# THE DEVELOPMENT OF CAPITAL MARKETS OF NEW EU COUNTRIES AFTER THE IFRS ADOPTION

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#### 1. Introduction

Increasing economic globalisation and integration of capital markets push for the introduction of a single set of internationally harmonised accounting standards (Ball, 2006). Accounting harmonisation is defined as a process, which aims at increasing the compatibility of accounting practices by setting bounds to their degree of variation (Nobes and Parker, 2012). International harmonisation of financial reporting is motivated by investors who seek the best opportunities to invest their scarce economic resources.

The investors look for the investments meeting their preferences on return, risk, and liquidity regardless the national boundaries. Financial statements of companies domiciled in a particular country are source of potentially useful information for all investors. However, home agents have better knowledge of local factors shaping the content of financial statements prepared in conformity with national GAAP, which may result in decision-making bias. Foreign investors, being exposed to an information risk, thus require risk premium for their investment (Gordon and Bovenberg, 1996), which increases the cost of capital of home investees. Both parties may profit from the harmonised accounting rules.

On the one hand, investors are able to better assess the profitability and threads of a wider range of investment opportunities. Facing the reduced estimation risk, they are willing to accept a lower rate of return. On the other hand, the adoption of internationally accepted financial standards transmits a significant signal about the investees' reporting incentives (Skinner, 1994; Burgstahler et al., 2006). By incurring bonding costs voluntarily, they commit to prepare financial statements, which are supposed to provide international investors with information useful for their decision-making (Dumontier and Raffournier, 1998). As remuneration, they obtain an access to cheaper capital.

The demand for internationally comparable financial statements is therefore of endogenous nature. At present, the international harmonisation of accounting is represented by worldwide adoption of the International Financial Reporting Standards (IFRS). According to the IASB's statistics, the IFRS were used in 114 jurisdictions as at the end of 2014. Regarding the EU, the process is driven by the Regulation (EC) 1606/2002 on International Accounting Standards. From 2005, companies publicly traded in the EU regulated capital markets are obliged to prepare their consolidated financial statements in conformity with IFRS.

The changeover is connected with material benefits and costs, which are unfolded equally neither across companies, nor countries. The shortcomings in institutional setting may close off all potential benefits from harmonised accounting, which is pertinent mainly for the transition countries. The aim of this paper is to identify absolute and relative winners and losers among new EU member states in terms of the development of their capital market. In particular, we will assess its size measured by a fundamental criterion "number of listed companies".

The paper is organised as follows: Chapter 2 develops the hypothesis, which is tested in Chapter 3 using both the literature review and the analysis of empirical data. Chapter 4 concludes, outlines the main limitation of study, and suggests future direction of research in the field.

# 2. Literature background and hypothesis development

The assessment of outcomes of accounting harmonisation requires the identification of the goals, which impelled policy makers to endorse the adoption of IFRS. Hope et al. (2006) discover that countries with a relatively weak investor protection are more likely to adopt IFRS. Imposing bonding costs, stemming from the switch to high-quality standards, on domestic entities should make capital markets more attractive for foreign investors.

The study of Ramanna and Sletten (2009) evidences that strong economies are reluctant to hand the power over standard-setting to independent international authority. The authors also stress the importance of network effects, which are further elaborated in Ramanna and Sletten (2014). They found out the degree of IFRS harmonisation of a particular country increases in the perceived value of its IFRS network. High value of the network effects may result in adopting the accounting rules, which do not suit well to domestic institutions. In fact, some countries adopting IFRS may do it, even if it means the replacement of local standards of quality superior to IFRS. Political factors and dependence on imports of mineral and other resources could be another reason, why countries adopt IFRS (Alon and Dwyer, 2014).

Ramanna and Sletten (2014) explored that the European Union was the main driver of network benefits from international accounting harmonisation through IFRS. As the IFRS adoption has a wide range of economic consequences, their proper assessment requires a systematic approach. Brüggemann et al. (2013) propose the classification matrix with reference to the goals of the Regulation (EC). They distinguish intended and unexpected economic consequences based on whether they were assumed in the text of Regulation. According to the Regulation, the adoption of IFRS as an exclusive set of accounting standards for European listed companies is supposed to ensure a high degree of transparency and comparability of financial statements, and thus to enhance the functioning of capital markets. In the EU context, harmonised financial reporting is considered as a necessary condition for the completion of the internal market for financial services and free movement of capital. Broad, smooth-functioning and cost-efficient stock exchanges are expected to contribute higher economic growth employment. possible to and "(foreign) investments – employment – growth" is analysed by Procházka and Procházková Ilinitchi (2011).

Based on the classification of Brüggemann et al. (2013), capital market effects are the intended consequences. Those effects are quite extensively scrutinised. The research splits up into two main categories. Firstly, a direct impact on characteristics of capital markets is explored; namely liquidity, cost of capital, bid-ask spread, and development of foreign equity and debt investments are under scrutiny. Secondly, indirect effects include e.g. informativeness of earnings announcements, the analysts' forecast accuracy.

However, the influence of IFRS adoption on quantitative features of capital markets (e.g. the number of issuers; changes in composition of market segments; etc.) is rather undervalued. Furthermore, the research effort is concentrated mainly on former EU-15 countries. New member states are usually out of scope, despite IFRS adoption was expected to significantly enhance the quality of their financial reporting. There are two explanations for this inequality. Firstly, economic power of transition<sup>†</sup> countries is considerably lower in comparison with the old member states. According to the Eurostat, the old countries generate 91,8% of the EU gross domestic product, despite their population creates "only" 79,2%. Moreover, Germany, France, Great Britain, and Italy produce individually

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<sup>&</sup>lt;sup>†</sup> For the purpose of this paper, the transition countries encompass new members from CEE region accessing the EU in 2004 and later (i.e. without Cyprus and Malta). Although some of them are OECD members, their economic and institutional environment significantly differ from the original EU-15 countries' setting, which justifies the usage of "transition countries" further in the text.

more than all 13 new EU states combined. The second reason behind the ignorance of transition countries is insufficient information coverage in databases used for empirical research (see e.g. the comment in Footnote No. 3 by Procházka (2012)). This paper will focus on publicly available data on a fundamental characteristic of capital markets, namely the number of listed companies. The main aim is to evaluate the progression of stock exchanges in new EU states compared to the development in old member states. The results of empirical analysis will be confronted against the principal goal of the Resolution (EC), which strives for the improvement of capital markets in order to attract new investment opportunities. We hypothesise that insufficient researchers' attention to the new member states is a consequence of the relatively low importance of capital markets in these economies.

### 3. Review of relevant literature on capital markets effects of the IFRS

Economic consequences of the IFRS adoption are currently the top area in empirical accounting research. 0 summarises the cardinal recent studies focusing on the impact of IFRS adoption on characteristics of capital markets. The researchers investigate esp. how the harmonisation of financial reporting of listed companies has affected the cost of capital and liquidity of their equity instruments. Furthermore, the influence on analysts' forecast and their accuracy is assessed. The last major stream of research in this area deals with the changes in ownership composition, with emphasis on foreign investors.

Tab. 1. Capital market characteristics after IFRS adoption: evidence from research

| Paper                     | Findings: Cost of capital and liquidity   |  |  |  |  |  |  |  |
|---------------------------|---|--|--|--|--|--|--|--|
| Daske et al. (2008)       | Increase in market liquidity; decrease in cost of capital; increase in equity valuation around IFRS adoption  Positive effects only for the companies with reporting incentives for transparency and countries with strong legal enforcement  Stronger effects identified for the voluntary adopters      |  |  |  |  |  |  |  |
| Lee et al. (2008)         | Significant reduction in the cost of equity capital in countries having high-quality institutions; mixed evidence for countries with low financial reporting incentives and insufficient enforcement  |  |  |  |  |  |  |  |
| Li (2010)                 | Once again, the reduction in cost of capital only in strongly enforcing countries Increased disclosure and enhanced information comparability are the drivers for the decrease in cost of capital   |  |  |  |  |  |  |  |
| Daske et al. (2013)       | Increase in liquidity and decline in cost of capital is present only for the "serious" adopters, but not in case of "label" adoptions   |  |  |  |  |  |  |  |
| Christensen et al. (2013) | Capital market liquidity improved in five countries, which made substantial changes in enforcement regime simultaneously with the IFRS adoption  The change in accounting regime did not affect the liquidity of capital market even in countries, who have strong regulatory and enforcement environment |  |  |  |  |  |  |  |
| Paper                     | Findings: Analysts' following and forecast accuracy   |  |  |  |  |  |  |  |
| Tan et al. (2011)         | IFRS adoption attracts foreign analysts, particularly those from other countries simultaneously adopting the IFRS  Mandatory IFRS adoption improves foreign analysts' forecast accuracy, but not domestic analysts' accuracy  |  |  |  |  |  |  |  |
| Byard et al. (2011)       | Analysts' absolute forecast errors and forecast dispersion decrease only for mandatory IFRS adopters domiciled in countries with both strong enforcement regimes and domestic accounting standards that differ significantly from IFRS  |  |  |  |  |  |  |  |
| Horton et al. (2013)      | Quality of the information environment (including forecast accuracy) increased more formandatory adopters relative to non-adopters and voluntary adopters   |  |  |  |  |  |  |  |
| Paper                     | Findings: Influence of IFRS adoption on investment allocation   |  |  |  |  |  |  |  |
| DeFond et al. (2011)      | Foreign mutual fund ownership grows provided that mandatory IFRS adoption resulted in improved cross-country comparability of financial statements  |  |  |  |  |  |  |  |

| Brüggemann et al. (2012) | Stocks experience a significant increase in trading volume, as global mandatory IFRS adopenhances cross-border equity investments by individual investors  |  |  |  |  |  |  |
|--------------------------|--|--|--|--|--|--|--|
| Florou and Pope (2012)   | Institutional holdings increased for mandatory IFRS adopters; changes occur especially around the first reporting period Institutional investments are concentrated in countries with strong enforcement/reporting incentives and with relatively high differences between local GAAP and IFRS                           |  |  |  |  |  |  |
| Beneish et al. (2012)    | IFRS adoption has a significantly greater effect on foreign debt than on foreign equity investment flows  Post-adoption increases in foreign equity investment are conditioned upon high governance quality; however, the growth in foreign bond investments has occurred regardless the quality of corporate governance |  |  |  |  |  |  |

Source: Authors' review of the extant research

Empirical research provides some evidence that the IFRS adoption contributed positively to the progression of (EU) capital markets. However, the revealed benefits are limited to the occurrence of two concurrent conditions: (a) strong country's enforcement regime; and (b) credible adopters' incentives to report transparently.

Despite the great contribution to our knowledge, research designs of the above papers have some shortcomings, which restrict the feasibility of their generalisation. Firstly, a low number transition countries are included in samples testing cross-country e.g. three in Li (2010), Brüggemann et al. (2012), Florou and Pope (2012), Daske et al. (2013); two in Daske et al. (2008); and even not a single one in (Lee et al., 2008). Furthermore, country-unique studies focusing on empirical exploration of capital characteristics in transition countries are very rare. There is only limited evidence for Romania (Ionașcu and Ionașcu, 2012; Mihai et al., 2012). Secondly, the research deals with changes in economic effects on companies listed in the pre-adoption compared to post-adoption period. However, the studies ignore the possibility that the change in financial reporting regime that followed the announced/completed IFRS adoption:

- may have attracted IPO (i.e. new listings); or
- may have boosted exits from stock exchanges (i.e. delisting).

Therefore, we will investigate an aggregate development of regulated capital markets within the EU, with focus on transition countries. The countries from CEE region are viewed as having underdeveloped institutional framework, which influences the functioning of capital markets negatively. The switch to IFRS, which are generally considered as standards of significantly higher quality than local GAAP, may have contributed the improvement.

#### 4. Empirical data on the EU regulated capital markets

Based on the argumentation above, we will assess whether the adoption of IFRS has had any impact on the size of regulated capital markets in the new EU countries. The size of capital market is approximated by the number of listed companies.

0 captures the development of equity instruments listed on regulated markets of stock exchanges in EU countries from 1995 till 2012. In 1995, the European Commission published a strategy "Accounting Harmonisation: A new strategy vis-à-vis international harmonisation", which expressed a strong EU support to the IASC activities. Five years later, "EU Financial Reporting Strategy: the way forward" communicated a commitment that issuers of securities traded on EU markets would prepare their consolidated financial statements using the same set of financial reporting standards. The Strategy was enacted by issuance of the Regulation (EC) 1606/2002 on International Accounting Standards, which mandated all companies listed on EU regulated markets to prepare their consolidated financial statements in conformity with IFRS for each accounting period starting on or after 1 January 2005.

Tab. 2. Number of listed companies in the EU countries: 1995–2012

| Country     | 1995  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Austria     | 109   | 97    | 114   | 91    | 86    | 99    | 92    | 96    | 102   | 102   | 98    | 86    | 73    | 70    |
| Belgium     | 143   | 174   | 156   | 143   | 250   | 235   | 222   | 153   | 163   | 167   | 166   | 161   | 158   | 154   |
| Bulgaria    | 26    | 503   | 399   | 354   | 356   | 332   | 331   | 347   | 369   | 399   | 398   | 390   | 393   | 387   |
| Croatia     | 61    | 64    | 62    | 66    | 66    | 145   | 145   | 183   | 353   | 356   | 271   | 240   | 209   | 184   |
| Cyprus      | 41    | 120   | 145   | 154   | 152   | 149   | 144   | 141   | 141   | 135   | 128   | 123   | 117   | 111   |
| Czech Rep.  | 1,635 | 131   | 94    | 78    | 63    | 54    | 36    | 29    | 32    | 18    | 16    | 16    | 15    | 17    |
| Denmark     | 213   | 225   | 208   | 193   | 187   | 178   | 179   | 201   | 198   | 216   | 217   | 206   | 186   | 174   |
| Estonia     |       | 23    | 17    | 14    | 14    | 13    | 15    | 16    | 18    | 18    | 16    | 15    | 15    | 16    |
| Finland     | 73    | 154   | 152   | 147   | 142   | 134   | 134   | 134   | 130   | 126   | 125   | 123   | 121   | 119   |
| France      | 450   | 808   | 791   | 772   | 934   | 898   | 885   | 717   | 707   | 966   | 941   | 901   | 893   | 862   |
| G. Britain  | 2,078 | 1,904 | 1,923 | 2,405 | 2,311 | 2,486 | 2,759 | 2,913 | 2,588 | 2,584 | 2,179 | 2,056 | 2,001 | 2,179 |
| Germany     | 678   | 1,022 | 749   | 715   | 684   | 660   | 648   | 656   | 658   | 638   | 601   | 571   | 670   | 665   |
| Greece      | 212   | 329   | 338   | 341   | 339   | 340   | 307   | 318   | 292   | 300   | 296   | 287   | 275   | 267   |
| Hungary     | 42    | 60    | 57    | 48    | 49    | 47    | 44    | 41    | 41    | 41    | 43    | 48    | 52    | 51    |
| Ireland     | 80    | 76    | 68    | 62    | 55    | 53    | 53    | 57    | 60    | 58    | 55    | 50    | 48    | 42    |
| Italy       | 250   | 291   | 288   | 295   | 271   | 269   | 275   | 284   | 301   | 294   | 291   | 291   | 287   | 279   |
| Latvia      | 17    | 64    | 63    | 62    | 56    | 39    | 45    | 40    | 41    | 35    | 33    | 33    | 32    | 31    |
| Lithuania   | 351   | 54    | 54    | 51    | 48    | 43    | 43    | 44    | 40    | 41    | 40    | 39    | 33    | 33    |
| Luxemb.     | 61    | 54    | 46    | 46    | 42    | 42    | 39    | 36    | 34    | 34    | 34    | 33    | 31    | 29    |
| Malta       | 5     | 10    | 12    | 12    | 13    | 13    | 13    | 14    | 15    | 19    | 19    | 20    | 20    | 20    |
| Netherlands | 217   | 234   | 180   | 180   | 268   | 256   | 237   | 226   | 122   | 110   | 121   | 113   | 108   | 105   |
| Poland      | 65    | 225   | 230   | 216   | 203   | 225   | 248   | 267   | 328   | 349   | 354   | 569   | 757   | 844   |
| Portugal    | 169   | 109   | 97    | 63    | 55    | 52    | 48    | 47    | 47    | 49    | 48    | 47    | 46    | 46    |
| Romania     | 7     | 5,555 | 5,140 | 4,870 | 4,484 | 4,030 | 3,747 | 2,478 | 2,096 | 1,824 | 1,824 | 1,383 | 1,267 | 77    |
| Slovakia    | 18    | 493   | 515   | 354   | 306   | 258   | 209   | 173   | 153   | 125   | 107   | 90    | 81    | 69    |
| Slovenia    | 17    | 38    | 38    | 35    | 134   | 140   | 116   | 100   | 87    | 84    | 76    | 71    | 66    | 61    |
| Spain       | 362   | 1,019 | 1,458 | 2,986 | 3,223 | 3,272 | 3,300 | 3,339 | 3,498 | 3,536 | 3,435 | 3,310 | 3,241 | 3,167 |
| Sweden      | 223   | 292   | 285   | 278   | 262   | 256   | 252   | 321   | 272   | 341   | 333   | 331   | 340   | 332   |

Source: The World Bank/World Development Indicators (row "CM.MKT.LDOM.NO")

Above mentioned benchmarks shaping the financial reporting of listed companies in the EU are highlighted in bold in the 0. In 2012, the biggest number of equity instruments was traded on the Spanish capital market. The second largest stock exchange was in Great Britain, followed by France, Poland, and Germany.

Poland is the exception among transition countries; the capital markets in new member states are quite underdeveloped (with Estonia and the Czech Republic being the last, as far as the number of issuers concerns). However, the dynamics over presented period are of higher importance. E.g. in 1995, the second largest capital market (in terms of the number of equity listings) was the Prague Stock Exchange. Similarly, the biggest market in 2000 was in Romania. After the next 15–20 years, those two exchanges are at the rear of the ranking with just a fraction of listed companies compared to the past years.

The drastic drop can be explained with reference to the unique way selected for the transformation of the former state companies in the communism era to a new model based on private ownership. Both Czech and Romanian government opted extensively for the mass privatisation, which led to largely dispersed ownership of companies by millions of people. The following concentration of equity interests came about spontaneously via domestic stock exchanges. The concentration turned to quite rapid delistings (from the RMS market in case of

Czech companies); and relatively slower exits (from RASDAQ market in case of Romanian companies). For the purpose of this paper, this pattern of ownership consolidation cannot be contributed to the IFRS adoption.

On the other hand, the Warszawa Stock Exchange has experienced the strongest growth; the number of issuers has risen by almost 300% from 2002 till 2012. The success might have been a result of favourable institutional factors, including the change of financial reporting regime.

A substantially growing number of issuers (till 2008) can be also witnessed in Croatia. These few examples motivate to analyse the development in each country in detail, because there can be relative winners and losers from the IFRS adoption on cross-country level. Similar findings are expressed by Christensen et al. (2007), who identified uneven cross-sectional dispersion of benefits from the IFRS adoption on company level. Using data of 0, we calculate the relative change in equity instruments traded in each country for two periods:

- the percentage change between years 2002 and 2005 (pre-adoption period);
- the percentage change between years 2005 and 2012 (post-adoption period).

The break-down into two subsamples follows the comments of Christensen (2012) to Kim and Shi (2012) evidence on the voluntary adoption of IFRS. Despite EU announced its intention to mandate IFRS in 2000 and approved the Regulation (EC) in 2002 with effective date from January 2005, only an inconsiderable portion of the EU listed companies voted for quasi-voluntary application of IFRS during the transitional period 2002–2005. Moreover, most of increase shall be attributed to the listings on Neuer Markt Börse Frankfurt (Leuz, 2003; Cuijpers and Buijink, 2005), for which issuers were supposed to submit their financial statements in compliance with IFRS or US GAAP. Christensen (2012) concludes that truly voluntary IFRS adoption was rare. Using the revealed preferences theorem (Samuelson, 1938), we assume that firms affected by Regulation (EC) were reluctant to adopt IFRS earlier than in year 2005, as they perceived the net benefits from early adoption to be negative.

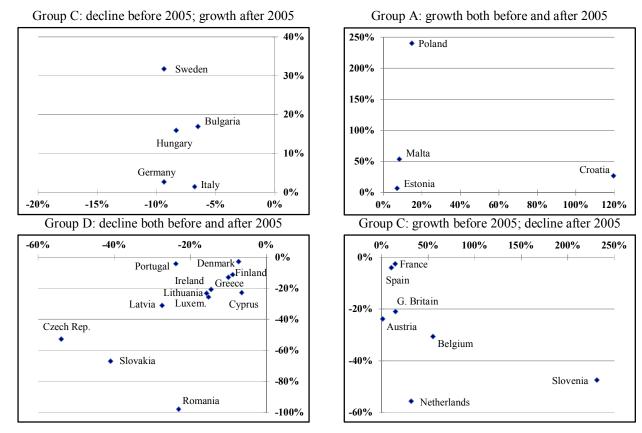
Based on the reasoning above, the splitting of data into two subsets should control over two different factors determining the new listings and delistings. Firstly, the adoption of IFRS meant (a) significantly higher disclosure requirements compared to domestic standards for the majority of EU countries; and (b) relatively high administrative costs (IT systems; staff training; etc.) for the switch and compliance (ICAEW, 2007). This may impel companies to deliberate their abidance at regulated capital markets. The harmonisation of financial reporting may induce explicit and implicit cost pressing companies to exit the capital markets. The delisting is more likely to (a) companies with low reporting incentives and/or (b) countries with strong enforcement regime. These factors are relevant to delisting decisions during the transition period (i.e. between 2002 and 2005), which are mostly influenced by expected benefits and costs of remaining on the exchange.

Secondly, the separate analysis of the changes in the number of listed companies in the post-adoption period allows assessing, whether the IFRS adoption has brought positive or negative effects in particular country. Companies listed before 2005 have already switched to the new system, so there are no implementation costs.

Holding enforcement, institutional, and other economic factors constant, the delisting in post-adoption era is then just the consequence of significant real costs for compliance with high quality standards, which are not accompanied by sufficient benefits. Contrariwise, if the quality of capital markets improves due to the IFRS adoption, new issuers may be attracted to enter the stock exchange with initial public offerings. The changes in size of capital markets measured by the number of traded equity instruments are presented in 0.<sup>‡</sup>

<sup>&</sup>lt;sup>‡</sup> Data on EU-15 countries + Cyprus and Malta are illustrated in the Figure, but not commented at the text, as we focus on the characteristics of CEE countries only.

Fig. 1. Pre- and post-adoption period changes in the number of listed companies



Source: Authors' calculation based on 0

Data are divided into two subgroups. The horizontal axis captures the net growth of the listed companies in period 2002–2005 (i.e. pre-adoption period); the vertical axis represents the development in post-adoption period (i.e. the relative change of year 2012 to 2005). Based on the results, countries are classified into four clusters. Group A contains countries, which could be considered as absolute winners, as they experienced the net growth of listed companies both in pre-and post-adoption period. Poland is on the top of rankings as the number of issuers has risen from 216 to 844 over scrutinised time frame.

The positive development in Croatia might be result of its preparation for the EU accession, which came later than for the rest of CEE countries. Despite included in this group, there is no significant change in the size of Estonian stock exchange, as the number of issuers was very low throughout the whole period – 14 issuers (2002); 15 (2005); and 16 (2012).

The majority of transition countries from CEE region are located in the lower left cell of the matrix (i.e. in Group D), which indicates a drop in traded equity instruments in both sub-periods. The greatest exits of listed companies are documented in the Czech Republic, Slovakia, and Romania, which cannot be attributed only to economic reasons (e.g. concentration of ownership following the mass privatisation). It could be assumed that IFRS adoption in these countries brings unintended negative consequences in terms of large-scale delistings. Lithuanian and Latvian stock exchanges have experienced a slightly better, but still very negative progression, losing almost 50% of issuers compared to year 2002.

The rest of transition economies belong to Group B and Group C. Slovenian stock exchange underwent reforms in segmentation of markets in 2002, which consequently increased the number of equity instruments reported in the World Bank Database in 2003. However, these companies were already present at the capital markets, so the positive movement is just a statistical reclassification. Taking into account further development, the capital market in Slovenia has developed in the same negative way as in the companies under Group D. Mixed evidence is

available for Hungary and Bulgaria. A fall by approximately 10% in pre-adoption period is followed by the net new listings growth (almost by 20%) in the post-adoption era.

To conclude this elementary analysis, Poland is the only winner among new EU countries from CEE region, regarding the size and efficient functioning of capital market in the era of internationally harmonised financial reporting. The Warszawa Stock Exchange is able to attract firms seeking the financing, including foreign issuers. According to PwC (2014), Polish capital market was the European No. 1 in 2012 and No. 2 in 2013 by the number of IPOs.§ On the other hand, there is a large group of companies, which might be considered as denoted as the absolute losers of a battle for benefits from accounting harmonisation, as their capital markets have substantially shrank after the approval of Resolution (EC). This group encompasses the Czech Republic, Slovakia, Slovenia, Romania, Latvia, and Lithuania. The characteristics of regulated capital markets in remaining CEE countries (*i.e.* in Hungary, Bulgaria, Estonia, and Croatia) have not significantly changed over the examined period. Compared to situation in other transition countries, these four economies may be viewed as relative winners, as they manage to avoid a quite massive process of going private.

# 5. Conclusion

The review of extant research, focusing on economic consequences of the IFRS adoption on capital markets characteristics across EU countries, revealed that the process is associated with relatively high benefits in some countries and relatively significant costs in other countries. The findings of archival studies investigating e.g. the change in cost of capital, liquidity, analysts' forecasts accuracy are also confirmed by the analysis of progression of capital markets in terms of their size (measured by the total number of equity instruments traded on particular national stock exchange). Despite simplicity, the measure of size allows identifying the absolute winner with a steadily and hugely increasing number of new issuers, which is Poland. Secondly, we may differentiate the relative winners, i.e. Hungary, Bulgaria, Estonia, and Croatia; their stock exchanges remained relatively stable in period after the approval of Regulation (EC) in 2002. Finally, the biggest group contains absolute losers, as they experienced significant declines in a number of publicly traded equity instruments during the IFRS era.

As far as the contribution to current state of art concerns, the empirical results presented in our paper partly support the findings of studies on relationship between the quality of standards and the quality of financial statements. For example, Skinner (1994); Ball et al. (2000); Ball et al. (2003); Burgstahler et al. (2006); Hail et al. (2010) point out that accounting quality depends on firms' reporting incentives and functional enforcement regime rather than on the quality of accounting standards. A widespread occurrence of benefits stemming from accounting harmonisation is therefore not guaranteed.

This is highly relevant especially for those transition countries, which suffer from low quality of enforcement and insufficient incentives of domestic companies to report transparently. In addition, we provide supportive arguments for the conclusions of Christensen (2012), who argues that research tends to overestimate the benefits and undervalue the costs connected with the IFRS adoption. He concerns primarily about the empirical assessment of outcomes of voluntary IFRS adoption, but his critique may be generalised for the mandatory adoption, too.

Coherence of empirically uncovered effects of voluntary IFRS adoption is mainly restricted by self-selection bias. Voluntary adopters have strong incentives to communicate with public in a transparent manner, including the extended voluntary disclosures and timely recognition of bad news. The transparency is in turn appreciated by investors. The achievement of benefits (lower cost of capital, foreign analysts' following; etc.) by companies, which made a credible voluntary

<sup>§</sup> Their offering values were rather lower than IPOs on EU-15 markets; therefore WSE is ranked 4 and 5 by the money value of IPOs.

commitment to adopt high quality standards, such as IFRS, is then of endogenous nature and self-explaining. Research design must therefore incorporate certain dummy variables and employ other procedures in order to control over this self-selection bias and to get robust results. On the other hand, companies' reporting incentives are not a cardinal problem, when analysing the consequences of mandatory IFRS adoption, as all affected companies had to skip to a new reporting system compulsory and at the same time. The empirical research compares the selected characteristic in pre- and post-adoption era after controlling for concurrent events to avoid the distortion of results because of "seeming correlation". In order to avoid this distortion and/or to get more robust results, a comparative sample of non-adopting countries is used to control for other factors than the change in financial reporting standards (e.g. to control for the development of enforcement regime).

However, the inclusion of non-adopting countries as control group does not solve the main problem with the selection of affected companies in adopting countries. The transition from domestic GAAP to IFRS did not happen overnight. A relatively long transitional period (from the decision in 2002 to the effective start in 2005) provided companies with the opportunities to estimate the impacts of IFRS adoption properly and to accommodate to the changeover. Some entities decided to stay publicly traded; others selected to exit capital markets, as going private could have been the only vital solutions how to avoid expected net costs to comply with new reporting standards.

Although economically rational on individual level, this kind of behaviour can have troublesome implication for research, provided that delisting is undergone by significant number of companies. Companies, which opt for delisting during the transition period, did not become mandatory adopters. Consequently, they cannot be included in the sample of companies, for which the impact from mandatory adoption was investigated. Let us suppose that a research study detected that IFRS adoption had reduced the cost of capital of companies listed on particular stock exchange.

Even if the sample captured the whole population of companies listed on that exchange in the post-adoption period, the empirical results cannot be generalised by arguing that IFRS adoption has enhanced the capital market characteristics. If companies decided to go private during the transitional period because of expected negative impact from the IFRS adoption on cost of capital (e.g. lower profits may violate debt covenants, decrease dividends, etc.), then their omission in sample produces partially incorrect findings about the real effects of IFRS adoption. This remark is relevant especially for countries clustered in Group C (including Germany, Italy) and Group D.

However, there are important limitations to our study. Firstly, it deals with aggregate figures on net increase/decrease in number of listed companies. A proper analysis would require a further break-down on new listings and delistings, which should help in identifying the individual incentives for entering/exiting the capital markets before and after IFRS adoption. Splitting-up is also necessary for resolving the methodological issue described above. Secondly, our elementary analysis assumed other factors (e.g. economic growth; strength of enforcement regime) stable over the whole period, which is not true. The influence of other factors than accounting standards on capital markets should be addressed in future research. Thirdly, more representative results require the comparison of progression in transition countries with the development in EU-15 countries. Furthermore, the specifics of each country regulatory system (including the distinction of strength and credibility of reporting incentives among countries) shall be incorporated in the analysis. Finally, the cross-country impacts of IFRS adoption on the capital market size shall be measured more exactly, using the common econometric approaches (incl. regression model), both on individual and aggregate level. Robust findings would require scrutinising other variables and their relevance (e.g. market capitalisation; trading volumes; etc.).

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## **Summary**

From 2005, the EU listed companies are obliged to prepare their consolidated financial statements in conformity with IFRS, which are viewed as high-quality financial standards (Leuz, 2003). To comply with the increased disclosure requirements, companies have to incur significant costs.

However, the benefits from harmonised financial reporting are available only to those entities, which have serious incentives to report transparently (Daske et al., 2013). The benefits and costs following the changeover to IFRS are therefore neither unfolded equally across companies, nor countries. Empirical research (e.g. Lee et al., 2008; Christensen et al., 2013) reveals that the shortcomings in institutional setting may close off all potential benefits from harmonised accounting, which is pertinent mainly for the transition countries.

The aim of this paper is to identify absolute and relative winners and losers among the new EU member states in terms of the progression of their capital market. The particular focus is put on the capital market size measured by a simple criterion "the number of listed companies" and its changes in transitional and post-adoption period. The splitting into two subsets enables to eliminate the influence of different of time-series reporting incentives from the effects of change in reporting regime. As an unintended result, the paper's empirical findings raise some doubts about the appropriateness of certain research designs for assessing the economic consequences of mandatory IFRS adoption.

**Keywords:** mandatory IFRS adoption; capital market development; transition economies.

JEL classification: M41, F21, G15 **UD classification:** 336.76 (061.1)

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