservatism in Eastern Europe and compared them with Western European results. I did not find evidence that there is conditional conservatism in Eastern Europe. My research shows that there was conditional conservatism only in Poland during the analyzed period. I found significant evidence proving my expectations regarding the influence of the quality of law, securities law and the risk of expropriation on conditional conservatism.

For the full text of this master thesis refer to the following webpage:

<http://hdl.handle.net/2105/5781>.

### 1. Introduction

Most of the post-communist European countries have already joined the European Union. What is important is that the European Union intends to harmonize accounting regulations across member countries by implementing International Accounting Standards. However, prior research proves that the differences remain despite common regulations due to political and institutional factors specific to certain countries.

Conservatism in accounting has been researched for many years. The results regarding Western European countries and the United States prove the existence of conservatism in accounting. In contrast to the West, not all post-communist countries were subjects of the research and institutional factors which can influence conservatism are not fully explored in the case of these countries. The objective of the research is:

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<sup>1</sup> This paper is based on my master thesis, completed in 2009 as part of the master Accounting Auditing & Control at Erasmus University Rotterdam under supervision of Dr. Y. Wang, reviewed by Dhr. Rob van der Wal. Since September 2009 I have worked as an Associate in PricewaterhouseCoopers. In the future I am going to continue an academic carrier.

*To analyze conservatism in accounting in post-communist countries of Central and Eastern Europe, which are members of the European Union and to identify institutional factors which have an influence on conservatism in these countries*

The main research question is:

*Is there accounting conservatism in Eastern Europe?*

The research sub-questions are as follows:

- Does accounting conservatism differ across Eastern Europe?
- Do institutional factors influence accounting conservatism in Eastern Europe?
- Did the transitional process influence accounting conservatism in Eastern Europe?

My research contributes to prior research for a couple of reasons. First of all Eastern European countries are rarely the subject of an analysis, secondly I used the Basu model in my analysis, third I explored the influence of institutional factors on accounting conservatism in this region. The results of this paper are important for all users of financial reporting to give them the possibility to assess the quality of accounting figures, especially in debt and management employment contracts. I found evidence that there is unconditional conservatism in both analyzed regions but it is higher in Western Europe than Eastern Europe. The results for conditional conservatism show that there is no conservatism in Eastern Europe (excluding Polish observations) but there is in Western Europe. Three Eastern European countries were analyzed in detail and I found that only in Poland for the whole analyzed period there is conditional conservatism. I found evidence proving my expectations regarding the influence of the quality of law on conditional conservatism, security law and risk of expropriation. I found significant evidence, which contradicted my expectations regarding transitional progress and tax burden; however I found reasons justifying these outcomes. I did not find significant evidence regarding my hypothesis about the influence of equity market exposure.

## **2. Accounting conservatism**

Feltham and Ohlson (1995) define accounting conservatism as a situation when on average book value is lower than market value. Basu (1997) defines conservatism as the incremental timeliness of bad news recognition over good news recognition. Basu (1997) as news means returns; he justifies it, by saying that in an efficient market, stocks incorporate all available information immediately. He assumed that the response of earnings to bad news is quicker than its response to good news. Givoly and Hayn (2000) examine conservatism from the point of view of changes in earnings, cash flows and accruals; they give another definition of conservatism based on the characteristics of a conservative reporting system, which tends towards the early and full recognition of unfavourable events in the financial statements and the delayed and gradual recognition of favourable events, and then conservatism can be measured by skewness or the variability of the earnings distribution. Givoly and Hayn (2000) also use another approach in measuring conservatism which is based on features of accruals. They explain that accruals tend to reverse, when there is a period, when income exceeds (is lower than) cash flow

and is followed by a period, when income is lower than (exceeds) cash flow. Conservatism takes place, when negative accruals tend to persist over time in stable companies. This measure is based on the definition of conservatism, in which the accounting system results in “slower revenue recognition, faster expense recognition, lower asset valuation and higher liability valuation”, this definition incorporates elements of earnings conservatism (revenue and income) and balance sheet conservatism (assets and liabilities).

### **3. Literature review**

#### **3.1 The existence of conservatism and trends**

One of the most important papers from the field of conservatism in accounting is “The conservatism principle and the asymmetric timeliness of earnings” of Basu (1997). First of all Basu proved that the regression coefficient is higher for a sample which included observations with negative unexpected returns than positive ones, it means that earnings is more timely in recognition of publicly available “bad news” than “good news”. Basu (1997) examines also conservatism from accruals point. He found out that regression coefficient for bad news is higher for earnings than for CFO, but for good news there is no difference between  $R^2$ 's, which is consistent with accounting conservatism incorporated in accruals. The next issue which Basu (1997) examines is the persistence of earnings. He proved that negative earnings have a higher tendency to reverse in the future than positive earnings. Basu (1997) also examines one of the reasons why there is an increase in the level of conservatism. He analyzed the relationship between auditors' liability and the coefficient of bad news and good news with earnings, and he finds that there is a relationship between this correlation and the level of auditors' liability. He finds that in periods of higher liability exposure for auditors there is higher a coefficient between bad news and earnings, and the coefficient between good news and earnings in the last period of high legal liability.

Givoly and Hayn (2000) widely prove that there was conservatism in accounting during the analyzed period. First of all they found out that in the early period (1966-1980) the companies generated slightly positive net accruals, and since 1982 net accruals have been negative. Accumulation of negative non-operating accruals is consistent with an increase in reporting conservatism over the last several decades. The other groups of measures like the earnings-return measures indicate an increase of conservatism overtime. The earnings distribution is negatively skewed in most of the examined periods and there is no similar phenomenon in cash flows. The negative skewness of earnings confirms the existence of conservatism and an increase of the skewness, which means an increase in conservatism over time.

#### **3.2 International differences**

The research of Giner and Rees (2001) focuses on three close European countries Germany, France and the UK. They found that the strongest conservatism was in the UK and then in France and Germany. However all three countries express an association of bad news with

returns which is much stronger than good news and returns. The differences between these three countries are however not significant.

Ball et al. (2000, 4) extend previous studies by going beyond just comparing different accounting regimes but focusing on institutional factors. Ball et al. (2000) study international differences between Australia, Canada, UK, USA, France, Germany and Japan. Ball et al. (2000) show that in common law countries with a so called shareholder orientation there are stronger incentives for conservatism, on the other hand code law or stakeholder oriented countries are characterized by less conservative accounting. They found out that in code law countries there is less conservatism than in common-law countries.

Garcia Lara and Mora (2004) find that both balance sheet and earnings conservatism practices exist in all countries examined, but there are significant differences in conservatism between countries. The market-to-book ratio in the UK is significantly different from the other countries. In all analyzed countries there is a significantly faster recognition of bad news in earnings with respect to good news. Lara Garcia and Mora (2004) indicate that the United Kingdom is the most extreme example in Europe (common-law-based country), which shows greater earnings conservatism than other analyzed countries

Raonic et al. (2004) focused on a different group of companies. They take for their analysis all companies across Europe which have been listed on more than one capital market between 1987-1999 (366 firms and 3 724 firm-year observations) using Basu model to measure conditional conservatism. The three factors considered are: equity market exposure and regulatory environment. Raonic et al. (2004) conclude that capital market pressure and regulatory impact each appears to lead to more conservative accounting.

Bushman and Piotroski (2006) analyzed the period between 1999-2001. They analyzed 38 countries. They used the Basu model in their research incorporating legal and institutional factors as dummy variables. Bushman and Piotroski (2006) find out that in the strong judicial system countries bad news is recognized faster than in countries with lenient judicial systems. Secondly, they find that strong public enforcement aspects of securities law slows recognition of good news in earnings relative to firms in countries with weak public enforcement aspects. In contrast, the private enforcement aspects of securities law have no impact on conservatism. Less conservatism in accounting is observed in countries with greater political involvement and a high risk of expropriation of assets by the state and high state ownership of enterprises

Evidence regarding one of the countries of Eastern Europe can be found in Jindrichovska and McLeay (2005). Jindrichovska and McLeay used the Basu model to measure conservatism in the Czech Republic. They did not find proof for the existence of accounting conservatism in the Czech Republic. This phenomenon Jindrichovska and McLeay explain due to economic transition and regulatory conditions that limit market influences on accounting behaviour.

The most recent paper about Eastern European countries is "Reliability of earnings figures and conservatism in transitional economies" by Martikainen and Tilli (2007). The results of the research show that in Bulgaria, Croatia, Lithuania, Poland, Romania, Russia, Latvia and Slovakia there is conservatism at a significant level. Conservatism in the Czech Republic and Ukraine is insignificant. The research also shows that joining the EU has a significant

positive influence on loss recognition, it means EU members are more conservative than non-EU ones. They also researched the influence of the transition process. They found out that those countries in which progress in the transition process is more thoroughly developed express higher conservatism, at the significant level.

## 4. Hypotheses and research design

### 4.1 Hypotheses development

#### H1: There is unconditional conservatism in post-communist countries

Capitalism has existed in post-communist countries for almost twenty years. During this period these countries were able to create institutional frameworks similar to Western European countries. All these changes allow it to be said that Eastern European countries have already created mechanisms typical for a market economy and that is why I can claim that unconditional accounting conservatism takes place in Eastern European countries.

#### H2: Conditional and unconditional conservatism is stronger in Western-European countries than in post-communist countries

Despite big progress made by post-communist countries in the transition process, full transformation from a command market to a free market economy cannot be done within such a short period of time. The market economy tradition in Western countries was built over decades, and it is not possible to repeat the same process in such a short time. On top of that, some countries like Slovenia or the Slovak Republic did not go through the transition process so fast. consequently it was expected that accounting in post-communist countries is less conservative than in Western European countries.

#### H3: There are differences in the level of conditional conservatism in Eastern European countries

Taking into account individual countries, it is reasonable to say that the countries despite a common communist tradition are different due to differently executed transition process. Countries had different approaches towards carrying out the transformation process. The Czech Republic was the quickest in privatization of state-owned enterprises. Poland chose a more gradual method of privatization, while Hungary tried to attract outside investors, which could buy state-owned enterprises. Beside their different ways of carrying out the transitional process, different factors like the size of capital markets, regulatory frameworks, and tradition (Polish accounting was relatively flexible already before 1990) can also determine dissimilar levels of conservatism in Eastern European countries. Based on the progress in the transitional process, regulatory framework, and the size of capital markets, I can expect that conservatism would be expressed the most in Poland and the lowest level of conservatism should take place in the Czech Republic.

#### H4: Asymmetric timeliness of earnings is higher in the countries with more progress in the transitional process

Progress in the transitional process as shown in various analyses differs greatly (source European Bank of Development and Reconstruction, Structural Change Indicators<sup>□</sup>,

<http://www.ebrd.com/country/sector/econo/stats/index.htm> ). This can have an influence on accounting practices, since countries, which went faster through transitional process have an approach more similar to Western countries, which means that they could demonstrate a higher degree of conservatism.

H5: Asymmetric timeliness of earnings is higher in the countries with higher market exposure

Strong market exposure of companies is connected with the risk of litigation by investors. Companies which are listed on capital markets are exposed to litigation in the event that they mislead investors. Then, managers are especially cautious about their accounting policy. It is expected that higher market exposure causes a higher level of conservatism in accounting.

H6: Asymmetric timeliness of earnings is higher in countries with a strong legal system

I could expect that the extent that the legal/judicial system is conducive to the use of enforceable contracts, there will be higher conservatism, due to a need for verifiable accounting figures by contracting parties. The role of the judicial system is to maintain the enforceability of contracts. This means that countries with a stronger judicial system (which lead to the use of accounting numbers in formal contracts) are characterized by a higher demand for conservative reporting.

H7: Asymmetric timeliness of earnings is higher in countries with strong securities laws

Regulatory bodies are exposed to public judgment, which is more unfavourable in the event of overstatement of accounting numbers than understatement. Then regulatory bodies tend to create laws which encourage conservatism. Furthermore, the costs of strong security law (which regulates relations between market players) are smaller than individual contracts, thus security law responds to contracting incentives. The last, strong security law is connected with some non-criminal penalties but also criminal ones (if it is built into the framework of national law), this causes accounting to be even more conservative. All these reasons lead me to believe that I should expect that the quality of security law is connected with level of accounting conservatism.

H8: Asymmetric timeliness of earnings is higher in countries, where there is a high risk of expropriation

It is claimed, that government aims to control enterprises due to market imperfections such as monopoly power, to provide employment and subsidies. The state wants to control poor performing companies for the benefit of the greater society. I expect that the relation between risk of expropriation and conservatism is positive, so the higher level of this risk signifies a higher level of conservatism in accounting.

H9: Asymmetric timeliness of earnings is higher in countries with strong tax regimes

It was expected that companies in countries with high tax burdens, in order to avoid tax payment will exercise conservatism. In this case I can state the above hypothesis should be true. It is understandable that companies want to avoid paying taxes. In order to diminish the value of income taxes, companies try to underestimate earnings which is characteristic

of conservatism. On the other hand, the situation of post-communist countries is a little bit different, because tax authorities in these countries have a strong position and try to prevent these kinds of practices in companies. This opposite stream in the tax regime of post-communists countries could result in the relationship between tax regimes and accounting conservatism to be opposite to what I expect.

## 4.2 Research design

In the first stage, unconditional and conditional conservatism are measured in Western European countries and post-communist countries as by two pooled samples. The sample of Western Europe consists of companies from France and Germany. For post-communist countries observations from the Czech Republic, Hungary, Lithuania, Slovakia, Slovenia and Poland were taken to do the computation. The Basu model and market-to-book ratio are measures, which were used in this research.

### Accounting conservatism in Eastern Europe. Comparison with Western Europe

In the first stage, two measures of conservatism are used: Basu model and market-to-book ratio.

The model of Basu is used in order to measure earnings conservatism.

$$NI_{it} = \alpha_0 + \alpha_1 DR_{it} + \beta_0 R_{it} + \beta_1 R_{it}^* DR_{it} + \varepsilon_{it} \quad (1)$$

$NI_{it}$  - accounting income (income before extraordinary items)

$R_{it}$  - the return of firm  $i$  over the 12 months  $(P_t - P_{t-1}) / P_{t-1}$

$$DR_{it} = \begin{cases} 1 & \text{if } R_{it} < 0 \\ 0 & \text{otherwise} \end{cases}$$

Measures of conservatism from the regression 1 (Givoly and Hayn, 2000, 293):

- $\beta_1$  - incremental response to bad news relative to good news, conservatism when  $\beta_1 > 0$ ,
- $(\beta_0 + \beta_1) / \beta_0$  the relative sensitivity of earnings to bad news compared with their sensitivity to good news, conservatism when ratio  $> 1$
- $R_{b2} / R_{g2}$  where  $R_{b2}$  -  $R_2$  power of regression in periods of bad news (negative returns);  $R_{g2}$  -  $R_2$  power of regression in periods of good news (positive returns), conservatism when the ratio  $> 1$

In order to measure balance sheet conservatism there is used market-to-book ratio.

$$MTB = MV / BV$$

MV - market value represented by market capitalization

BV - book value represented by shareholders equity

The market-to-book ratio is calculated based on aggregated amounts of market and book value, where market value is sum of market capitalization of all companies in sample and book value is a sum of shareholder's equity of all companies in sample.  $MTB > 0$  indicates the accounting conservatism.

### Influence of institutional factors on conservatism

The Influence of institutional factors on conservative accounting is measured by the incorporation of these variables into the Basu model as a dummy variable. The following model is constructed according to Bushman and Piotroski (2006) research.

After incorporating an institutional factor the Basu model is as follows:

$$NI = \beta_1 + \beta_2 R_{it} + B_{21} CCD R_{it} + \beta_4 R_{itD} + \beta_{41} CCD R_{itD}$$

After transformation, the above equation is as follows

$$NI = \beta_1 + (\beta_2 + B_{21} CCD) R_{it} + (\beta_4 + \beta_{41} CCD) R_{itD}$$

CCD- represents any institutional factor: transition process (TRANSP), equity market exposure (EQMEXP), legal system (LAW), security law (SECLAW), risk of expropriation (PTECON) and tax burden (TAX).

Similar to Bushman and Piotroski (2006), in their research the focus will be on recognition of good and bad news in CCD countries relative to non-CCD countries, so the  $B_{21} + \beta_{41}$  are of great importance.

When  $\beta_{21} \neq 0$  the speed of good news recognition differs in CCD countries relative to non-CCD countries

When  $\beta_{41} \neq 0$  incremental speed of bad news recognition relative to good news recognition differs for CCD countries to non-CCD countries

In the model there are incorporated the institutional settings. Proxies are based on ratings provided by European Bank of Development and Reconstruction and World Bank in its annual reports.

I have analyzed the influence of following factors on conservatism in accounting:

- transitional process (TRANSP)
- equity market exposure (EQMEX)
- regulatory environment (law enforcement) (LAW)
- security law (SECLAW)
- political economy (PTECON)
- tax regime (TAX).

The data for research were extracted from World Scope and Thomson Financial database for the period 1994-2008. Market capitalization was taken as a market value (WS.YR END MARKET CAP) which is Market Price-Year End \* Common Shares Outstanding, book value is represented in database by common equity (TF.Total Common Equity common shareholders' interest in a company), the accounting earnings (NI) are income before extraordinary items (WS.IncomeBefExtraltmsAndPfdDiv- Net Income Before Extraordinary Items And Preferred Dividends), and dividends per share (WS.DividendsPerShare). All accounting variables are scaled by beginning market value of the company (WS.YR END MARKET CAP). Stock returns ( $R_{it}$ ) are computed as  $((P_{it} + Div_{it}) - P_{it-1}) / P_{it-1}$ .

Market-to-book ratio



All companies with missing values are excluded from the research. The number of observations is very low at the beginning of the analyzed period for Eastern European countries. The reason is that at the beginning of 90's securities markets were not developed and some stock exchanges were recently established in post-communist countries. The number of observation for the period 1994-2008 in Eastern European countries is 3.003 and in Western European countries 20.901.

Basu model

The structure of the sample is determined by the size of the capital markets of the analyzed countries. According to market capitalization (World Development Indicators online database), the biggest securities market is in Poland. Budapest and Prague's stock exchanges are similar in the size, and the capital markets with the smallest market capitalization are in Slovakia, Slovenia and Lithuania. This goes together with the structure of the sample. There are 2.161 observations for three Eastern European countries for the period 1994-2008. The data are dominated by Polish companies, which represent 60% of observations. The rest of the countries have the following shares: 18% Czech Republic, 17% Hungary, 0,6% Lithuania, 2% Slovakia and 2% Slovenian companies. Because of the dominance of Polish companies, a reestimation is provided of models excluding Polish observations. There are 18.673 observations for Germany and France for the period 1994-2008

## 5. Results and analysis

### Estimations of accounting conservatism across regions and countries

My research shows that in the Western European region conservatism is stronger than in Eastern Europe for the analyzed period which confirms hypothesis 2 "Conditional and unconditional conservatism is stronger in Western-European countries than in post-communist countries" (regarding the part about unconditional conservatism, later on evidence is provided about conditional conservatism). The results also show that my expectations about hypothesis 1 are true, there is unconditional conservatism in Eastern Europe. The results show also that between the three analyzed countries, Poland has the highest market-to-book ratio, the next one is Hungary and at the end the Czech Republic. Table 1 presents the outcome of the analysis regarding conditional conservatism  $Nl = \beta_1 + \beta_2 R_{it} + \beta_3 D_{it} + \beta_4 R_{it} D$  for the Western European countries and Eastern European countries.

**Table 1. Association between earnings and returns in Western and Eastern Europe**

$\beta_2$ ,  $\beta_4$  and adjusted  $R^2$  presents the results derived from the following model  $NI = \beta_1 + \beta_2 R_{it} + \beta_3 D_{it} + \beta_4 R_{it} D_{it}$ , for country-year observations for years indicated in the first column.  $R_{it}$  bad and  $R_{it}$  good are derived from the models, where bad news (negative returns) are regressed on accounting income and good news (positive returns) are regressed on accounting income. In the last column there is presented number of observations. The values of the first row of each region in the second and the third column present the unstandardized coefficients; values in brackets in the second row are the t-statistics.

Period	$\beta_2$	$\beta_4$	Adj. $R^2$ [%]	$(\beta_2 + \beta_4) / \sigma^2$	$R^2$ bad	$R^2$ good	N
<b>Western Europe</b>							
1994-2008	0.021***	0.309***	10.9	15.71	0.089	0.006	18673
	(7.390)	(28.801)					
1994-2001	0.012***	0.292***	11.9	25.33			9462
	(3.790)	(22.872)					
2002-2008	0.035***	0.310***	10.4	9.86			9211
	(6.927)	(17.754)					
<b>Eastern Europe</b>							
1994-2008	0.050***	0.182***	9.5	4.64	0.035	0.032	2161
	(6.110)	(4.840)					
1994-2001	0.069**	0.325***	10.1	5.71			787
	(2.478)	(4.554)					
2002-2008	0.048***	0.084	9.3				1374
	(6.012)	(1.879)					
<b>Czech Republic, Hungary, Lithuania, Slovakia and Slovenia</b>							
1994-2008	0.115***	0.037	5.1				855
	(3.128)	(1.069)					
2002-2008	0.103**	-0.040	4.1				426
	(2.631)	-(0.296)					

\* significant on the level of 10% confidence level

\*\* significant on the level of 5% confidence level

\*\*\* significant on the level of 1% confidence level

There is evidence that the asymmetric timeliness of earnings (measured by the  $\beta_4$  coefficient) is stronger in Western European countries than in Eastern European countries at the 1% significance level. Results derived in this section regard hypothesis 2:

“Conditional and unconditional conservatism is stronger in Western-European countries than in post-communist countries”. Both types of conservatism show a higher level in Western Europe. The market-to-book ratio is higher for Western Europe than for Eastern Europe in the Basu model’s results I conclude that Western Europe’s accounting is more conservative than Eastern Europe’s accounting. In fact, there is no evidence indicating accounting conservatism in Eastern Europe, when I exclude from a sample Polish observations.

I mentioned in my objectives that I want to use two measures of accounting conservatism in order to check if the chosen methodology influences the results, and secondly if there are differences in the levels of conditional and unconditional conservatism in the analyzed

regions. Although results derived from the period 1994-2008 are similar, when I divide my sample in two periods, the results are opposite. The market-to-book ratio is higher for Eastern Europe than for Western Europe in the second period and results for the Basu model are opposite; the conditional conservatism was higher in Western Europe than in Eastern Europe for the second period. These opposite results I can explain due to a biased measure of the market-to-book ratio (Givoly and Hayn (2000)). I think that the results of the market-to-book ratio in the second period for Eastern Europe are biased by growth opportunities. That is why the Basu model is a better measure of accounting conservatism.

After analysing Eastern Europe as a whole sample, it is interesting to explore countries individually. The number of observations for the Czech Republic, Hungary and Poland allow me to conduct research separately for these countries. Table 2 reveals the outcome.

**Table 2.** Association between earnings and returns in Eastern European countries

$\beta_2$ ,  $\beta_4$  and adjusted  $R^2$  presents the results derived from the following model  $NI = \beta_1 + \beta_2 Rit + \beta_3 Dit + \beta_4 RitD$ , for country-year observations for periods indicated in the first column.  $R^2$  bad and  $R^2$  good are derived from the models, where bad news (negative returns) are regressed on accounting income and good news (positive returns) are regressed on accounting income. In the last column the number of observations is presented. The values of the first row of each region in the second and the third column present the unstandardized coefficients; values in brackets in the second row are the t-statistics.

Period	$\beta_2$	$\beta_4$	Adj. $R^2$ [%]	$(\beta_2 + \beta_4) / \sigma^2$	$R^2$ bad	$R^2$ good	N
<b>Czech Republic</b>							
1996-2008	0.169**	0.123	4.1	-	0.007	0.018	391
	(2.220)	(0.580)					
<b>Hungary</b>							
1994-2008	0.072***	0.046	12.9	-	0.013	0.046	373
	(2.880)	(0.720)					
<b>Poland</b>							
1994-2008	0.032***	0.178***	12.4	6.56	0.038	0.029	1304
	(4.261)	(4.507)					

\* significant on the level of 10% confidence level

\*\* significant on the level of 5% confidence level

\*\*\* significant on the level of 1% confidence level

Comparing Eastern European countries, the first finding is that the timeliness of accounting earnings is the highest in Hungary (Adj  $R^2$ ). Secondly, the incorporation of good news into earnings is the highest for the Czech Republic and the lowest for Poland ( $\beta_2$ ). Further on, only in Poland there is evidence at the 1% significance level that there is asymmetric timeliness of earnings. The results for Hungary and the Czech Republic are insignificant; it means that there is no evidence of asymmetric timeliness for earnings. The relative sensitivity of earnings to bad news compared with their sensitivity to good news is higher than 1 in Poland (the calculation is not provided for the Czech Republic and Hungary, since the coefficients are not significant), and the last measure of conservatism: the relation of the power of the regression in periods of bad news (negative returns) to the power of the regression in periods of good news (positive returns) is higher than 1 only in the Polish case. I believe that there are two main drivers of the results obtained in Table 2. This is the way of handling the transitional process used by post-communist Eastern European countries and the tax regulations in these countries. The results for the beginning of the

analyzed period are determined by the first driver. In the Czech Republic a lack of an institutional framework around the securities market, which developed very quickly, is a reason for the lack of conservatism at the beginning of the period in the Czech Republic and Hungary. Poland had a different attitude. This country firstly developed regulations based on western standards, which some criticized for overambitious goals, because they were difficult to attain for companies which recently started to learn about capital markets (OECD 1998). However, it was probably the most important reason why there was accounting conservatism in Poland and not in Hungary or the Czech Republic. Nowadays, the security market's regulations have also improved in Hungary and the Czech Republic. The results from the Czech Republic are similar to those found in a paper by Jindrichovska and McLeay (2007). They also found evidence that there is no asymmetric timeliness in earnings. The reasons for these particular results are seen in the transitional nature of the Czech market and restrictive tax regulations, which diminish incentives for conservatism. It is worthwhile to note that the Czech Republic has the highest coefficient of stock returns (good news), which indicates that the timeliness of earnings is the highest in this country. This can indicate that strict tax requirements reinforce the incentives of companies to recognize all events in a timely manner. The specific Czech regulations regard limitations on provisioning, depreciation and deferred taxation. Companies that do not fill the requirements (e.g. reduce their tax base) can also face penalties (Jindrichovska and McLeay, 2007). The results for Poland are in accordance with the paper of Jermakowicz and Gornik-Tomaszewski (1998), who researched the relation of stock returns and earnings. They found out that this relation is similar to the mature markets and the results are comparable to the research conducted on the US market by Easton and Harris (1991). The lack of evidence of conservatism in the Czech Republic, even when I take more recent periods into analysis, is driven by a very strict tax system in this country. Overall, I can conclude that in Eastern Europe the main drivers of conservatism are institutional settings (like taxes and securities market regulations). In these countries the costs of establishing adequate regulations by market players are too high (it was hoped that regulations would be established by players in the Czech Republic; this was a mistake and the government realised that this is its role to establish a legal framework and regulatory bodies at the end of 90's). The results regarding Poland, Hungary and the Czech Republic confirm hypothesis 3: "There are differences in the level of unconditional and conditional conservatism in Eastern European countries". These countries, despite their common communist past, differ in the level of conditional conservatism, and these differences result from the diverse way of handling the transitional process and establishing regulations. Poland is the most conservative country while there is a lack of evidence for the existence of conditional conservatism in the Czech Republic.

**Table 3.** Evidence on the influence of legal and political institutions on the asymmetric timeliness of earnings in Eastern Europe

The following table presents select coefficients and test statistics of estimations from the model

$$NI = \beta_1 + \beta_2 Rit + \beta_3 Dit + \beta_4 RitD + \beta_{11} CCD + \beta_{21} RitCCD + \beta_{31} Dit CCD + \beta_{41} DRitCCD$$

The sample holds observations from Czech Republic, Hungary, Lithuania, Poland, Slovakia and Slovenia available for period 1994-2008. In the first rows unstandardized coefficients are presented, the second rows provide t-statistics.

	Good news		Incremental bad news sensitivity		Adj R <sup>2</sup>
	$\beta_2$	$\beta_{21}$	$\beta_4$	$\beta_{41}$	
TRANSP	0.086***	-0.067***	0.369***	-0.328***	10.20%
	(5.355)	-(3.421)	(5.675)	-(3.875)	
EQMEXP	0.045	-0.064	0.242	-0.026	7.60%
	(1.091)	-(0.827)	(1.671)	-(0.574)	
LAW	0.038***	0.028	0.041	0.284***	8.10%
	(3.815)	(1.032)	(0.743)	(3.234)	
SECLAW	0.044	-0.003	0.314	-0.153	7.50%
	(0.425)	-(0.032)	(1.313)	-(0.630)	
PTECON	0.029***	0.069***	0.097*	0.199**	8.80%
	(2.962)	(2.569)	(1.866)	(2.217)	
TAX	0.075***	-0.058***	0.369***	-0.344***	9.10%
	(5.357)	-(3.147)	(5.790)	-(3.992)	

\*\*\* significant on the level of 1% confidence level

\*\* significant on the level of 5% confidence level

\* significant on the level of 10% confidence level

Table 3 provides evidence about the relation of institutional factors and the timeliness of earnings. First of all the results for the transitional process are significant and they show that the transitional process causes lower timeliness of earnings ( $\beta_2$  and  $\beta_{21}$ ) and lower incremental bad news sensitivity ( $\beta_4$  and  $\beta_{41}$ ). This contradicts hypothesis 4: “Asymmetric timeliness of earnings is higher in the countries with more progress in transitional process”. The reason why the outcome for the transitional process is different from my expectations is that there was a negative relation between the development of capital markets and the speed of privatization of state-owned enterprises, which is the main element of the TRANSP proxy. The rapid privatization which was the main indicator of the progress of the transitional process was connected with a lack of setting up proper regulations. On the other hand high standards for securities law was a main driver of conservative accounting. Furthermore, high standards constrained privatization and the development of private enterprises due to difficult access to capital markets, as was the case in Poland.

The results for equity market exposure are insignificant, so the coefficients cannot really be interpreted; the reason why the outcome from equity market exposure is insignificant can be connected to the underdeveloped security markets in the analyzed countries. The securities markets are still unstable and vulnerable to outside factors (Schroder, 2000). This can be a reason why the results are not significant. Further on, in Blommestein’s paper (1998, OECD report) it is indicated that the cost of establishing regulatory bodies and regulations encouraging conservatism was too high. Because market development did

not go alongside the development of regulations. This can also be a reason why despite higher market exposure of the listed companies accounting conservatism was not encouraged. Based on this result I do not find significant evidence, which proves hypothesis 4: “Asymmetric timeliness of earnings is higher in the countries with higher market exposure”.

Table 3 provides evidence that countries with impartial courts (clear legal framework) have a higher incremental sensitivity to bad news. Since the companies face the threat of litigation from investors when earnings are overvalued rather than the opposite, this threat is more probable in countries where the legal system is clear and enforceable. It is reasonable that companies recognize their “bad news” quicker in countries with high legal standards. The result is on a significant level. Furthermore, there is no evidence of the influence of the legal framework on good news sensitivity since the results are not significant. The outcome confirms my expectations regarding hypothesis 5: “Asymmetric timeliness of earnings is higher in countries with a strong legal system”.

There is no evidence about the influence of securities law on the timeliness of earnings, since the results are not significant. However, there is a reason to do some further research by changing the construction of the dummy variable. The way it is done in previous analysis means that there are 79 observations with 0 values of the dummy, and 2080 with 1. This can be a reason for the insignificant results regarding the securities market in the previous analysis. This modification in the construction of dummy variables increases the number of observations with the dummy variable value of 0 to 473. The results after the correction of the SECLAW dummy variable are consistent with the expectation stated in hypothesis 6: “Asymmetric timeliness of earnings is higher in countries with strong securities laws”. Countries with high quality securities laws recognize good news slower, at a significant level. However, based on the results there is no evidence showing how securities laws influence the recognition of bad news since the results are insignificant. The change in construction of the dummy variable improves the result and confirms the hypothesis. The improvement of the dummy variable was certainly justifiable, since previously the observations were in the majority of instances assigned to the high quality of security law, and it was impossible to get significant results.

The results regarding political economy are as follows: The sensitivity of good news is higher in countries with a high risk of expropriation at a 1% significance level. The result shows that companies operating in countries, which have a higher risk of expropriation, incorporate good news faster than countries with a low risk of expropriation. On the other hand, incorporation of bad news is also quicker in high risk of expropriation countries on the significance level 1% and 5%. Because post-communist countries are considered as non-benevolent countries, states which take over companies, that perform well the higher coefficient  $\beta_{41}$  than  $\beta_4$ , confirms that companies in countries with a high risk of expropriation undervalue their earnings by quicker incorporation of negative events. On the other hand, a higher  $\beta_{21}$  than  $\beta_2$  is not consistent with the assumption that Eastern European countries are non-benevolent countries. The results show that countries with high PTECON incorporate good news faster but that the incremental bad news sensitivity is also higher. Then, it is hard to assess which direction the influence of political economy is stronger. Based on the results I can conclude that hypothesis 7 “Asymmetric timeliness of

earnings is higher in countries, where there is a high risk of expropriation” is confirmed, because incremental speed of bad news recognition relative to good news recognition is higher for countries with high risk of expropriation than for countries with low risk of expropriation ( $\beta_{41}$ ).

The findings regarding tax regime are opposite to the stated hypothesis 9 “Asymmetric timeliness of earnings is higher in countries with strong tax regime”, but confirm the expectations about the influence of this aspect on conservatism in post-communist countries. The result verifies that in countries with strict tax regimes, there is no conservatism but rather aggressive accounting (negative coefficient  $\beta_{41}$  on the significant level). It provides evidence that the tax regime has a significant influence on conservatism in post-communist countries, which confirms a brief divagation of Jindrichovska and McLeay (2007) about the reasons for the lack of conservatism in the Czech Republic. However, a high tax burden resulting in slower good news recognition may prove that tax regulation encourages conservatism, as expected by Bushman and Piotroski (2006). Nevertheless, the results show that  $\beta_{41}$  is negative on the significance level of 1%, which does not confirm hypothesis 9: “Asymmetric timeliness of earnings is higher in countries with a strong tax regime”.

## 6. Summary and conclusions

The objective of this research is to analyze conservatism in accounting in the post-communist countries of Central and Eastern Europe, which are members of the European Union and to identify institutional factors which have influenced conservatism in these countries.

I investigated Eastern European countries which have already joined the European Union and had a communist regime in the past. I measured unconditional conservatism using the market-to-book ratio and Basu’s conditional conservatism model. The period of my analysis was limited to the years 1994-2008.

Hereafter, I will shortly recall the results of my research. First of all, my main research question was “Is there accounting conservatism in Eastern Europe?”. After the analysis I conducted I can answer: yes, there is unconditional conservatism in Eastern Europe. On the other hand I found evidence confirming the existence of conditional conservatism in Eastern Europe (including Poland in the sample). I compared the results for Eastern Europe with the results for Western Europe, and I concluded that accounting conservatism is represented more brightly in Western European countries

I also found answers for more detailed sub-questions in my research. Regarding my first sub-question “Does accounting conservatism differ across Eastern Europe?” I found that the level of conditional conservatism differed in the three countries analyzed. My second sub-question was as follows: “Does the transitional process influence accounting conservatism in Eastern Europe?”. Hypothesis 4 was aimed at answering this question. The evidence shows that the progress of transition discourages conservatism. Thus it seems that the regulations are the main incentives for accounting conservatism in Eastern Europe. The results are consistent with the outcome of hypothesis 7 regarding security laws.

My last research sub-question verifies whether institutional factors influence accounting conservatism in Eastern Europe. First of all I did not find significant evidence that equity

market exposure encourages accounting conservatism and I justify this by pointing out the vulnerability of equity markets in emerging markets, which overshadow the results. The second institutional factor which I analyzed was the quality of law. I found evidence that the impartiality of the legal system encouraged conditional conservatism in Eastern Europe, which is in accord with my expectations. After the quality of law I researched another regulatory aspect: security law. In this case I also found that higher standards of security law positively influence the level of conservatism. These outcomes were in accordance with my eighth stated hypothesis. I found that the risk of expropriation by the state discouraged conservatism.

The results for the tax regime's influence on conditional conservatism was opposite to my expectations; however it is justifiable, since high tax burdens are so strong in these countries. This means that companies do not try to underestimate their earnings, but rather they try to recognize them in a timely manner due to the danger of penalties.

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