Master Thesis

Economic Consequences

Did the introduction of IFRS affect the decision-making behaviour of investors?

Student: Olga Grigorieva (289984)

Supervisor: Prof. Dr. M.A. van Hoepen RA

ERASMUS UNIVERSITY ROTTERDAM

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1 Executive summary

This work investigates the behaviour of investors on five European markets – in France, Germany, the Netherlands, Sweden and the UK in order to answer the question whether an introduction of an accounting reporting standard causes economic consequences. The underlying question of which is whether the International Financial Reporting Standards (IFRS) introduction impacted the decision making behaviour of investors. I use the cost of equity capital as a proxy to analyse the change in the conduct of shareholders. The choice of this proxy is also supported by the Capital Asset Pricing model (CAPM) which provides the formula for the return which investors aim to receive.

I construct a main sample of 4039 company-years in five countries over the period 2001-2007. This sample includes both IFRS early adopters and IFRS mandatory adopters. The approach for the benchmark is quite unique. I look at the development in national accounting standards by identifying the critical changes mainly in the area of disclosure. The outcome of this review grounds the idea that the benchmark may consist of stock exchange listed companies which continue following the local accounting standards after 2005 constructed virtually. In my thesis I give some thoughts on how to build the benchmark sample based more on calculation which can be used for further research.

I base the fundament of my research on the logical chains between the introduction of IFRS and the behaviour of investors. The literature supports the logic that IFRS delivers higher quality disclosure, which in its own turn, lowers the level of information asymmetry on markets and, which provides more trust among investors resulting in the reduction in the cost of capital.

Having investigated the cost of capital, my results reveal that, first and more importantly, there are evidences that investors are prepared to require less cost of equity capital from IFRS adopters than from non-adopters. These results are supported by two statistical methods (mean comparison t-test and regression analysis). Firms benefiting from the lower cost of capital are able to organise more efficient internal and external operations which positively influences the economy.

Second, based on my findings, I can say that the stockholders' behaviour is different per legal origin. Investors in common law countries (for instance, in the UK) reduce the cost for IFRS adopters in larger extent than investors in civil law countries (for instance, in France or in Germany). Last, I find that firms-IFRS adopters in the countries with weak institutional infrastructure have more advantages in the cost of capital aspect then firms-IFRS adopters in the countries with strong one.

What makes this research unordinary is that the investigation is extended to three years after the mandate date (1st January 2005) when IFRS became the only accounting standards for European publicly traded companies to prepare their consolidated financial statements. Previous studies are limited to either before the IFRS introduction or one year after (2005).

Key words: *International Financial Reporting Standard (IFRS), GAAP NL, GAAP DE, GAAP FR, GAAP UK, GAAP SE, legal origin, cost of equity capital, institutional infrastructure.*

2 Introduction

We cannot deny that the accounting standards play more and more crucial role in our life. After the accounting scandals with Enron, Worldcom, Parmalat, Tyco International etc and the recent one - Satyam Computer Services - even people far from the accountancy field become familiar with some accounting principles and the importance of the accounting for corporate business. Accounting is (mis)used to commit a crime, and at the same time the accounting standards and rules are used to prevent it. In the time of economic downturn which started in 2008 we can hear more and more accusations against the current accounting principles and at the same time economists, politicians and public look at standards-setters as one of rescuers who are able to find the solutions to stabilise the current economy. An introduction of a new accounting regulation is named as one of them.

Any new accounting standard cannot be considered separately from economy and it also obviously brings along the consequences from its implementation. Before a new accounting standard can be introduced, it is worth considering the economic consequences of previous accounting standards.
According to Zeff (1978, p.56) under "economic consequences" one can understand "the impact of accounting reports on the decision-making behaviour of business, government, unions, investors and creditors". Thus, accounting standards setters must take those effects into consideration when issuing accounting principles, Zeff continues in his article "The rise of economic consequences". He also stated in 1978 (p. 56) that "the subject of social and economic consequences has become *the* central contemporary issue in accounting". It makes the research on the economic consequences of an accounting standard an interesting and modern topic nowadays.

As of 1st January 2005, the European Union (EU) listed companies are obliged to apply International Financial Reporting Standards (IFRS) developed by the International Accounting Standards Board (IASB), in their consolidated financial statements. Since that time more than 100 countries have applied IFRS reporting or decided to move to it in the near future.
The goal of IFRS is to establish accounting quality, provide comparability and transparency of financial reporting around the world; thereby facilitate cross-border financial transactions, contribute to efficient and cost-effective functioning of capital market and suit the needs of a dynamic business environment. IFRS was the recent international standard which was mandated in one of the global markets – the EU. In this study I will look at the economic consequences of this accounting standard.

As I am interested in investigating the overall effect of IFRS on the decision-making behaviour of one of the listed stakeholders, my preference goes for investors. They are the main players on capital markets which, with no doubts, can bring the most significant consequences to the global economy. Having said so, I assume that observations or better to say the empirical investigation of the impact of IFRS on the decisions of this market player would give more "natural" results of market response and hence show more significant economic effects. I will elaborate on these thoughts further. On top of that, the research on the economic consequences of an accounting standard introduction as the result of the change in the behaviour of investors will involve study on two domains – accounting and finance.

Although the impact of accounting reports on the decision-making behaviour of business (or management) is present, it is not significant for the whole economy. For instance, Hail and Leuz (2007, p. 11) also identified the management impact on the economic consequences as indirect and exclude it from their study. More serious accounting report requirements would force management to prepare more transparent and reliable financial statements with better quality disclosure and hence improve management's decision making according to the agency theory. These improvements would not, however, be a driver for the big effects on capital markets. They are not going to

influence in direct way e.g. the cost of capital and liquidity on those markets. This observation is also supported by the previous studies (e.g. Lambert, 2001; Lambert et al. 2007).

The influence of accounting reports on the decision-making behaviour of the government may have noticeable results on markets. It can be reasonable to assume that particular government interests and decisions are already incorporated in the accounting regulations. As Deegan and Unerman (2006, p. 75) state, "... financial accounting affects the distribution of wealth within society it consequently will be political". It is quite challengeable, I think, to find out a proxy to estimate the economic consequences on the decision-making behaviour of governments because it could be subjective to some extent.

The study on the impact of an accounting standard on the decision-making behaviour of units is assumed to be limited by looking at the economic consequences of one-two particular IFRS standards which have significant influence for e.g. the labour force.

The transparency and international standard following are the reasons to change the decision-making behaviour of creditors (banks and other financial institutions) leading in e.g. the reduction of the interest rate spread (because of the ability to understand and compare the corporate financial reports) and, in its turn, the reduction of the debt cost of capital. Although the corporate budgeting with more debts may seem to be more attractive, companies should care about the leverage ratio and take no more risk on their balances. I see that the influence of IFRS on the decision-making behaviour of creditors can be limited for the economic consequences as the whole.

Therefore in this study I focus on the impact of an international accounting standard on the decision-making behaviour of investors.

The observed period for this study is 2001-2007. The beginning of the period is linked to the full year after the announcement of an important draft regulation in June 2000 by IASB about the compulsory adoption of IAS standards on 1st January 2005 as the international accounting principles for public traded companies in Europe to prepare their consolidated financial statements. The end date of the period is linked to the last complete year before the financial crisis. The data obtained during the economic downturn might influence the overall results and conclusions and thus might not support the main goal of this research.

The main sample for the research is constructed from publicly traded companies in some European countries: France, Germany, the Netherlands, Sweden and the UK. This choice is based on the fact that these countries are representatives of different legal origins (reflecting different cultures, history and social values), have strong economies; and their market indices developments have significant influence on global economy. In my paper I will return to this subject in several sections.

Although IFRS became mandatory in the EU in 2005, some companies applied these standards far time beforehand. They are so-called voluntary adopters. For the comprehensive investigation of the impact of IFRS I will scope this group as well.

An important conclusion of this research is whether or not IFRS impacted the decisions of shareholders, and, in case of the observed impact, the next important question is –what is the impact and how to classify it.

The research question of this work will be formulated as follows:

Did the introduction of IFRS affect the decision-making behaviour of investors on EU markets?

This research analyses the economic consequences - the impact of IFRS on the decision-making behaviour of investors. The conceptual framework for it contains the chain of evidences (from previous studies) and theoretical links. Going through the pieces of the chain shows us the impacts of IFRS on disclosure and transparency, disclosure on information asymmetry, information asymmetry on investors' decisions which may influence, in their turn, capital market factors. The capital market factors are measured by cost of capital in this research and tested by means of the empirical analysis. The significant attention is paid in the literature review to the potential incentives of investors to change their behaviour.

The remainder of the paper is structured as follows. Section 2 reviews the literature. Section 3 develops my hypotheses, describes the sample selection procedure, time period and theoretical framework for the empirical test. Section 4 discusses my methodology of estimating changes in economic consequence proxy (cost of capital) by presenting the information about the methodology of the research. The main findings about the economic consequence effects of the IFRS introduction are in Section 5. Finally, conclusions and implications are summarised in Section 6.

3 Literature Review

This section provides the academic literature review relevant to the research. The section Conceptual outline gives more background on links between several events which form the theoretical fundament for my practical research. In this section I also review the mandatory disclosure and economic theory about the cost of capital.

Previous studies suggest that the change in the capital market is the result of the impact of the new accounting standard on the decision making process, namely, of investors. In the section IFRS: the impact on investors' decisions I look at how IFRS impacts decisions of investors and what incentives investors may have to change their behaviour. I designate one chapter to the differences between two international standards US-GAAP and IFRS. Some public companies followed US-GAAP before the IFRS adoption and this might bring specifics in the research. Therefore I consult appropriate papers in this field in the existing literature.

In my research I look at several countries from different legal origins to see whether the legal origin has influence on the capital market factors improvement. The section "The impact of legal origin on international accounting standards" gives more background on the legal origin theory.
The approach for this research is virtually made – the benchmark is created based on the theoretical assumptions and investigations of developments in IFRS and local standards. The chapter Conceptual framework contains the analysis of similarities and differences in IFRS and local GAAP's through the period 2001-2007.

3.1 Conceptual outline

3.1.1 The link between disclosure and information asymmetry

Needless to say, the disclosure is the central topic in the accounting and in the explanations of the link between financial reporting, accounting standards and the economic consequences (Verrecchia, 2001).

I use the definition of disclosure from Hail and Leuz (2007, p. 8), who identify it as all forms of corporate disclosures including firms' annual, internal and press release reports. Information asymmetry arises when one or more investors hold private information about a company's value. In its turn, information asymmetry establishes an adverse selection issue in the market when informed investors use this private information for the trade. (Brown and Hillegeist, 2007).

Economic theory reveals that the increasing commitment by a firm to higher quality of disclosure should lower the information asymmetry between managers and outside investors. This effect should increase the willingness of investors to enter into a trade. On top of that, as the literature review shows, good quality financial reporting can reduce the non-diversifiable risk and also improve the risk diversification on markets, which should help to lower the firms' cost of capital. (Hail and Leuz, 2007). A brief sketch of this theory can be explained by using the work of Leuz and Verrecchia (2000). Information asymmetries between buyers and sellers add costs into transactions by adverse selections of shares; this reduces market liquidity (the ability to easily convert assets by buying or selling without a significant move in price and with minimum loss of value). Investors compensate for holding shares in illiquid markets by adjustments of share prices. To overcome the reluctance of potential investors, firms issue capital at a discount, leading to higher cost of capital. Thus information asymmetry proxies should reflect, among other things, firms' accounting quality (Leuz, 2003).

Brown and Hillegeist (2007) go even further in their search expending the question *whether* the link between disclosure and information asymmetry exists to the question *how* they are related. The finding supports, in first place, the theory that disclosure quality is negatively correlated with information asymmetry and, secondly, their relationship is based on the reduction of the likelihood that investors use private information in their trading. The research also suggests that disclosure quality is linked to the cost of capital through its influence on information asymmetry. The same argument can also be found in the work of Verrecchia (2001). He calls transaction costs as the information asymmetry component of the cost of capital, which companies should pay to accommodate the adverse-selection problem in markets. Subsequently, it is beneficial for firms to diminish the information asymmetry ingredient of the cost of capital. How can they do this? The obvious way is to commit to a high level of disclosure by using an accounting standard with strict requirements towards disclosure. (Verrecchia, 2001, p. 165).

Verrecchia (2001, p. 172) states that "while this essay reviews a variety of work that has attempted to link efficiency to disclosure, either in the context of social welfare or single-firm efficiency, in my opinion the one with the greatest potential is the link between disclosure and information asymmetry reduction." In that paper Verrecchia calls the information asymmetry reduction the vehicle that integrates the efficiency of disclosure, explanation for the disclosure incentives and a process which involves the interaction between individual and diverse investors.

3.1.2 The link between information asymmetry and investors' behaviour

Healy and Palepu (2001, p. 408) investigate the information problem intensively. According to them both investors and entrepreneurs are rational and value investments on their own information. Because of the information problem investors undervalue or overvalue stocks relative to the information available. Together with Kothari (2001) they conclude that regulated financial reports provide new and relevant information to investors.

From the work of Glosten and Milgrom (1985) it is possible to see that uninformed investors fear that other investors are better informed. Those better informed investors will sell (or buy) at the market price only because they have superior information and know that the price is currently too high (or too low). From this effect, Hail and Leuz (2007, p.8) argue that "the uninformed investor lowers (increases) the price at which he/she is willing to buy (sell) to protect against the losses from trading with an informed counterparty". This price protection mechanism for buying or selling shares introduces a bid-ask spread into secondary share markets. Also the reduction in the number of traded shares can be named as one of the potential consequences. Hence, the information asymmetry can be the cause of the liquidity issue and the price impact.

The effect of the reduction of information asymmetry as the consequence of the high quality corporate disclosure is twofold (Verrecchia, 2001). On one hand, in the situation of plenty of public information it becomes more costly and time consuming to find private information. This will lower the chance of trading with a better informed counterparty. On the other hand, more disclosure will give better estimation of a company market value and, hence, will decrease the value of extra information. Both cases will make investors to think about the reduction of price protection.

There is another side of the adverse selection which might influence the decision of investors and demand a certain price for the inefficient asset allocation. Gârlenau and Pedersen (2004), who extensively observed the allocation inefficiency related to adverse selection, demonstrate that in equilibrium, investors wish to be compensated for the inefficient allocation of securities on markets.

Hail and Leuz (2007, p. 10) argued that there is a direct link between reporting quality and the cost of capital, without any reference to market liquidity. In this observation they use the model of Merton (1987) where investors possess incomplete information and have a lack of knowledge of all companies in the economy. By means of disclosure the less-known firms can introduce themselves to the investors. As the result, the investor base is enlarged and, hence the risk sharing is improved and the cost of capital becomes lower. This effect is more significant in case of smaller and less known firms without analysts following.

One can recognise this effect also in an international context. Yet, investors are not eager to buy shares from foreign firms, especially when these firms comply with unknown local accounting regimes. Thus switching to an internationally accepted accounting standard (such as IFRS) should enlarge the investor base and improve risk-sharing, resulting in lower cost of capital in the global economy.

Another aspect which is also worth mentioning here is that an international reporting (such as IFRS) will lower the costs of firms' comparison across markets (Hail and Leuz, 2007). It should go without saying that the level of information disclosure does not play a significant role to support this argument. Financial statement provides more useful data to investors leaving the possibility for the latter to analyse and understand the level of disclosure a company announces.

Summarising, it is reasonable to say that the elimination of information asymmetry and adverse selection leads to the improvement of market liquidity, firm value assessment and risk-sharing which are all good arguments for investors to consider change in their behaviour which might result in lower cost of capital. However, I must admit that this is what the theory tells us; the investigation on the cost of capital is a purely empirical test, and so far the studies are unable to give significant results to strengthen this statement. According to Hail and Leuz (2007, p. 30), "the evidence on mandatory IFRS reporting is still in its infancy".

3.1.3 Mandatory disclosure

Academic literature supports three arguments to justify mandatory disclosure (Hail and Leuz, 2007, p. 14).

The first is that the existence of externalities (both positive and negative) is considered as the ground for a mandatory disclosure regime. For instance, the information disclosed by one company can be useful for investors to valuate other companies, especially in the same industry (positive externality). Also an overload of disclosure or, in contrary, a lack of disclosure may be desirable or not for a society (negative externality).

The second argument states that mandatory disclosure represents a "commitment device" (Hail and Leuz, 2007, p. 14) which forces companies to disclose the information in good and bad times. Thus, a mandatory regime minimizes the disclosure manipulation. The above argument alone does not justify mandatory disclosures, because firms might stick voluntarily to such commitments. If there are disclosures that all firms can provide voluntarily, by lobbying with a regulator, than the mandatory regime can provide commitment at lower costs. This requirement saves firms the agency costs of negotiating disclosures with outside investors (Mahoney, 1995). Mahoney (1995) argues also that "agency information", i.e. disclosure about related party transactions, underwriting fees, and self-dealing, has this feature as it addresses agency problems that arise in almost all securities offerings. In contrast, information that primarily helps investors to project future cash flows and value the firm is likely to be highly company specific and hence should be discretionary.

In their third argument Hail and Leuz (2007, p.15) argue that it is almost impossible for a company to accomplish a cost effective level of disclosure commitment on its own. Managers can deviate from the owners' disclosure policy (by withholding information), because the penalties of private contracts between the management and the owners to provide a certain level of disclosure to the investors are limited, in general. When a firm in this situation raises capital, outside investors are aware of these incentives, and they will raise the cost of capital. This implies that owners suffer from providing a credible commitment and possible agency problems. Thus, a mandatory disclosure regime can be beneficial if it offers any access to the penalties that is not available to private contracts (Hail and Leuz, 2007, p.15).

Shareholders and insiders can have incentives for a lower level of disclosure to gain private benefits. They will not have voluntary commitments, even when it increases firm value or lowers the cost of capital. Outside investors try to protect themselves from such situation by lowering stock prices. This behaviour can be costly to the economy as a whole.

In my research I distinguish between two types of companies – early adopters and mandatory adopters. One of the reason lies in the fact that, as is stated by Leuz and Verrecchia (2000, p. 94), there is a big difference between mandatory and voluntary disclosures. The mandatory disclosure (or commitment) is the decision of a company on what will be disclosed before the information is actually known (*ex ante*); whereas the voluntary disclosure is the decision of a company on what will be disclosed after the information is known (*ex post*). It is obvious that the relationship between the mandatory disclosure and the capital market factors like costs of capital will be stronger than in the case of voluntary disclosure. Commitment is the requirement to disclose the information despite of the content of this information.

3.1.4 Economic theory about costs of capital

According to the economic theory, "the (equity) cost of capital is the expected return of other investments available in the market with equivalent risk to the firm's shares".

(Berk and DeMarzo, 2007, p. 246)

Cost of equity = Risk free rate of return + Premium expected for risk (1)

The Capital Asset Pricing model (CAPM) allows determining a theoretically appropriate price of an asset, for example, a security. Investors would expect to receive the return equals to:

$$\mathbf{R_E = R_f + \beta_E \times [E(R_M) - R_f],} \quad \mathbf{(2)}$$

where:

R_E = The expected return on equity;
R_f = The expected risk-free return in that market;
β_E = The sensitivity to market risk for equity;
$E(R_M)$ = The expected market return on equity;

The above stated relationship (2) for the equity cost of capital, as the direct result of the CAPM model, is known as the security market line (SML)[1].

[1] Security market line (SML) is a positively sloped straight line displaying the relationship between the expected return and beta. (Ross et al., 2000, p.404).

It is worth mentioning that the expected risk on each type of investment is proportional to its beta (β_E). In other words, beta is the expected percent change in the excess return of a security for a 1% change in the excess return of the market portfolio (Berk and DeMarzo, 2007, p. 308). Beta also identifies the systematic risk of the asset relative to average, where the systematic risk is the one that influences a large number of assets, each to a greater or lesser extent.
The difference between the market return and the risk-free return in the market, ($E(R_M) - R_f$), is termed as the *market risk premium*[2].

"The market risk premium of a security represents the additional return that investors expect to earn to compensate them for the security's risk" (Berk and DeMarzo, 2007). Indeed, if an investor having a security in possession (a stock or a bond) feels that the possibility exists that it would be difficult to liquidate this security position because of shortage of buyers on the market then this investor would demand a higher market risk premium to compensate for this risk.

The assumption is made that the adoption of an international accounting standard, such as IFRS, makes investors willing to pay a smaller market risk premium which reduces the cost of capital in the capital market.

I will elaborate on the aforementioned statement using the findings of the research of Lambert et al. (2007). By means of a model which they build and which is in line with CAPM, they observe that the quality of accounting information could affect the cost of capital. In their model they use the term "cash flow" instead of "return" which allows one to come to the conclusion that "higher quality information reduces the assessed *variance* of a firm's cash flow" (Lambert et al, 2007, p. 387). This happens because the higher quality accounting information changes the perception of market participants – investors in large extent – about the distribution of future cash flows. Also they show that the increase in the quality of a company disclosure influences the expected *covariances* with cash flows of other firms. This change will support the movement of a firm's cost of capital towards the risk-free rate meaning that the market risk premium would tend to zero. The covariance is a forward-looking factor which is determined based on the information available on the markets. That is why the quality of the information has direct impact on this parameter and, hence, on the cost of capital. Also I would like to repeat the words of Lambert et al. (2007, p. 404) who make a clear statement about the link between the information and decisions - "clearly, decision makers in an economy make decisions on the basis of the information they have available to them. If this information changes, so do their decisions".

3.2 IFRS: the impact on investors' decisions

"Although accounting should not in itself drive investment decisions, it is certainly one of the core sources of economic data that influences investment thinking".

(Antill and Lee, 2005, p.22)

Antill and Lee in their article "Investment Implications of IFRS" (2005) focus on the implications of IFRS for investors and decisions taken by investors in the situation of a new accounting standard.

[2] Market risk premium is the slope of the SML, the difference between the expected return on a market portfolio and the risk-free rate (Ross et al., 2000, p.404).

The authors continue their article with the analysis of different implications of IFRS and possible reaction of investors to these implications. The article concludes that after the transition period of IFRS investors would be up to speed with the new standard and would definitely benefit from clear and standardised reporting. They would benefit from investing overseas, especially. The second major advantage is that investors would bear relatively less risk than before.

According to Ball (2006, p. 15), equity investors have five direct advantages from the implementation of IFRS:

1. Investors can benefit from more accurate, comprehensive and timely financial statement information of IFRS than of the local GAAP it replaces. When the financial statement information was not known from other sources this leads to better awareness in the capital markets and hence to lower risks for investors;
2. Small investors can reduce their risk when trading with more professional, and better-informed investors (adverse selection), because the small investor is less capable in gathering information than a large investor;
3. Following IFRS leads to more comparability internationally. This reduces cost for investors because they do not need to analyse different accounting standards, to be able to compare the value of different equities;
4. The previously mentioned cost reduction increases market efficiency, resulting in better stock prices. Most investors are expected to gain from this increased efficiency;
5. Less accounting standard differences may result in growing cross-border acquisitions, rewarding investors to have better take-over premiums.

In the same article Ball (2006, p. 16) also notes some *indirect* advantages for investors from the IFRS introduction:

1. The transparency of IFRS reporting and higher quality disclosure pushes the agency costs between shareholders and managers down. Managers have more incentives to behave in the interests of shareholders;
2. More timely loss recognition could lower the costs of debt, resulting in a possible gain for equity investors (by reduction of the cost of debt capital);
3. One direction of thought is that the IFRS effect allows investors to forecast earnings in more accurate manner because better accounting standard makes that reported financial statements better reflection of a firm's value. Another direction of a thought (a disadvantage for investors) is that managers' intention to lower the volatility (by smoothing) of equity is not realised under a better accounting regime. With IFRS earnings are more informative, but also more volatile, and therefore earnings forecasting is more difficult.

Hail and Leuz (2007) put forward another argument that the potential effect of mandatory IFRS reporting may facilitate international investments and synergy of capital markets. The standardisation of accounting rules simplifies the decision for international investors to put their money abroad. Such behaviour of investors would lead to enlargement of investor base and hence to better risk sharing, increase of liquidity and decrease of costs of capital (Covrig et al., 2006).

An analyst from KPMG also suggests that investors won the prize in the form of IFRS. According to Barrett (2005, p.12) when IFRS evolves it will assist investors better in their valuation decisions on performance of companies across the countries and the industries.

3.3 IFRS (IAS) versus US-GAAP

In this section I explain some differences and similarities between IFRS (or its precursor IAS) and US-GAAP.

Leuz and Verrecchia (2000) compare two accounting standards: IAS and US-GAAP in their study on the capital factors development for German listed companies in 1998 who switched from local GAAP into one of the international standards (either IAS or US-GAAP). They come to conclusion that: "[… we are] unable to find significant differences across the two accounting standards, suggesting that it is the commitment to increased disclosure and not the standard per se that matters" (Leuz and Verrecchia, 2000, p. 111). However, as the test was made with a very small sample, the authors warn to take these results with caution.

The research of Beuren et al. (2008) on differences of IFRS and US-GAAP of British companies quoted on the London stock exchange shows that there is difference in financial economic indicators depending on the standard which is adopted by a company. The study is limited to one year - 2005. However, the regression and correlation analyses show that the difference comes not from the standards itself.

Callaghan and Treacy (2007) make detail analyses of two reporting standards of IASB and FASB and conclude that despite the effort of two accounting boards to converge EU and American standards, the important and significant differences still exist.

Daske (2006) examines the capital market benefits for companies which adopted IFRS or US-GAAP in 1998-2002. He fails to find evidence that these companies have lower costs of capital in that period. The reason, according to the author can lie in the inaccurate estimation of costs of capital. I have to keep in mind, however, that Daske (2006) selects only German companies for his research. In his paper he also supports the aforementioned statement of Leuz and Verrecchia (2000) that it is more important that companies seriously follow the accounting standard and provide high quality disclosure.

3.4 The impact of legal origin on international accounting standards

Moerland (2005, p. 17) states that firms around the world differ in historical origin, structures of ownership and control as well as in management style and performance evaluation. He continues that this unlikeness in the institutional structure tends to influence the economic behaviour.

We can notice this influence in the modern market structure. Most US firms are listed at stock exchanges; in the European Union (EU), fewer firms are publicly quoted. According to Moerland (2005, p. 18), "in the United States 99% of the top 400 companies (in terms of 1987 turnover) are publicly listed at a stock exchange as opposed to only 54% on average in the EU countries." In Germany and Japan large banks are of great importance in financing and monitoring the corporate business. In France, Italy and Spain family and state ownerships are the main players on the local markets.

Figure 1: The Distribution of Legal Origin (La Porta et al., 2008, p. 289)

The legal origins theory of La Porta et al. (2008) suggests that legal systems and traditions play a role in the corporate ownership structure determination. Differences in legal systems are largely accounted by legal origins, which can be explained by a basic view on legal styles: the policy setting focus of civil law versus the market focus of common law.

The common law includes the law of England and its former colonies. According to La Porta et al. (2008, p. 288) "the common law is formed by appellate judges who establish precedents by solving specific legal disputes".

The civil or so-called Romano-Germanic legal system is the oldest. According to La Porta et al. (1998, p. 1118), it is also "the most influential and the most widely distributed around the world". Roman law builds its fundament with its statutes and comprehensive codes. Three common families under this tradition are recognised: French, German, and Scandinavian. The French Commercial Code was written under Napoleon in 1807 and distributed to the western regions of Europe including, among others, the Netherlands and the western lands of Germany. The German Commercial Code was drafted in 1897 after the unification of Germany. Many procedural characteristics of this Code remind the French law but incorporate more professional judicial law setting. The Scandinavian family is usually considered as part of the civil law tradition as well, although its law is obtained from Roman law with lesser extent than the French and German ones. I will follow most studies and view the Scandinavian rules as separate from the French and German ones.

As a follow-up of this theory, La Porta et al. (2008, p. 286) state that the conquest and colonisation spread common and civil laws all over the world and, as the consequence, human capital and legal ideologies were dispersed as well. English common law should thank landowners aristocrats and merchants for developing a system of law which has strong protections for property and contract rights without interference from the government (La Porta et al., 2008, p. 288). The civil law founders - French, German, socialist, and Scandinavian - wished to use state power to alter property rights and

attempted to insure that judges did not interfere. Every now and then countries adopt some rules from one legal origin and other rules from another but commonly a certain tradition dominates in each country.

Platikanova (2007) concludes that the legal origin of countries has a connection to the strength of the IFRS impact. In her study she found that "the effect of the IFRS introduction on adverse selection (trading) costs is larger for stocks from countries with civil law than those with common law." In her study she looks at four countries from different legal origins, namely, France, Germany, Sweden and the UK during the period 2003-2006.

In general, market participants in various legal origin groups react differently to the adoption of international standards. Ball et al. (2000) study the interaction between accounting standards and the incentives of managers and auditors who prepare them, for four East Asian countries. These countries developed a market-orientated accounting standard (Anglo-American model), which emphasises high quality disclosures.

Despite these high standards, managers and auditors have low incentive for transparency because of reduced demand for accounting information from the capital market and, consequently, increased political influence on corporate governance and enforcement mechanisms for accounting standards. They conclude that, first, reported earnings in four East Asian countries have generally low level in transparency, next, manager and auditor incentives are the important determinants of international accounting differences, and finally, that information quality is not determined by accounting standards alone. The demand for accounting transparency varies all over the world as a function of economic and political institutional variables (Ball, Kothari and Robin, 1999).

"The factors that have been important in shaping the principles and practice of accounting in various countries include the nature of the legal system, the prevalent types of business organisation and ownership, the influence of taxation and the strength of the accounting profession" (Nobes, 2007, p. 504). For instance, if the family business is prevailing in a country (an example is France) then the accounting principles show less demand towards professionalism and comparable details. If owners of most public companies' shares are financial institutions (like in Germany) then true and fair value requirement is not that strong. In the UK, on another hand, the stock ownership is diversified from financial experts to less knowledgeable shareholders. This fact requires the accounting standard to demand more true and fair view of financial information.

From the aforementioned we can see that the division of countries with respect to their legal origin has an influence on the accounting principles and traditions. Therefore, it is wise constructing a sample including countries from different legal origins. Kim and Shi (2007), Platikanova (2007) and Daske et al. (2008) who investigated the market factors modifications after the IFRS adoption have taken the legal origin also into account considering countries from all four legal origins: French, English, German and Scandinavian.

3.5 Related studies

In the following table I highlight the works performed in the same direction as mine and which I used as the starting point for my research.

Author	Year	Highlights	Observed period and sample
Hail and Leuz	2007	Analyse the impact of IFRS on market liquidity and the cost of capital in the EU capital market. In this report they also explain links between corporate disclosure, liquidity and the cost of capital taking the investors' decisions and their incentives into account. The results show that in the mandate year of 2005 there are some evidences that the cost of capital is lower (not significantly) for all firms under IFRS. The liquidity proxies show stronger results for 2005. Only the bid-ask spread results are not significant. The proxies used for the market liquidity are the bid-ask spread, the price impact of trades and the frequency of zero-return days.	2001-2005; main sample - 21656 unique EU firms; benchmark – 21710 unique firms from Australia, Canada, Japan and the US.
Covrig et al.	2006	Test that voluntary IFRS adoption reduces home bias among foreign investors and improves capital allocation efficiency.	1999-2002; 29 countries including EU but outside of the US and Canada
Daske et al.	2008	Find empirical evidence of capital market benefits for early IFRS adopters.	2001-2005; 26 countries
Kim and Shi	2007	Investigate and evaluate the differences in the cost of capital effects between IFRS adopters and non-adopters. They also take the impact of institutional infrastructures into account. The results show that the cost of capital is significantly lower for full IFRS adopters than for non-adopters. The result holds independently from a country's institutional infrastructures. The factor of strong/weak institutional infrastructure plays an important role as well. The weaker the institutional infrastructure is, the greater is cost-reduction effect.	1998-2004; 34 countries worldwide
Platikanova	2007	Provides the evidence of the IFRS impact on four countries market liquidity. The research is made with regards to legal origins, before and after the IFRS introduction.	2003-2006; four countries: France, Germany, Sweden and the UK

Table 1

In my study I look at the developments before-, during and after-mandate period. In the previous studies the research period did not cover any years after 2005 for the cost of capital investigation. Hail and Leuz (2007) and Daske et al. (2008) try to observe the consequences of IFRS after the mandate date just with the duration of one year. However, as they mentioned the outcome of such results should be taken with a caution mostly because the 2005 year was a transition year for most of countries. Unlike Hail and Leuz who work with countries outside of the EU and use the country company information as the benchmark, my approach is to study the major changes in the local regulations of each country considered. Like Kim and Shi (2007) I extensively study the impact of IFRS on the cost of capital and, although the question of institutional infrastructure is not part of my main research, I include this aspect for the investigation as well in my regression model. The legal origin and accounting traditions are, nevertheless, extensively tested in my research to get more insides on the investor behaviour in different countries.

Regarding results of the previous studies, it is wise making the following remarks. Covrig et al. (2007) show that foreign mutual fund ownership is far way higher for companies adopted IFRS than local GAAP followers. Companies who implemented IFRS have fewer issues in attracting foreign investments.

The results of Platikanova (2007) show that market players make different decisions as the consequence of the IFRS implementation in a country. The heart of differences lies in the legal origin of the country. The details of her study give quite unexpected outcome. One of the market liquidity proxies used in the research – the bid-ask spread – is observed to become higher with the IFRS implementation for UK and Swedish companies, although before the mandate (2005) UK companies did not face problems with the adverse selection as the component of bid-ask spread and normally the bid-ask spread was low in the UK market. The same factor has different development for French and German firms where the improvement has been observed.

The research of Kim and Shi (2007) reveals the following: the costs of capital are significant lower for companies which adopted IFRS in full spectrum than for companies whose IFRS adoption was partially implemented. Moreover, this result holds for each country despite of the institutional infrastructure or legal origin. The interesting thing to note is that the empirical test of Platikanova (2007) shows that the bid-ask spread change depends on the legal origin of a country. Kim and Shi (2007) show that the cost of capital improvement principle holds in general; however the degree of this improvement is different. In countries with a weak institutional infrastructure the effect of the cost of capital improvement is greater than in countries with a strong infrastructure.

The outcome of the research of Daske et al. (2008) demonstrates that, on average, the liquidity is increasing and the cost of capital is decreasing as the result of the implementation of IFRS. Opposite to the conclusions of Kim and Shi (2007) and Platikanova (2007), Daske et al. (2008) find that the capital market benefits are noticeable for the countries where both the legal enforcement and the incentive of companies towards the high level disclosure are strong. What is also striking in the work of Daske et al. (2008) is that early IFRS adopters gain the most pronounced benefits from the capital market. This observation is valid for the years before and during the mandate year. The literature suggests that the capital market factors development is less effective for the early adopters after the mandate ones (e.g. Hail and Leuz, 2007 and Kim and Shi, 2007). One more finding of the work of Daske et al. says that “the effects around mandatory adoption are stronger in countries that have larger differences between local GAAP and IFRS and in countries without a prior convergence strategy towards IFRS” (Daske et al., 2008, p. 42).

Hail and Leuz (2007) document some evidences that the cost of capital are lower for the companies adopted IFRS in 2005 and voluntarily adopted IFRS earlier. The effect, however, is small in magnitude

and weak on the robustness test. The effect of IFRS on market liquidity give more significant results except perhaps for the bid-ask spread (which is more in line with the finding of Platikanova, 2007).
Most of papers in this study field refer to the fact that the local legislation in most countries around the IFRS mandatory adoption is revised. As also suggested in the literature, this fact cannot be excluded from the consideration of the economic consequences of the IFRS implementation. I address this aspect as the research issue.

4 Conceptual framework

4.1 Hypotheses development

Based on the existing knowledge base, the theoretical framework for this research consists of the following links which are supported by the literature review and known studies. IFRS requires higher quality disclosure and, hence, more transparency is reached in financial reporting of IFRS adopters. This lowers information asymmetry level and leads to more efficiency in markets. As investors are the main market players, their behaviour is of crucial importance to the changes in the capital factors. In order to test the investor behaviour I will use the cost of capital as the proxy (see also chapter 2.1.4).

The research hypotheses I would like to verify can be formulated as follows:

H_0: The introduction of IFRS did not affect the cost of capital in EU markets.

H_a: As the consequence of the introduction of IFRS, the cost of capital in EU markets was reduced.

I can test these hypotheses by establishing two samples: the main one and the benchmark not impacted by IFRS rules. The comparison of cost of capital for the aforementioned two samples will suggest the acceptance or rejection of the hypothesis **H_0**.

Further I will formulate some more country specific (working) hypotheses which will help to look at the IFRS influences deeper – at the country level.
Grounding my assumption on the legal origin factor of countries I would like to set up the following working (country specific) hypotheses for the "deep dive" analysis. I expect to see that the behaviour of investors is different in different legal origin countries. During my literature analysis I noticed that several works (Platikanova, 2007; Kim and Shi, 2007) observed the cost of capital and/or market liquidity factors based on the legal structure of a country. The characteristic like legal origin was one of the differentiation factors in this domain. These authors come up with the conclusion that the behaviour of the cost of capital dependent on the country legal structure and, hence, also on the legal origin. I expect that in countries with strong legal infrastructure (English legal origin) the cost of capital will be lower and in countries with weaker legal infrastructure (French legal origin) the cost of capital will be higher in comparison with other legal origin countries. The cost of capital for Scandinavian and German legal origin countries, I expect, are to be almost the same.
The hypotheses formulation reflects also the conclusions found in the work of La Porta (1998, p. 1151) on the investor rights and protection. His outcome says that common law countries (e.g. the UK) give more rights and protection to shareholders than civil law counties. The French legal law countries score considerably less in this area where Scandinavian and German legal origin countries are in the medium. I will remind the reader that the United Kingdom is from the English legal origin, the Netherlands and France are from French legal origin, Sweden represents Scandinavian legal origin and Germany is from German legal origin.

English legal origin:
H_0': The cost of capital in the UK does not differ from one in other legal origin countries (France, Germany, the Netherlands and Sweden) after the IFRS adoption

H_1': The cost of capital in the UK is less than one in other legal origin countries (France, Germany, the Netherlands and Sweden) after the IFRS adoption.

French legal origin:
H_0'': The cost of capital in France does not differ from one in other legal origin countries (Germany, Sweden, the Netherlands and the UK) after the IFRS adoption.

H_1'': The cost of capital in France is larger than one in other legal origin countries (Germany, Sweden, the Netherlands and the UK) after the IFRS adoption.

German and Scandinavian legal origins:
H_0*: The cost of capital in German and Sweden does differ significantly from each other after the IFRS adoption.

H_1*: The cost of capital in German and Sweden does not differ significantly from each other after the IFRS adoption.

French legal origin:
H_0**: The cost of capital in the Netherlands and France does differ significantly from each other after the IFRS adoption.

H_1**: The cost of capital in the Netherlands and France does not differ significantly from each other.

4.2 Research settings and sample properties

First of all, I will construct the benchmark sample for the research. In ideal situation I select companies which are stock exchange listed and follow local GAAP rules in the EU after 2005. In principle, this is not possible; there are, perhaps, several companies, which, because of some reasons, could not apply the IAS standards. I do not think that these companies could represent a trustful sample of a control group. I can also organise the sample from companies which are located outside of the EU. In this case I would face the challenge of explaining that the differences in the capital market parameters between the main sample and the benchmark are the consequences of the IFRS introduction and not other external factors. Hail and Leuz (2007) construct the benchmark sample from the worldwide companies who do not apply IFRS. In their paper they accent the cautiousness of the received results several times due to the facing challenges. The main of which is the trustworthiness of the benchmark sample. That means that there is a big chance that the observed changes between the main sample and benchmark can be a result of modifications of differences in legal regulations and/or traditions.

The benchmark in this study will be partially a virtual one. For each country I will look at the initial differences in local GAAP and IFRS. Then, starting from 2001, I will be closely looking at development either in local accounting standards or IFRS or local regulations which may have influence on the decision making behaviour of investors leading to the changes on the capital market factors. For the period after the mandate I will continue analysing the development of two standards and its consequences as if there was still a big number of listed companies who reports under local GAAP.

In parallel, the following alternative approach can be suggested to verify the theory. As it is quite a laborious method and it is necessary to prove the concept in the first place, it is advisable to begin with a small sample consisting of 10-20 non-publicly quoted companies in one country (e.g. the Netherlands because of the availability of the necessary data in the database Reach, for example) which correspond to the necessary profile. This company should not be a financial institution; its market capitalisation should be comparable with the main sample companies and it should report

under the local GAAP. The cost of capital should be calculated for each year beginning in 2001 and ending in 2007 based on the financial statement of a company. The figures founded help to understand the development of the cost of capital for companies under the local GAAP and, hence, help to form the benchmark for the main sample by determining the cost of capital ratio for the non-IFRS adopters. Thus, it would be possible to compare the cost of capital for IFRS adopted companies listed in the Netherlands with NL-GAAP reported companies for each year of the considered period. In advance, I would like to state that for the correctness of such research the benchmark sample should be extended in the future to obtain more trustworthy results.

One of the methods to calculate the cost of capital of a private company is to use the betas of public companies within the same industry. My priority is to use this method as it is simple and uses the analogous approach as if the private company were quoted on the stock exchange, which is close to the idea of my benchmark construction.

The methodology is as follows:
Step 1. Calculate the asset betas (unlevered betas) for public firms within the same industries using the formula

$$\beta_{unlevered} = \beta_{levered} / (1 + (1 - \text{tax rate}) (\text{Debt/Equity})) \quad (3)$$

Step 2. Define asset beta for a private firm using the average figure of the industry betas.
Step 3. Calculate the private company beta to obtain the equity beta.
Step 4. Define the average betas per industry for both publicly traded and private companies.
Step 5. Calculate the cost of capital ratio for both groups (publicly traded firms group and private firms group).
Step 6. Compare the ratios for each year.

I expect to see the same outcome in the ratio development for both groups for the period 2001-2005. However, as of 2005, the ratio for IFRS mandatory adopters is supposed to decline. I have not found that kind of thoughts on the benchmark creation in the knowledge database. In this paper I describe the concept of this method leaving the empirical analysis for the future research.

I plan to make an investigation for several European countries starting with the Netherlands and followed by similar studies for France, Germany, Sweden and the UK.

My choice of countries is determined by the idea of representing each legal origin: French, German, English and Scandinavian. The selection of France, Germany and the UK is logical as they are the typical representatives of the corresponding legal origins. I've chosen Sweden from Scandinavian countries as it is an interesting country from the economic point of view. In the Global Competitiveness Report 2009-2010 Sweden is ranked the fourth (after Switzerland, the US and Singapore). In some previous works (e.g. Platikanova, 2007), where the legal origin of a country was a key, Sweden was often taken as an example of the representative of the Scandinavian region. Indeed, among three Scandinavian countries Denmark, Norway and Sweden I think the Swedish accounting system keeps the Scandinavian traditions the most. For instance, Denmark was the first country to implement the Fourth Directive. I will return to this directive in my paper shortly. Norway is not a EU country, however, it is a part of the EEA (European Economic Area). Although IFRS applies to the EEA as well, the legal process of the IFRS adoption is quite different and contains an extra layer. Because of this complexity I leave Norway out of scope of my research.

The choice of the Netherlands is based on the "speciality" of this country. Although the official legal origin of this country is French the accounting practice is more related to Anglo-Saxon. The Netherlands, for instance, as well as the UK and Ireland supports the accounting philosophy about professional and private investor approach towards the accounting policy setting. (Lafferty, 2007). As far as the publication of account and disclosure information is concerned the Netherlands falls under British type together with the UK, Ireland and the US. France and Germany fit into the Continental group (Nobes, 2007, p. 508). In the section Accounting rules the Netherlands takes part in the British type group and not in the Continental group. The main difference is that the former group accounts show a true and fair view of the financial situation of a company business; where at the same time the accounts in the latter group have to mainly reflect the laws and provide the government and revenue authorities with useful information. (Nobes, 2007, p. 511).

The Netherlands has implemented the Fourth and Seventh Directives of European Commission which were considered as Anglo-Saxon thinking in the accounting. These directives contain the principles of the accounting formats and rules (Fourth Directive; adopted in 1978) and on consolidated accounting (Seventh Directive; adopted in 1983). (For reference, see Alexander and Nobes, 2004, p. 99).

As the basis for 2001 I use data from the survey of Nobes (2001). He investigated 62 national accounting rules and compared them with IFRS. I am not the only one who uses the survey of Nobes as the primary source on the research on differences between Domestic Accounting Standards (DAS) and IAS. Ding et al. (2007) base their research on the data from the report "GAAP 2001: A Survey of National Accounting Rules Benchmarked against International Accounting Standards" (Nobes, 2001). They create two indices: absence and divergence. "Absence measures the extent to which the rules regarding certain accounting issues are missing in DAS but are covered in IAS. Divergence applies in circumstances where the rules regarding the same accounting issue differ in DAS and IAS. It measures the extent of differences between DAS-based rules and IAS-based rules". (Ding et al., 2007, p. 1). The article of Ding et al. analyses the link between the absence and divergence factors and the earnings management and the level of the firm-specific information in capital markets. Their work supports the observation that high level of absence leads to higher earning management and high value of divergence has a positive effect on the level of the firm specific information on capital markets. They use a sample of 30 countries.

4.3 The Netherlands

Continuing speaking about the study of Ding et al. (2007) the Netherlands scores less than average in the absence factor and above average in the divergence factor. The later result points out that the differences between the Dutch accounting standard and IAS were significant in 2001. (Ding et al., 2007, p. 9).

Quite a number of reports are available on the comparison of local GAAPs with IFRS. Big accounting consultancies as Pricewaterhouse Coopers (PWC), KPMG and Deloitte are especially active in this area. PWC issues several reports with analysis of similarities and differences between local GAAP standards (both in Europe and overseas) and IFRS. In July 2006 KPMG issued a detailed gap analysis "IFRS compared to Dutch GAAP: overview". Deloitte publishes updates about local GAAP modifications on a frequent basis through small "pocket-size" articles. I use the information from the abovementioned reports in my comparison highlights.

4.3.1 National developments

In the Netherlands the accounting rules are set up at two levels: the law stated in Volume 2 of the Netherlands Civil Code (CC) and the Framework and the Guidelines for Annual Reporting (GAR) or - in

Dutch - Raad voor de Jaarverslaaggeving (RJ) - from Dutch Accounting Standards Board (DASB). "Dutch GAAP or NL-GAAP" is the combination of rules on two levels. Like IAS CC is prepared for profit organisations (Title 9 of CC is mainly intended for profit-oriented firms). The literature (Walton et al, 2003, p. 239; article of van der Tas) states that the Civil Code was several times amended to incorporate EU accounting directives and it was reflected in Title 9. Interestingly enough, the Netherlands was the only continental European country where till 1971 there was only one legal form of an organisation – public limited liability company (Naamloze Venootschap, NV). Needless to say, that earlier accounting principles were focused on such type of organisations.
Unlike IAS GAR is intended for both profit and non-profit organisations. A separate set of GAR's exists for small organisations. My selection data consists of large companies from big stock indexes, therefore this set of GAR's is out of scope for this research.
As it is mentioned in the report of Deloitte (2008) IASB is working on several projects where the outcome will be the changes in the current version of IFRS. Dutch GAAP represents, on the contrary, the stable set of rules. At the beginning of the introduction of IFRS the aim of RJ was to incorporate the IFRS rules into the local GAAP unless they already do not contradict with the local accounting practice. However, as time goes by, the initial motive was changed. The current strategy of DASB, according to the article "IFRS's and NL GAAP" of Deloitte (2008), is ''to focus on financial reporting standards for non-listed entities". As a consequence, the changes in IFRS are unlikely to be implemented in the Dutch GAAP and the number of differences between two standards might grow. However, as the practice shows, DASB, in contrary, continues revising local articles and moving them towards IAS rules (see the table 2).

What is also worth mentioning is that Dutch accounting rules are based on the determination of a true and fair view. The local authorities decided that companies which fully follow IFRS rules comply with the legally required "true and fair view" (Deloitte & Touche, VNO-NCW, 2002).
In comparison of two accounting standards - IFRS and the local GAAP - my main interest contains the disclosure requirements as one of the chains of the theoretical framework of the research. I also mention some changes in the GAAP which were added with the intention to harmonise IAS and NL-GAAP. The rest of changes are neither mentioned nor specified as they do not have additional value for this research.

According to the report of Deloitte & Touche "Accounting Standards Compared: Differences between IAS, NL-GAAP and US-GAAP" (2002, p. 10), NL-GAAP has less disclosure requirements to cash flow statements, taxes and leasing. As far as negative goodwill and the reclassification of financial (compound) instruments into equity and liability parts are concerned, there are also significant differences in the disclosure rules between the two standards. IFRS and Dutch GAAP have, however, quite a number of similarities on the disclosure requirements, e.g. the level of details of the required disclosure depends on the complexity of a financial instrument. Like IAS GAR requires the fair value disclosure of investment property regardless of the measurement model in use. The disclosure requirements are almost the same in IAS and GAR for contingent liabilities.

The disclosure requirements were under amendment in both accounting standards. In 2005 IASB proposed IFRS 7: Financial instruments: Disclosures for the changes in the disclosure for the existing standards IAS 30 and IAS 32. This standard was effective as of 1st January 2007. The GAR 115 – criteria for recognition and disclosure of information – was revised in 2005. DASB suggests that the requirements to the content and the form of the information to be included in the annual accounts should be constantly evolving (RJ official site is www.rjnet.nl).
As far as comprehensive comparison is concerned, the enclosed information contains the highlights from the survey of Nobes (2001, p.92) for 2001. 2001 is the basis year for my research.

Dutch accounting does not contain rules on the recognition and measurement in the following areas:

- the creation of provisions in the context of acquisition accounting

- in accounting for employee benefits
- the measurement of actuarial gains and losses and past service cost
- hedge accounting for derivatives.

In the NL-GAAP there are no specific rules requiring disclosures of a primary statement of changes in equity and also the fair values of investment properties.
In comparison with 2000 Dutch GAAP published some changes in the following areas (Nobes, 2001, p. 93):

- accounting for goodwill
- the consolidation of special purpose entities
- impairment of assets
- intangible assets
- lease accounting
- disclosure concerning discontinuing operations.

In 2002 the Netherlands was chosen to be one of the countries for the 2002 GAAP convergence survey. The results of Dutch accounting policy have been scored in the following groups (Street, 2002):

- governmental or other authority requirement to converge with IFRS - 57%
- disagreement with certain significant of IFRS – 37%
- satisfaction with national accounting standards among investors/users – 21%

The following table highlights amendments/new guidelines in the national standards after the year 2001 (KMPG, 2006), (update of Deloitte on the site: www.iaspluc.com) and (update of RJ on the site: www.rjnet.nl).

Year	Amendments
2002	Council of Annual Reporting issues new and preliminary guidelines which improved the convergence with IAS. These guidelines concern: - stock options given to the management and staff recognition - disclosure of EBITA (Earnings Before Interest, Tax and Amortization) and EBITDA (Earnings Before Interest, Tax, Depreciation and Amortization) in notes to the financial statement and not in the income statement - instructions on the budgets, classification in the income statement - the content of the management board report for non-profit companies - recognition and measurement of financial instruments in order to minimize differences with IAS 39 Financial Instruments: Recognition and Measurement - restrictions on the recognition of "extraordinary items" in order to increase compliance with IAS - recognition of the change in the accounting policy and estimates - disclosure of proposed dividends - a new benchmark treatment for the measurement of real estate investments in order to come closer to the IAS 40 Investment Property.
2003	New guidelines of the Council for Annual Reporting are intended to close gaps between NL-GAAP and IAS. Among others, RJ 330 Related Parties is in line with IAS 24 Related Party Disclosures. Amendments were made to incorporate the principles of IAS 19 Employee Benefits. The convergence with IAS 32 Financial Instruments: Presentation and IAS 39 Financial Instruments: Recognition and Measurement are postponed till the final version of IASB. Dutch accounting guidelines for pensions move closer to IFRS.
2004	New guidelines and amendments are published: GAR 135 General principles for the determination of the result, GAR 215 Joint Ventures, GAR 221 Work in progress and construction contracts, GAR 272 Income taxes (revise), GAR 274 Government grants and comparable facilities (revise), GAR 340 Earnings per share (revise), GAR

Year	Amendments
	345 Discontinuing operations (revise), GAR 360 Cash Flow Statement (revise) and GAR 394 Interim reports. As far as revision in IAS is concerned the reader may notice that almost the same sections are involved. IAS 1 Presentation of Financial Statements, IAS 10 Events After the Balance Sheet Date, IAS 12 Income Taxes, IAS 14 Segment reporting, IAS 16 Property, Plant and Equipment, IAS 17 Leases, IAS 18 Revenue, IAS 19 Employee Benefits, IAS 19 Amendment – Actuarial Gains and Losses, Group Plans and Disclosures (new); IAS 27 Consolidated and Separate Financial Statements, IAS 31 Interest in Joint Ventures, IAS 33 Earnings per Share, IAS 34 Interim Financial Reporting, IAS 36 Impairment of Assets, IAS 37 Provisions, Contingent Liabilities and Contingent Assets, IAS 38 Intangible Assets, IAS 39 Financial Instruments: Recognition and Measurement, IAS 39 Amendment – Transitional and Initial Recognition of Financial Assets and Financial Liabilities (new), IAS 40 Investment Property.
2005	As of 1st January 2005 Dutch listed companies should prepare their consolidated accounts according to IAS (Final law) with no delay in the adoption. A number of modifications are made in both accounting standards regarding the basis accounting. Like IAS the financial statement is prepared based on the modified accounting historical costs with emphasis on the fair value. The difference between two standards, however, is that GAR uses the definition of the current value and IAS – the fair value. In 2005 the revision is made to two standards in section IAS 14 Segment reporting and in GAR 350 Segment information. The rules of two accounting standards are almost similar e.g. the segmentation is considered to be at two levels: primary and secondary. The disclosure requirements for the secondary level are less strict. The exception is that according to GAR 350 "large" companies should follow the disclosure rules regardless either they have already listing or in process to obtain the listing. Some revisions are made to the articles related to the third party disclosure (GAR 260 Revenue recognition on intercompany transactions and GAR 271 Employee benefits). The disclosure requirements of IAS are comparable with GAR; in some cases IAS asks more detailed information like e.g. according to IAS and GAR the comprehensive disclosure is required for the third party transactions. IAS asks to break down this disclosure per category. This year the revision is made to IAS 32 Financial Instruments: Presentation and in GAR 290 Financial Instruments. Like IAS GAR requires the qualitative disclosure of the risk of financial instruments and its management measures. IAS, however, requires splitting the equity and liability component of compound instruments. Like IAS the conditions, terms and accounting policy should be disclosed for financial instruments. As far as the fair value of financial instruments is concerned, according to both standards, the measurement of the fair value should be disclosed. The fact that a financial instrument is not reported against the fair value should be disclosed as well. For financial instruments GAR has, besides the accounting information, some legal and listing rules which are the additional requirements to the ones IAS has. Also some financial and operational information should be provided in annual reports.
2006	RJ comes with some new rules (Uiting 2006-4) which move Dutch accounting standards closer to IAS. Among others, there is an explanation for Dutch subsidiaries of stock exchange listed companies as to how to prepare financial statements (non-consolidated) according to the article 2:48 BW. According to RJ, it is also possible that a Dutch subsidiary uses the accounting information from the consolidated statement of the main company. In this year some changes are made in GAR 160 Events after the balance sheet date, GAR 220 Inventories and GAR 272 Income taxes (Uiting 2006-2 and 2006-3). The

Year	Amendments
	"Uiting 2006-1" contains the revision in the article GAR 274 Government grant and comparable facilities. The changes do not include the disclose rules modifications.
2007	In August 2005 IASB issued a new standard IFRS 7 Financial Instruments: Disclosures which is effective as of 1st January 2007. This standard simplifies the disclosure rules for financial instruments in IAS 30 Disclosures in the Financial Statements of Banks and Similar Financial Institutions and in IAS 32 Financial Instruments: Presentation. It concerns the lower disclosure requirements about the risks of financial instruments. GAR 600 Banks has a new version where the latest amendments in IAS are taken into account. As banking sector and financial institutions will be considered out of scope for this research I do not specify the changes. Definitions from the IFRS 4 Insurance Contracts are added into GAR 605 Insurance companies (Uiting 2007-4). Some changes are done in the GAR 615 Investment institutions (Uiting 2007-7) concerning among others rate differences and the definition of the fair value of investments.

Table 2

From the summary listed in the table above the reader could notice that, in general, the disclosure requirements of IAS and Dutch GAAP are comparable. However, IAS requires more detailed and specific information in general. As far as financial instruments are concerned, GAR requirements seem to be stricter. We can also see that the convergence between local accounting rules and IAS is still in place, perhaps with a slower tempo.
What is also important to keep in mind is that the earlier (before 2005) adoption of IAS was not allowed in the Netherlands. Indeed among the 93 publicly traded companies listed at the Amsterdam stock exchange and for which the IFRS indicator is available in Thomson ONE Banker database, all 93 companies adopted IFRS in or after 2005.

4.4 Germany

The accounting consulting companies KPMG and Deloitte have made several researches on the comparison analysis between IFRS and German GAAP. Deloitte has a separate web-site with relative updates per country. I use publications of these companies in this paper.
The accounting requirements for Deutsche Boerse are primarily written down in German Commercial Code (Handelsgesetzbuch - HGB). A special accounting standard setter organ in Germany was established in 1998 – the German Accounting Standards Committee of Germany (GASC) - with the only mission to harmonise local accounting rules with international standards (IAS and US-GAAP) by 2004. When the German Accounting Standard (GAS) is issued, it has to be approved by the Minister of Justice and published in the federal newspaper Bundesanzeiger, and only after that this rule can be considered legally effective.

I would like to add several words about the accounting practice in Germany. Unlike the Netherlands the accounting practice in Germany has the principles of proper bookkeeping as its basis. The true and fair view, which is in use in the Netherlands, is appropriate to enterprises with limited liabilities. The true and fair view override aspect does not exist in Germany. Under proper bookkeeping according to the KPMG report (2003, p. 5), the following is understood: "completeness, materiality, accuracy, continuity, clarity, valuation based on corresponding payments, economic focus, substance over legal form, prudence, realisation, individual valuation and the measurement at the balance sheet date". Accounting rules in Germany are based on the legal regulation. Unlike IFRS, the requirements of HGB to financial reporting, level of disclosure and auditing are dependent on industry, size, legal form and a stock exchange listing.

The local accounting requirements towards disclosure in general are less strict than IFRS requirements. It is especially relevant to the disclosure of financial instruments where according to IFRS it is necessary to report the related risks and, according to German GAAP, it is a part of management report, there are no specific rules for public disclosure.

As far as the research of Ding et al. (2007) is concerned Germany takes an average place for the score for the parameter absence and exceeds the average score for the indicator divergence to large extent. (Ding et al., 2007, p. 9).

4.4.1 National developments

As of 1998 Germany was focused on adjustments of local GAAP to make it more harmonised with the international standards (IAS and US-GAAP). In 1998 HGB issued the standard 292a where it was allowed public trade companies to prepare their annual financial statements according to either IAS or US-GAAP.
Unlike the Netherlands, German accounting authorities allow early adoption of IAS as of 1998 for stock exchange listed companies and as of 2003 for unlisted companies.
Germany, as well as the Netherlands, participated in the survey in GAAP Convergence 2002 survey. The results of German accounting policy have been scored in the following groups (Street, 2002):

- Complicated nature of particular standards - 51%
- Tax-driven nature of the national accounting regime – 49%
- Disagreement with certain significant IFRS – 39%
- Governmental or other regulatory requirement to convergence with IFRS – 57%

In general, concerning the disclosure level in Germany under the German GAAP the literature review suggests that this outcome has been criticised as being relatively low. (Leuz and Verrecchia, 2000, p. 92).

The same authors make some comments about the German accounting standards in 2000 in their research on the link between the disclosure and the cost of capital on the German market. “German accounting standards and disclosure practices are commonly criticised in the Anglo-American financial press and investors' community. The main complaints are: too much discretion in German standards allows firms to manage income using large "silent reserves''; German reporting is too heavily influenced by tax avoidance strategies; and, German standards lack detailed disclosures designed to satisfy the information needs of investors and financial analysts”, (Leuz and Verrecchia, 2000, p. 95).
As the result of these shortcomings of the German GAAP, local companies faced some issues with raising funds and with explaining of their financial reporting to international investors. German companies started looking at the international standards (IAS and US-GAAP) as the possible solution to their problems. During some period companies either prepared dual reporting (they reported under an international standard but without violation of the German GAAP) or prepared the financial statement under the local GAAP with the reconciliation of the income and shareholder equity with the international standard afterwards or enriched the German GAAP financial statement with the IAS or US-GAAP requirements. All these approaches were relevant to the consolidated statements only. Till 1998 German companies were obliged to prepare their financial statement under the local GAAP. With the effect of KapAEG law companies were allowed to switch into an international reporting standard (either IAS or US-GAAP).

In the table below I list some milestones on the way to the harmonisation of local GAAP to IAS.

Year	Amendments
2001	GASC prepared about 10 new standards. It was one of the first steps on the harmonisation to the international standards. Nobes (2001, p. 49) describes in his report the most important differences between IAS and German GAAP appeared in 2001.
2002	GASC intends to shorten or even remove the differences between German GAAP and IAS in the following sections: business combination, presentation of equity, deferred tax and third party disclosures. Throughout 2002 IASB continued working with seven liaison standard setters, one of them is Germany. In February 2002 the Corporate Governance Codex (the Codex) was published. The goal of this document was to increase the acceptance of German companies by international investors. The Codex recommended preparing consolidated financial statements and intermediate reports according to international standards. Although the Codex recommendation was voluntary, the majority of corporate companies announced their readiness to follow it. Companies who decided to apply IAS in 2002 were supported by the guidelines published by the professional auditing organisation Institut der Wirtschaftsprüferhaus (IDW) in Accounting Practice Statement (IDW RH HFA 1.003). The requirement of this Practice Statement was to open the balance sheet of the current period but also of the previous period. The balance sheet of the previous period should have been prepared according to IAS as well. In cases when that was not possible, the intermediate report should have been prepared for investors with relevant explanations (e.g. differences with German GAAP).
2003	About 13 GAS's were published, among others GAS 11 Related Party Disclosure. Unlisted companies in Germany were permitted to report under IAS. GASC prepared a draft Framework to be a basis for new German accounting standard principles.
2004	Under the authority of German Ministry of Justice, the Financial Reporting Enforcement Panel (FREP) was organised to recognise any incompliance issues with IAS at companies and to take the corresponding enforcement.
2005	Stock exchange listed companies are obliged to prepare their consolidated financial statements under IFRS.
2006	No update.
2007	In November 2007 the draft of German Accounting Law Modernisation Act (BilMoG) with focus on the harmonisation between HGB and IFRS was issued. This bill was approved in May 2008[3].

Table 3

From the highlights of national standards developments it is possible to see that originally German GAAP had a lot of differences with international standards; however, local accounting authorities pushed the convergence process very hard. Because of developments in the accounting standards in Germany (briefly mentioned above), I expect to see the majority of publicly traded companies as early adopters of IFRS in my research. Due to the enforcement initiative of German Ministry of Justice I also expect the high level of adaptation of IFRS by stock exchange listed companies in Germany.

4.5 France

In IAS regulations issued in June 2002 some options could be selected by countries themselves like

- "Require or permit IFRS's for unlisted companies.
- Require or permit IFRS's in parent company (unconsolidated) financial statements.

[3] This event does not have influence on my research; however, it shows once more that Accounting authorities in Germany are very serious to adjust local accounting principles according to international standards.

- Permit companies whose only listed securities are debt securities to delay IFRS adoption until 2007.
- Permit companies that are listed on exchanges outside of the EU and that currently prepare their primary financial statements using a non-EU GAAP (in most cases this would be US GAAP) to delay IFRS adoption until 2007". (www.iasplus.com/country/france.htm)

The following selection of options is applicable to my research. French Member State (MS) decided positively on Article 9 of the IAS Regulation (a) to defer the application of IAS until 2007 for companies whose debt securities are admitted only to a regulated market of any MS. And earlier adoption of IAS (before 2005) is not allowed in France.

"French requirements are based on the Code de commerce, company law and decrees, rules established by the Comité de la Régelmentation Comptable (CRC, Committee of Accounting Regulation) including, the Plan Comptable Général (General Accounting Plan) and interpretations of the Comité d'urgence (Urgent Issues Committee) as applying to consolidated financial statements" (Nobes, 2001, p. 46). CRC plays the central role in the accounting domain in France. It issues all government decrees related to financial and accounting aspects. There is one more standard setter in France - the Conseil National de la Comptabiliti (CNC) which prepares and submit regulations for the endorsement to CRC. In general, all accounting decrees, orders and rules are govern-driven and there is no "generally accepted accounting principles" definition in France. The Code de commerce contains the framework for the accounting principles.
Since mid 1990 the French standard setters' focus was on the transparency of information in the financial reporting system. One accounting regulation from the 90-ties is worth mentioning. In 1998 the government approved the regulation according to which French companies no longer need to prepare the consolidated statement based on the French accounting rules. However, the CRC published the necessary decree only in 2005.
Ding et al. (2007) show that France has plenty of differences between their local GAAP and IAS scoring above average in both indicators: absence and divergence. (Ding et al., 2007, p. 9).

4.5.1 National developments

As far as the disclosure requirements of the French GAAP and IAS are concerned, the local standard does not have specific laws in the following areas (Nobes, 2001, p. 46)

- "a primary statement of changes in equity (IAS 1.7)
- transactions with related parties except for limited requirements (IAS 24.1/3)
- discontinuing operations (IAS 35)
- segment liabilities (IAS 14.56)
- the FIFO or current cost of inventory when LIFO is used (IAS 2.36)
- the fair values of investment properties (IAS 40.69)"

In general, the disclosure under IFRS demands more extended information and includes more items.

There are, of course, other differences like the lack of impairment concept, discounting provisions, calculation of basic and diluted earnings per share etc. There are also some inconsistencies like the definition of intangible items which have the direct consequences in accounting, usage of hedging, capitalisation of expenses etc. However, these deviations do not have much influence on the subject of my research. Despite all above mentioned differences, if a company does not execute some types of transactions then the financial statements under French GAAP may be compliant with IAS.

France participated in the survey in GAAP Convergence 2002 survey as well with the following results (which are the same as the ones for Germany):

- Complicated nature of particular standards - 51%
- Tax-driven nature of the national accounting regime – 49%
- Disagreement with certain significant IFRS – 39%
- Governmental or other regulatory requirement to convergence with IFRS – 57%

In the table below some milestones are listed on the way of the harmonisation of local GAAP to IAS.

Year	Amendments
2001	CRC issued 2000-05 regulation on the new consolidation rules for insurance companies. The regulation 2000-06 contains the adjustments to IAS 37 for accounting of provisions and certain liabilities.
2002	In this year the prompt to harmonise the local standard with IAS (IAS16 – Property Plant and Equipment and IAS 38 – Intangible assets) is taken with Avis no 2002-07, Depreciation/amortisation and impairment of assets. This regulation was approved in June 2002. The main idea behind was to facilitate the transition to IFRS in 2005. In this year another rule - Avis CNC 2002-16 which included a proposed degree to implement a European directive related to transparency on financial relationships between Member States and public entities as well as other entities - was prepared.
2003	"In 2003, the publication of the Loi de Securite Financiere (LSF 2003-706, Law on Financial Security) introduced a number of important changes. This law resulted not only from the changes introduced by the European Commission but also as the consequence of the American Sarbanes Oxley Act, since it implemented new procedures for the regulation of financial markets, the audit profession and financial information, in order to improve transparency and control over financial reporting and securities transactions" (Devaille et al., 2005, p. 139).
2004	No update.
2005	Stock Exchange listed companies are obliged to prepare their consolidated financial statements under IFRS.
2006	No update.
2007	No update.

Table 4

For the period 2004-2007 no update on the French GAAP development is provided on the web site of Deloitte. In other sources there are no notes on any significant adjustments to the local GAAP either. I can assume that local accounting authorities did not issue regulations relevant to the harmonisation with IFRS during that period.
Looking at table 4, it is possible to say that French government does not have big focus on the convergence of the French GAAP and the international standard. At the beginning of the century (in the years 2001-2003) some steps have been made to adjust the local accounting standards in order to smooth the transition period for the publicly traded companies in 2005.

At the second half of the considered period almost no actions for the harmonisation of two accounting standards were undertaken. However, as we will see later on in section "IFRS development", some European accounting rules are to be applied in the national regulation as well. Therefore I might make an assumption for my research that two samples (companies adopted IFRS as of 2005 and a virtual sample of the companies who follow the local GAAP) can be compared meaning that if there are significant changes in the capital factors after the adoption of IFRS then these changes can be considered as the result of the IFRS implementation.

On other side, the European international standard is in continuous modification process. I would like to list some IFRS related events (www.iasplus.com) in the next chapter to show that even though there were no significant modifications in the local accounting standard in France, the national

accounting authorities were forced to implement some international accounting principles leading to the harmonisation of local and international accounting practice.

4.6 IFRS development

2004 – New European rules for auditing and disclosure for Special Purpose Entity (SPE) are issued by European Parliament. In the midst of accounting scandals of that time, new regulations and rules are defined. Member states are also required to consider these adjustments in the auditing area in their national laws including also more strict rules towards disclosure and quality of financial data.
The Council Directives 78/660/EEC and 83/349/EEC are endorsed in 2004 which have the purpose of further enhancement of confidence and trust in the financial statements. In this Directives the establishment of collective responsibility of board members, enhancement of the transparency of the related parties' transactions and off-balance arrangements and also the structure of the governance statement (disclose information about practices in a "corporate governance statement") are taken into account.
European body would like to see that Member States apply the regulations facilitating cross-border investments and forcing good quality disclosure in their national laws which would require amendments in the national legislations which differ at that moment. Member States are obliged to implement this Directive by the end of 2006.
In that year the final Transparency directive on the minimum transparency requirements, which provides better protection to investors, enhances investor confidence and improves the efficiency of capital markets (Press release IP/04/1508, Brussels, 17 December 2004), was approved. The Directive must be adopted by Member States within two years.
As we can see, even in the case when a local government is not seriously focused on the convergence of local standards into the international ones it is forced by the European body to take actions and make necessary amendments to the national legislation.

2005 - The Committee of European Securities Regulators (CESR) published the final technical advice on the equivalence between Canadian, Japanese, and US GAAP's and IFRS's. CESR considers these three standards as an equivalent to IFRS and allows non-European companies operating in European capital markets to submit financial statements in Canadian, Japanese, and US GAAP without a full reconciliation of their accounts to IFRSs. However, they must provide information about certain specific differences between those national GAAPs and IFRSs (Press Release Ref: 05-451, Date: 5th July 2005).
In October 2005 the European Union's internal markets Commissioner, Charlie McCreevy gave a speech in Brussels about the benefits of IFRS adoption by EU listed companies. Here is an extract from his speech highlighting the importance of the international standard mandate.

"A common accounting standard increases investor transparency and comparability. As users become more familiar and confident with IFRS, the cost of capital for companies using IFRS should fall. It should lead to more efficient capital allocation and greater cross-border investment, thereby promoting growth and employment in Europe.
Furthermore, we are all aware of the challenges that globalisation and a rapidly-industrialising China are bringing. Now more than ever, we need to press on with the Lisbon agenda and increase the efficiency of the European economy. A common accounting standard based on IFRS, rather than a thicket of different national standards, is therefore not a luxury, but rather an absolute necessity".

(The European Union's internal markets Commissioner, Charlie McCreevy,
speech titled "IFRS – No Pain, No Gain?").

2006 - CESR addressed the importance of the clear and transparent disclosure in the financial statement especially on the usage of available options of reporting standard and decisions on the determination of accounting policies in case of lack of specific IFRS guidelines (Press release Ref.: CESR/05-758, Date: 12 January 2006).
In the same year CESR made several studies: on reporting requirements and access of financial reporting. The first study was intended to collect inconsistencies in the reporting and to make a proposal for the future work. The second one was to improve the availability of financial statements via the electronic means.
In October 2006 the US Security and Exchange Commission (SEC) and CESR joint work plan has been launched. In this plan the following goals were set up:

- The development of high quality international accounting standards
- Consistent application of IFRS around the world
- To take into account the full spectrum of the standards of parties involved (especially in international deals)
- Resolution of conflicting decisions on IFRS and US-GAAP

In August CESR issues the standard on financial information. The aim of this standard was to enforce the IFRS adoption throughout Europe. It contained the set of rules which EU authorities are to apply to promote the adoption of IFRS. France and the United Kingdom implemented this standard fully. Germany had a partial implementation, and the Netherlands and Sweden did not apply it at all.

At the end of 2006 the European Commission started the assessment of the IFRS economic impact in EU.

2007 – According to the Press release IP/07/315 (Brussels, 12 March 2007), the European Commission has adopted the measures supplementing the EU Transparency Directive. The goal of these supplementary measures was to "improve the quality of information available to investors on companies' performance and financial position as well as on changes in major shareholdings". The new regulations relate to:

- issuers' disclosure of financial information in half-yearly reports;
- investors' disclosure of major holdings;
- minimum standards for the pan-European dissemination of regulated information to the public; and
- minimum requirements for accepting equivalence of third-country regulations with respect to some elements of the Directive.

4.7 The United Kingdom

Following the earlier pattern, first of all I would like to begin with some words about the history of the UK accounting standards and principles. The first important document giving the practical instructions on accounting “Recommendations on accounting principles” was published in 1942. (according to the information from the official web-site of the Institute of Chartered Accountants in England and Wales - www.icaew.com). In January 1970 the Accounting Standards Steering Committee was established. The first Statement Standard Accounting Practice (SSAP) – Accounting for the results of the associated companies (SSAP 1) was published in 1971. These statements were issued till 1990. In 1990 the government announced the establishment of a new organ – the Financial Reporting Council (FRC) whose goal was to promote good financial reporting principles together with the Accounting Standards Board (ASB) and the Financial Reporting Review Panel (FRRP). Accounting standards which were written down after 1990 were known as Financial Reporting Standards (FRS). As of 2004, the FRC became the single body responsible for setting and enforcing of accounting

standards and principles. The UK accounting regulation has some influence from US and EU traditions.

According to the investigation on the national accounting standards by Deloitte the main sources of the UK-GAAP are the following (www.iasplus.com):

- "The Companies Acts 1985 and 1989
- Financial Reporting Standards (FRS) issued by the UK Accounting Standards Board (ASB)
- Statements of Standard Accounting Practice (SSAPs) adopted by the UK Accounting Standards Board
- UITF Abstracts issued by the Urgent Issues Task Force (UITF) of the UK Accounting Standards Board
- In accordance with the reporting requirements listed companies must comply with the Listing Rules of the London Stock Exchange, and Alternative Investment Market (AIM) companies must comply with the principles described in chapter 16 of the Rules of the London Stock Exchange".

As of 1st January 2005, the UK listed companies are permitted to prepare their consolidated financial statements according to IFRS. The local authority (member states) allowed the options to prepare annual accounts for listed companies. The local decision was also not to allow the earlier adoption of IFRS and delay of the date of mandate till 2007.
The score of the UK in the study of Ding et al. (2007) is quite impressive – the value of the absence factor is equal to zero (meaning that there are no rules which are supposed to cover some issues present in IAS but missing in the UK-GAAP). The value of the divergence indicator is very large (much above the average) meaning that there are abundant mismatches between the two standards for the same accounting issue (Ding et al., 2007, p. 9).

4.7.1 National developments

As well as the Netherlands, Germany, and France, the UK also participated in the survey in GAAP Convergence 2002 survey with the following results which mirror the results of France and Germany:

- Complicated nature of particular standards - 51%
- Tax-driven nature of the national accounting regime – 49%
- Disagreement with certain significant IFRS – 39%
- Governmental or other regulatory requirement to convergence with IFRS – 57%

In his report Nobes (2001) marked the inconsistencies between the UK-GAAP and IFRS in the areas of employee benefit costs (IAS 19), provision requirements for acquisitions (IAS 22.31), goodwill (IAS 22.44/51), dividends (IAS 10.11), deferred tax (12.5/15/53), trading, available for sale and derivative financial assets (IAS 39.69) etc. Nobes mentioned one inconsistence related to disclosure - disclosures relating to discontinuing operations may begin later (IAS 35.16).

Table 4 outlines a more detailed analysis of development of UK-GAAP through 2001-2007 with special highlights on the steps towards IFRS convergence. Source: www.iasplus.com.

Year	Amendments
2001	The commencement of the special project - The Convergence Handbook – which compared financial reporting requirements of UK-GAAP with those issued by International Accounting Standards Committee (IASC). The goal of this project is to assist ASB to identify the sections and priority for the national standard amendments on the way to harmonisation with IAS.
2002	On 15th May 2002 ASB published seven drafts of Financial Reporting Exposures

Year	Amendments
	(FREDs), the goal of which was to align the national accounting standards with IFRS. The intention of ASB is to have the compliance with the international standard for listed companies earlier than 2005. These FREDs are related to the following topics: - FRED 23 - Financial Instruments: Hedge accounting. - FRED 24 - The effects of changes in foreign exchange rates; Financial reporting in hyperinflationary economies. - FRED 25 - Related parties disclosures. - FRED 26 - Earnings per share. - FRED 27 - Events after the balance sheet date. - FRED 28 - Inventories; Construction and service contracts. - FRED 29 - Property, plant and equipment; borrowing costs.
2003	"The United Kingdom Department of Trade and Industry (DTI) has approved a regulation that permits, starting from January 2005, all British companies to use the International Financial Reporting Standards as an alternative to the UK accounting standards. The European law already requires listed companies to use IFRS of 2005 in preparation their consolidated accounts. In the UK, that requirement will be extended, so that, starting from January 2005: - publicly traded UK companies will also be permitted to use IFRS in their individual accounts; and - other companies and limited liability partnerships in the UK will be permitted to use IFRS in both their individual and consolidated accounts". The Institute of Chartered Accountants in England and Wales organised the survey of its members on the awareness of IFRS and its impact for the UK. The outcome was that the majority of members were aware of the IFRS principles, however, lack of understanding was shown in the effect of IFRS for the UK accounting practice.
2004	"In the Discussion Paper titled UK Accounting Standards: A Strategy for Convergence with IFRS, the UK Accounting Standards Board has set out its plans for the future of UK accounting standards in the light of the move to the mandatory use of International Financial Reporting Standards for the consolidated accounts of EU listed companies". ASB intended to replace some FRSs by new standards, namely: - FRS 20 based on IFRS 2 (Share based payments); - Financial Instruments standards based on IAS 32 and IAS 39 as of 2005; - Retirement benefits standards based on FRS 17 which is consistent with IAS 19; - Post balance sheet events standards based on IAS 10 and Earnings per share – on IAS 14; - Related party disclosures will be based on IAS 24; - Agriculture standard will be based on IAS 41 and - The revised disclosure rules for operational lease commitments compliant with IAS 17 (Leases). Moreover, the paper seeks the possibilities for small entities to move into IFRS. DTI recommends the companies, not subject for the mandatory adoption of IFRS, to apply this international standard for the financial reporting.
2005	Stock exchange listed companies are obliged to prepare their consolidated financial statements under IFRS. ASB determined its role as - "contributing to the development and implementation IFRSs, - influencing EU policy on accounting standards, including the endorsement of IFRSs, - achieving convergence of UK accounting standards with IFRSs, and - providing guidance on applying IFRSs in the absence of guidance from IFRIC (International Financial Reporting Interpretation Committee)".

Year	Amendments
2006	ASB continued amending the national standards to reflect the changes in IAS. For instance, FRS 23 was changed based on the introduced modifications in IAS 21, FRS 29 was changed according to the changes in IFRS 7 (Financial Instruments: Disclosures) and FRS 26 was implemented in full the modifications in IAS 39. ASB issues the discussion paper "Heritage Assets: Can Accounting Do Better?" with the intention to improve the consistency and transparency of the reporting on heritage assets. An article "Principles Not Rules – A Question of Judgment" was issued by the Institute Chartered Accountants of Scotland (ICAS). There was stressed the importance of principle-based approach in the accounting standard setting which serves the business and public interests in better way and leads to "true and fair view" and "fair presentation" reporting.
2007	The Market Participant Group advised on the Audit Market product project and gave some recommendations to auditors, investors, companies and other market participants as to how to mitigate the risk of audit services. I mention some of the recommendations related to disclosure and transparency domains. - "Audit firms should disclose the financial results of their work on statutory audits and directly related services on a comparable basis"; - "The FRC should continue its efforts to promote understanding of audit quality and the firms and the FRC should promote greater transparency of the capabilities of individual firms"; - "The FRC should amend the section of the Smith Guidance dealing with communications with shareholders to include a requirement for the provision of information relevant to the auditor selection decision" and - "When explaining auditor selection decisions, Boards should disclose any contractual obligations to appoint certain types of audit firms".

Table 5

As the data in Table 5 show, the UK accounting authorities (as well as German ones) were very serious about the harmonisation of the local reporting standards in accordance with IFRS. ISB started with the gap analysis in 2002 and focused on the areas of inconsistency of the UK-GAAP and IAS pursuing the goal of convergence of the two standards. The member states decided to forbid the early adoption of IFRS. Perhaps the reason behind was to reach the set-up results by 2005 first and ease the transition challenges for UK listed companies.

4.8 Sweden

"Sweden has a distinctive accounting tradition with, on one hand, a system of accounting laws that is primarily tax driven and, on the other hand, an accounting profession that is both sensitive and responsive to the needs of the international capital markets" (Blake et al, 1999, p. 421).

Indeed, the Municipal Income Tax Act, approved in 1928, married tax and accounting in Sweden. It is also worth mentioning that the tax accounting legislation was formed before the legal accounting framework. Moving forward the tax politics played more and more serious role in the accounting foundation in Sweden. In 90-ties a discussion about the break in the traditional tax-accounting link was raised. (Blake et al., 1999, p. 424). However, in 1995 the EU fourth and seventh directives were implemented in the country, also with the tax-accounting link. In some points in the implementation of this legislation Sweden followed the example of Germany, e.g. for a "true and fair override" (Blake et al., 1999, p. 424). It is not surprising, because before the Second World War the German accounting rules dominated the Swedish legal and accounting infrastructure (Paananen, 2008, p. 3).

Three organs are empowered to set the accounting standards which should be prepared in compliance with the God Redovisningssed (GRS) – Good Accounting Practice (Blake et al., 1999, p. 423).
The oldest accounting authority is Föreningen Auktoriserade Revisorer (FAR). The main role of this body is to give recommendations on the matter of accounting principles. Another body – Bokföringsnämnden (BFN) is the local Accounting Standards Board. The accounting record of companies is their own responsibility. In 1989 a new board was created – the Redovisningsrådet (RR) - which represents the Swedish Financial Reporting Council. They are in charge for the standard setting for public firms listed on a stock exchange. Thus, the accounting standard in Sweden is founded by the Annual Accounts Act (with EU Directives additions) and the rules of Financial Reporting Council (RR) or the Swedish Financial Accounting Standards Council (SFASC). In September 2006 the merger of two accounting bodies FAR and Svenska Revisorsamfundet or SRS (Swedish Organisation of Auditors) was an official fact.

Quite surprisingly, in the research of Ding et al. (2007) Sweden had almost the same scores for the indicators absence and divergence as the Netherlands. It is below the average for the absence parameter and above it for divergence. As Swedish accounting followed the developments in Germany my expectation was to see Sweden closed to Germany. I remind that Germany scores about average for the indicator absence and way above for the divergence. (Ding et al., 2007, p. 9).

4.8.1 National development

Sweden was also included in the survey on the GAAP convergence in 2002 and the results per category are:

- Governmental or other regulatory requirement to converge with IFRS – 57% (like the rest of researched countries)
- Tax driven nature of the national accounting regimes – 47% (like Germany and France)
- Translation difficulties – 18% (Sweden is the only country from my sample that was marked in that category)

Following the structure of presenting the national development information for previous countries I continue with the outcome of the survey of National Accounting Rules for Sweden (Nobes, 2001). In this report the most appealing data refer to the disclosure requirement rules. The Swedish accounting does not include some aspects in this field, namely (I quote Nobes, 2001, p. 126):

- A primary statement of changes in equity (IAS 1.7)
- Most of the information required by IAS concerning the fair values of financial assets and liabilities (IAS 32.77)
- The fair values of investment properties (IAS 40.69)
- Discontinuing operations (IAS 35)

What is also noteworthy is the area of changes in the national requirements with effect after 2001. These are some examples: internally generated assets, impairment of assets, provisions, presentation and disclosure of financial instruments (which is more relevant for my study) and accounting for employee benefits.
In the following table I will mark some national standard amendments which have been made towards the harmonisation with IFRS and which are of some relevance to my study.

Year	Amendments
2001	As mentioned above, the differences between the national standard and international accounting rules concerning presentation and disclosure of financial

Year	Amendments
	instruments were removed in Swedish accounting legislation.
2002	In October 2002 the Swedish Financial Accounting Council (SFASC) published three accounting standards with effect on 1st January 2003. Among them is SFASC 27 – Financial Instruments: Disclosure and Presentation, which is based on IAS 32 – Financial Instruments: Disclosure and Presentation. Earlier that year some more national standards received adjustments. I would like to note two of them, which are SFASC 22 (Presentation of Financial Statements based on IAS 1) and SFASC 23 (Related Party Disclosures based on IAS 24).
2003	No update
2004	No update
2005	No update
2006	No update
2007	No update

Table 6

From the analysis by Deloitte brought up before, I can observe that the national accounting setters made some very necessary adjustments towards the IAS. Specifically, during the first two years of the period in the consideration 2001 and 2002, a lot of changes have taken place. During the period around the mandate date – 2005 – no highlights about amendments in the Swedish GAAP are available on the IASPlus web-site. Due to this fact I can assume that the local accounting regulators became less attending to the convergence of the two standards.
The research results of Paananen (2008), who examines the IFRS implementation in Sweden, indirectly support this observation. The outcome shows that IFRS not only has not improved the quality of financial statements of Swedish public companies, but also there is some evidence that the quality has been reduced after the IFRS adoption which might have led to the cost of capital increase.

4.9 Theoretical research results

From the theoretical review I can notice that local authorities were focus on the standards convergence at the beginning of the research period. However, starting from 2005, less effort was made from the side of local standard setters to amend the local accounting practice towards the IFRS. There are evidences that the comparison between the main sample and the virtual benchmark is possible. In case of significant differences in the cost of capital structure in the main sample for IFRS adopters it is possible to assume that this capital factor was modified due to the introduction of IFRS. The biggest advantage of IFRS or any other international accounting standard, in my view, is that it is recognisable by all investors and allows the company comparison quite easily.

5 Research Method

In order to perform the empirical test, the following ingredients deem to be necessary:

1. source of data
2. regression model for the research
3. proxies for economic consequences
4. control variables
5. data selection and description including the period of the research, the main sample, and the benchmark information
6. sensitivity tests
7. research issues

5.1 Source of data

The main source of the data is the database of Thomson Reuters – Thomson ONE Banker (TOB) which contains data from different financial databases such as Datastream, First Call, Thomson Financial, Worldscope etc. The market data such as stock historical information, accounting practice, general company information are accessible from TOB.
The information on estimations for earnings per share (EPS) is available in the database I/B/E/S. The information on the accounting standards is retrieved from the Compustat database. The Inflation rate (Annual Inflation rate) is downloaded from Eurostat database.
In order to determine the accounting standard which a particular company follows I use the parameters IFRScompliant (where a company IFRS compliant – Yes/No) and IFRSswitch (when the company switched into IFRS) from TOB. For the cross check purposes I use also the values of Accounting Standard from the Compustat database where it is clearly defined when (what year) and what standard (US-GAAP, IAS, local) is applied. In the appendix A more information is available.

5.2 Regression model

The following regression model is used for the empirical research:

$$EconCon = \beta_0 + \beta_1 Voluntary\ IFRS + \beta_2 Mandatory\ IFRS + \beta_3 US\text{-}GAAP + \sum \beta_j Controls_j + \varepsilon \quad (4)$$

where

- *EconCon* stands for the capital market factor which helps to measure the economic consequences. In my case this factor is represented by *the costs of capital* (see the next chapter).
- Voluntary IFRS (or IFRS adopters) takes the value of "1" if a company is an IAS adopter within the period of 2001-2004 from the year of adoption. During the period 2005-2007 the value equals "1" from the year of mandatory adoption.
- *Mandatory IFRS* has the value of "1" if a company implemented IFRS and "0" otherwise.
- *US-GAAP* has the value of "1"if a company adopts US-GAAP and "0" otherwise. The US-GAAP followers are noted separately as US accounting standard has higher disclosure requirements than local GAAP's and in general is considered to be one of the international standards.
- $Controls_j$ denotes the set of control variables. I elaborate on that later on.
- ε *is the e*rror term.

5.3 Cost of equity capital

Previous studies suggest several methods for measuring the cost of capital. Daske et al. (2008, p. 47) use four models: Claus and Thomas (2001), Gebhardt, Lee and Swaminathan (2001), Ohlson and Juettner-Nauroth (2005), and the price-earnings-growth (PEG) model by Easton (2004). The last model is selected by Kim and Shi (2007, p. 13), based on the fact that the components in the PEG model highly correlated with the ones in the other mentioned models and are similar with other models. I use the PEG model in my research. The underlying idea of all four models is nearly the same – to calculate the cost of capital as the internal rate of return using prices and expected returns based on analysts forecast.

According to the PEG model of Easton, the firm's expected cost of capital is calculated as follows (Kim and Shi, 2007, p.13):

$$CoE_{PEG} = \sqrt{\frac{E_0(eps_2) - E_0(eps_1)}{P_0}} \qquad (5)$$

where

E_0 = Expectations operator, the subscript *0* denotes the year of expectation formation;

eps_t = Earnings per share (EPS) in year *t*;

P_0 = Price at the beginning of year *0*.

In order to calculate company's expected costs of capital I need to know stock prices and one and two year's expectations about future earnings. These data are available in the I/B/E/S database. The list of necessary companies is downloaded from Worldscope. Some values presented in the databases are in currencies other than EUR. For currencies which vanished like DEM I used the conversion exchange rate (for DEM – the exchange rate DEM/EUR = 1,95583 of February 28th 2002 is used). For the existing currencies like USD the relevant exchange rate of the year (from December) is in use.

In the cost of capital calculation according to PEG some challenges are faced:

- Data are not fully present for all companies for all years considered. In such cases I removed companies' entries which represented only one year or two years before or after the mandate.

- In the database I/B/E/S several estimations are available for EPS for the same period. In such cases I take the most recent estimation.

5.4 Control variables

In order to be able to isolate the effect of mandatory IFRS on the investors' behaviour from the effect of other extraneous factors, possibly affecting my analysis, some control variables are to be introduced. First, I have to determine which other effects can be of influence on the behaviour of investors. Second, I describe how to include these control variables in my empirical model.

I consulted works of other relative empirical studies to define the reliable control variables for my research.

Size is firm size calculated as natural log of total assets according to Kim and Shi (2007).
Financial Leverage is a ratio of total liabilities to total assets.

I need these two variables for control on size of companies and their leverage ratio. In previous studies the observations were made that larger and less leveraged companies are most likely to adopt IFRS (Kim and Shi, 2007, p. 12).

As the equity costs of capital are calculated as the sum of risk-free rate and the amount of premium expected for risk, the risk-free rate is definitely wise being monitored in the regression model.

For *Risk-free rate (Interest)* I work with the Euribor interest rate of 12 months for France, Germany and the Netherlands to define this value, LIBOR12 for the UK market and STIBOR12 for Sweden. In some studies the U.S. Treasury bill is used as the proxy for the risk free rate for all countries (e.g. Hail and Leuz, 2006). That assumes, however, that the exchange rates cover inflation differences and real rate is the same across countries. I do not think that these assumptions can be always met. Also Hull (2009, p. 75) explains that e.g. LIBOR rate is better proxy than Treasury bill and bond rates and it (LIBOR rate) is used often by derivative traders as the benchmark for the risk free rate. LIBOR serves well as opportunity costs of capital.
One more macroeconomic parameter is inserted into the model - *Inflation* rate - to control for the economic situation in countries.

Return variability is measured as annual standard deviation of monthly stock returns.
Return variability is also known as "the variability of an asset's return that causes its compound rate of return to fall below its average rate of return" (according to the article of the Asset Allocation Advisor, 2008). This parameter is affected by the investment decisions of companies and represents a business risk. The increased variability on return to common shareholders is the financial risk and is the result of the usage of debt and preferred stocks. I include this variable in my regression model because my expectation is that the value of this variable will be improved after the IFRS adoption, which might influence the cost of capital in the positive way.

Share turnover - Annual trading volume (in a currency) divided by the market value of outstanding equity. Share turnover shows how liquid the stock is. The higher share turnover is, the more liquid is the stock of company. According to the previous studies, the liquidity of markets improved after the IFRS adoption. Hence, this variable might be influenced by the fact whether or not a company follows IFRS accounting rules.

Besides the aforementioned variables, I define a few more, according to Daske et. al (2008, p. 18), Kim and Shi (2007, p.12) and Hail and Leuz (2006, p. 495).

Cross listing is defined as "1" when a company share is traded on more than one stock exchange and as "0" otherwise. I need to capture this value to control the exposure to foreign markets.
Return On Equity (ROE) is the ratio of the net income after tax to shareholder's equity.
Return on Assets (ROA) is the ratio of earnings before interest and taxes to total assets.

The dependent parameter – cost of capital, calculated according to PEG (C_0E_{PEG}) – refers to *ex ante* (expected cost of capital). The variables – Leverage, Size and ROA – are included to isolate the effect of *ex ante* on the IFRS adoption from other company specific effects (Kim and Shi, 2007).

On top of that, I use country-specific independent variable - *Legal* to control for the institutional infrastructure. This variable has several proxies which are described below.

To control for the efficacy of a countries' governance mechanisms, I include two independent variables *Disclosure* and *InvPro* (Kim and Shi, 2007, p. 17).

Data on *Disclosures* can be found from La Porta et al. (2006, p. 6). They develop the disclosure requirements index relating to the following categories: (1) prospectus; (2) compensation of directors and key officer; (3) ownership structure; (4) inside ownership; (5) contracts outside the ordinary course of business; and (6) transactions between the issuer and its directors, officers, and/or large shareholders. The index ranges from 0 to 1; with higher values indicating more extensive disclosure requirements.

Invpro is measured from three indices, which determine a countries' investor protection environments. Data on the three indices (*AntiDir*, *EffJud* and *LawRule*) are obtained from La Porta et al. (1998, 2002).

The *AntiDir* index defines how the legal system protects its minority shareholders against management and dominant shareholders in respect to the decision-making process. For five of these director rights a country gets score 0 if it does protect for the right, and 1 if not. For the sixth right, a call for an extraordinary shareholder meeting, a country gets score of 1 if they fall at or below the world median percentage of 10% capital shares needed (La Porta, 1998, p. 1129).

EffJud covers the assessment of the efficiency and integrity of the legal environment as it affects the business (Kim and Shi, 2007, p. 40). This is done on a scale from 0 to 10, with lower scores representing lower efficiency levels. The assessment is compiled by private credit risk agencies (such as Business International corp.) and addresses five measurements: the efficiency of the judicial system, the rule of law, corruption, risk of expropriation-meaning outright confiscation or forced nationalisation by the government, and the likelihood of contract repudiation by the government (see La Porta et al., 1998, p. 1140).

LawRule covers the assessment of the law and other tradition in the country, produced by the country risk rating agency *International Country Risk* (ICR). This is done on a scale from 0 to 10, with lower scores standing for less tradition for law and order. This value is calculated by la Porta et al. (1998).
The data matrix is also extended with Burden of Proof parameter (la Porta, 2006); and *SecReg,* which is a composed index of *Disclosure*, *Burden of proof* and *PubEnf* (Kim and Shi, 2006, p. 18). The index of Burden of proof equals the arithmetic mean of: (1) Burden director; (2) Burden distributor; and (3) Burden accountant (la Porta, 2006, p. 28).

In a nutshell, Burden director index shows the complexity in the legal process in recovering losses from the directors due to the misleading information in the statement.
Burden director index equals "1" when investors have to prove that a statement is misleading. It equals "2/3" when investors should also prove that they trusted the statement and made losses based on the information from the statement. It equals "1/3" when investors have to prove that management acted with negligence and they relied on the statement and made losses because of that. It equals "0" when "restitution from directors is unavailable or the liability standard is intent or gross negligence" (La Porta, 2006, p. 28).

Burden distributor index shows the complexity in the legal process in recovering losses from the distributors due to the misleading information in the statement. Burden distributor index equals "1" when investors have to prove that a statement is misleading. It equals "2/3" when investors should

also prove that they trusted the statement and made losses based on the information from the statement. It equals "1/3" when investors have to prove that distributors acted with negligence and they relied on the statement and made losses because of that. It equals "0" when "restitution from distributors is unavailable or the liability standard is intent or gross negligence" (La Porta, 2006, p. 29).

Burden accountant index shows the complexity in the legal process in recovering losses from the distributors due to the misleading information in the statement. Burden accountant index equals "1" when investors have to prove that a statement is misleading. It equals "2/3" when investors should also prove that they trusted the statement and made losses based on the information from the statement. It equals "1/3" when investors have to prove that accountants acted with negligence and they relied on the statement and made losses because of that. It equals "0" when "restitution from accountants is unavailable or the liability standard is intent or gross negligence" (La Porta, 2006, p. 29).

The index Public Enforcement (*PubEnf*) equals the arithmetic mean of: (1) Supervisor characteristics index; (2) Investigative powers index; (3) Orders index; and (4) Criminal index (La Porta, 2006, p. 30). In short, this indicator gives the flavour of the level of influence of authorities (also called supervisor) on the market business. La Porta et al. (2006, p. 10) determine this indicator based on the four aspects: (1) supervisors' efficiency (including independency, their focus on markets and their level of power), (2) investigative power (making the right decisions in case of e.g. information inaccuracy), (3) and (4) indices cover non-criminal and criminal sanctions for violations of securities laws respectively.

One interaction parameter is inserted into the model – *Voluntary IFRS and Legal*. This interaction factor shows how two values relate to each other and what influence they have together on the independent parameter in the regression model. The knowledge base says that the institutional country specific characteristics influence the accounting standards. Some researches (Kim and Shi, 2007; Platikanova, 2007) support this statement in connection to IFRS. In order to control for the mutual effect I introduce this variable in the model.

Finally, I include a dummy variable *Industry*, based on the General Industry Classification from Thomson Financial, a dummy variable *Year* to control for fixed effects from the year and a dummy variable *Country*.

5.5 Data Selection

The following general criteria are applied for the main sample.

1) Company should be a publicly traded active company and listed on a local stock exchange, the name of which is mentioned later per country.
2) Financial (insurance included) companies are excluded from the sample, as they have different characteristics than other companies particularly with respect to the area of financial instruments, which are subject to significant revisions and which could distort the results (Kim and Shi, 2007, p. 16)
3) Samples are taken from European countries with different legal origins, strong economy and world influence.

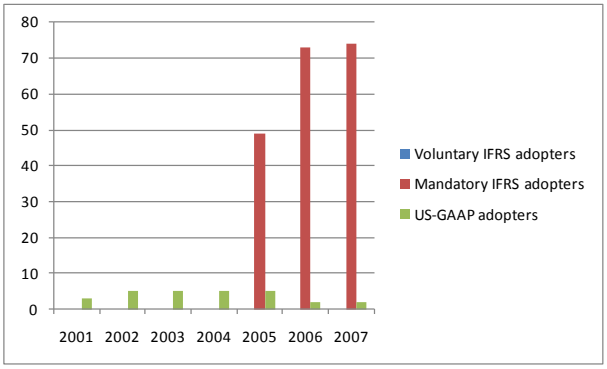
In the Thomson ONE Banker (TOB) database the new indicators are available which provide with the information on IFRS compliance (the indicators: IFRScompliant and IFRSswitch), which mean whether a company IFRS compliant and the date of switch into IFRS. These indicators are of importance for the selection on early adaptors (if any) and on the year when companies can be added to the mandatory adopter list.

The size of companies is not taken into account at this stage to broad the selection. Financial companies, however, are excluded from the sample.
In order to limit the outlier influence on the sample the dataset is winsorised by 10%. The new regression analysis should be qualitatively identical to the original regression.

Further I will highlight some country specifics on selection. The institutional infrastructure characteristics mentioned below are taken from different studies of La Porta et al (1998, 2002 and 2006). Table E of the Appendix C summarises this information.

5.5.1 The Netherlands

Companies which are listed on the Amsterdam stock exchange are selected for this research. The list consists of about 70 companies for the period 2001-2007 (Financial companies are excluded). The Netherlands does not have early adopters sample as the earlier adoption (before 2005) of IAS was not allowed by the local regulation. The majority of companies implemented IFRS in 2005. Graph 1 shows the international accounting standard adoption in the Netherlands during the 2001-2007 periods. As displayed in Graph the number of US-GAAP adopters contained in the sample is very small. Almost all selected companies adopted IFRS by 2007.

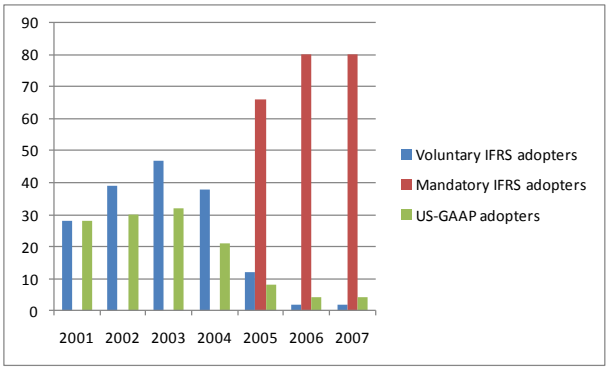


Graph 1 – International standard adoption development in the Netherlands

As far as the institutional infrastructure variables are concerned (they are also used as control variables in the regression model) the Netherlands represents the civil law country. It has the medium level of disclosure requirements (equals 0.5 where the maximum is 1) according to the research of La Porta et al. (2006). The anti-director right indicator in this country is equal medium for civil law countries. The mean of the same indicator is twice higher for common law countries. The indicators Efficiency of Judicial System and the Rule of Law are the possible highest value meaning that Dutch judicial system is efficient and very strong in sense of traditional law attitude. The burden of proof parameter is 1 meaning that the burden of proof for investors is low and requires less proof on the misleading information in the financial statement in case the decisions were made based on these data. The public enforcement factor (0.38) is very low in the Netherlands. It is less than the mean for the group of French origin countries (0.49) where the Netherlands belongs to (La Porta et al., 2006).

5.5.2 Germany

Companies which are listed on the Frankfurt stock exchange are selected in the main sample. In Germany the number of companies which adopted IAS before the mandate data is large. The population of German companies consists of about 80-90 companies.

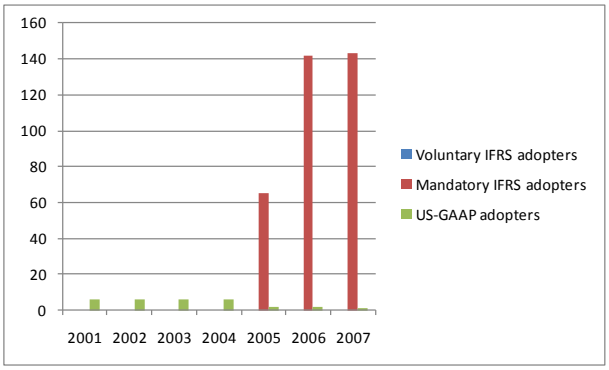


Graph 2 – International standard adoption development in Germany

From Graph 2 we can see that almost half of the selected German companies were IFRS early adopters. In Germany listed companies were allowed to follow IAS as of 1998. Consequently, almost all companies from the sample had adopted IFRS before or in 2005. What is also noticeable is that the percentage of US-GAAP followers in Germany before the mandate date is the biggest in comparison to other countries of this research.
With reference to institutional parameters Germany has lower scores than the Netherlands for all groups suggesting that in general the institutional infrastructure in Germany is weaker than one in the Netherlands. Germany is, as well as the Netherlands, the common law country.

5.5.3 France

Local companies which are quoted on the Paris Bourse ("Bourse de Paris" in French) represent the French sample in the research. About 140 French companies are selected from TOB.
As shown in Graph 3 the majority of companies jointed the IFRS adopter society not in 2005 but one year later. The number of US-GAAP adopters in the period 2001-2004 is very small. As companies were not allowed to adopt IAS earlier than in 2005 the variable Voluntary IFRS adopters is not present on the graph.

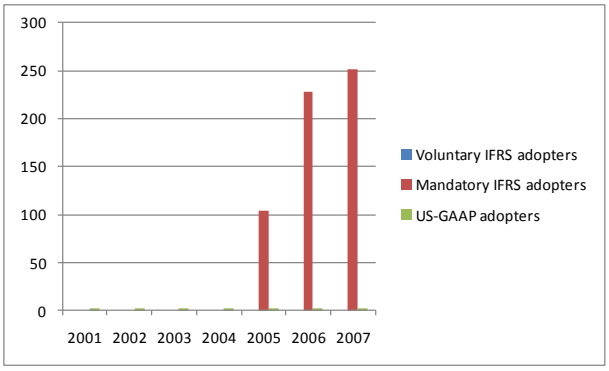


Graph 3 – International standard adoption development in France

Looking at the legal characteristics of this country we can see that the disclosure requirements, anti-director rights and public enforcement scores are higher than in previously mentioned countries (the Netherlands and Germany). French has the highest score in Public Enforcement. The French Judicial system seems not to be efficient and the traditional law system seems not to be strong. France is behind the Netherlands and Germany on these parameters.

5.5.4 The UK

The UK company selection consists of public companies quoted on the London Stock Exchange. Data for approximately 250 companies are retrieved from the TOB database. It has the largest country representation in the sample.

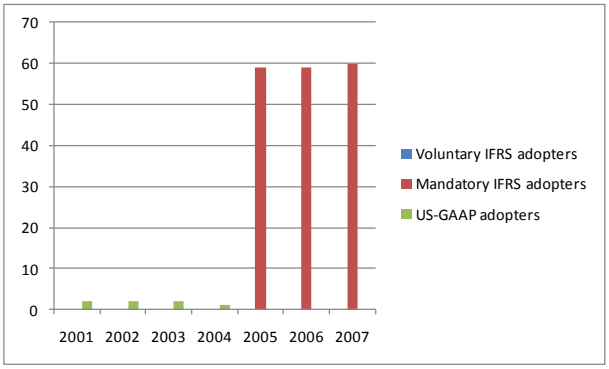


Graph 4 – International standard adoption development in the UK

Graph 4 demonstrates that the majority of companies applied IFRS in 2006 (the same is valid in France). There were almost no UK companies who followed the US-GAAP regulation.
The legal indicators support the observation that civil law countries have stronger institutional infrastructure than common law countries. The UK has the best score in the Disclosure requirements, Anti-director rights, Efficiency of Judicial system and Law rules. However, the indicator Burden of proof is quite high meaning that investors should take more efforts to prove any misleading information on statements resulted in their losses. The indicator of Public Enforcement is also quite high meaning that public authorities' involvement in markets is quite strong.

5.5.5 Sweden

The sample for this country is taken from publicly traded companies who listed on the Stockholm Stock Exchange. The selection results in about a 60 firm list.



Graph 5 – International standard adoption development in Sweden

From Graph 5 we can notice that almost all companies implemented IFRS in 2005. The number of US-GAAP adopters was tiny across 2001-2004.
Sweden has average score in the legal country characteristics. The disclosure requirement level is 0.58 which is almost the mean in the Scandinavian legal origin group (La Porta, 2006, p. 32). The Juridical system is quite efficient (the score is 10 which is the maximum). The level of traditional law system is high (it has the maximum score of 10). The value for Anti-director rights, Burdon of proof and Public Enforcement is close to the mean.

5.5.6 Benchmark sample

As is already mentioned the benchmark sample for this research is a virtual one. As of 2005 and onward it is assumed that there are companies who apply the local GAAP for their reporting

purposes. Having analysed the national accounting standard development, I observe that it is possible to do so. With some cautions I will estimate differences in the cost of capital for IFRS adopters and non-adopters (companies from the sample which have not yet applied IFRS) to understand the benefit of IFRS implementation.

5.6 Sensitivity test

In order to make research results robust and trustworthy, I do a sensitivity test to control the calculation of the cost of capital. In this section I explain the test.

I use the PEG model from Easton (see the chapter 4.6 Cost of equity capital) to measure the cost of capital. I would like to check if this model is robust and trustworthy for different estimates of the cost of capital. I introduce one more alternative valuation model such as a proxy for the cost of capital. With these estimate I follow the study of Kim and Shi (2007, p. 24).

The alternative model I want to consider is the Ohlson and Juettner-Nauroth (2005) model. It uses one-year ahead forecasted earnings and dividends per share as well as forecasts of short-term and long-term abnormal earnings growth (Kim and Shi, 2007, p. 24). The cost of equity (CoE_{OJ}) can be defined as:

$$CoE_{OJ} = A + \sqrt{A^2 + \frac{eps_1}{P_0} \cdot \left(\frac{eps_2 - eps_1}{eps_1} - (\gamma - 1) \right)} \quad (6)$$

Where:

$$A = \frac{1}{2}\left((\gamma - 1) + \frac{dps_1}{P_0} \right) \quad (7)$$

dps_1	=	forthcoming dividends per share in year 1;
eps_t	=	Earnings per share in year *t*;
P_0	=	Price at the beginning of year *0*;
γ	=	assumed perpetual growth rate.

From Gode et al. (2003, p. 408), I assume:

$$(\gamma\text{-}1) = r_f - 3\% \quad (8)$$

This term is to account for inflation effects, with r_f being the 12 months Euribor yield.

To evaluate this formula, the data are obtained from the *IBES International* and *Worldscope* databases from *TOB*.

5.7 Research issues

I would like to mention some challenges for this research. Previous studies on the capital market effects of mandatory IFRS reporting also face some or all these caveats (e.g. Kim and Shi, 2007; Daske et al., 2008, Hail and Leuz, 2007).

1. As IFRS reporting is mandatory for all stock exchange listed companies (publicly traded firms) I cannot have a control sample in EU. I analyse the capital market situation using the

information about cost of capital for public traded companies before their adoption of IFRS. I use this information for my virtual benchmark sample to be able to compare economic parameters for IFRS adopters and non-adopters. Although the theoretical analysis has been done and showed that it is possible to use such approach, the results of the test has to be taken with caution.

2. It can happen that the effect of mandatory IFRS adoption is already anticipated in capital markets. This statement is applicable for the cost of capital factor. The future cost of capital may be already incorporated in the firms' market valuations. I address this issue by analysing the figures around the mandate date carefully. Daske et al. (2007) perform some check to investigate this issue on their results.
3. At the end, it is important to take into account the changes in government rules and legal regulations around the time when IFRS become mandatory. These changes have impact on the capital market behaviour and it is quite difficult to separate these effects. They simply should be noted while interpreting my findings.

I should interpret the outcome of 2005 very carefully due to the impact of the transition period, which was equally complicated for company management and investors. One analyst says about IFRS reporting: "I think it will be at least one year before people fully understand what they are looking at". It is stated in the article of one of KPMG analysts that the key element during the transition period was the communication between management and investors because of the high chance of shocks from the first reporting. Good management and transparency were important factors during that period. (Barrett, 2005) These two factors are difficult to measure during the research performed in 2010. In addition to that, I would like to add that mandatory disclosure, besides benefits, has also cost aspects. They might be higher in the transition period for providing the certain level of disclosure.

6 Test result analysis

6.1 Mean comparison t-test

The tables 7 and 8 present descriptive statistics results of compare means independent t-test for the costs of capital between IFRS adopters and non-adopters. The group IFRS adopters include IFRS early adopters and IFRS mandatory adopters.

Group Statistics

	IFRSadop	N	Mean	Std. Deviation	Std. Error Mean
CapCost	1	1721	.1018297	.07132711	.00171935
	0	2303	.1050445	.07586379	.00158084

Table 7

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CapCost	Equal variances assumed	19.815	.000	-1.364	4022	.173	-.00321485	.00235654	-.00783498	.00140528
	Equal variances not assumed			-1.376	3818.374	.169	-.00321485	.00233564	-.00779408	.00136437

Table 8

As shown in Table 7 the mean cost of capital measured by the Easton (2004) model is 0.1018 for IFRS adopters and 0.1050 for non-IFRS adopters, the standard deviation values are 0.0713 and 0.0758 respectively. The t-test demonstrates that the costs of capital for the IFRS adopters is lower than for the non-adopters. This observation gives me some ground to reject the hypothesis H_0 suggesting that IFRS adoption did not influence the cost of capital in EU markets. However, if we look at the table 8 we can see that the difference between two groups (IFRS adopters and non-adopters) is not significant t(3818)=-1.376, p>0.05.

The following test results (Tables 9 and 10) refer to the same compare mean independent t-test but for IFRS mandatory adopters and non-mandatory IFRS adopters (including early IFRS adopters).

Group Statistics

	IFRSman	N	Mean	Std. Deviation	Std. Error Mean
CapCost	1	1320	.0999721	.06703557	.00184509
	0	2700	.1054318	.07710781	.00148394

Table 9

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CapCost	Equal variances assumed	48.510	.000	-2.198	4018	.028	-.00545978	.00248370	-.01032921	-.00059036
	Equal variances not assumed			-2.306	2969.958	.021	-.00545978	.00236779	-.01010246	-.00081710

Table 10

The data in Table 9 says that the mean cost of capital for IFRS mandatory adopters is 0.0999 and for non-mandatory IFRS adopters – 0.1054. The standard deviation figures are 0.0670 and 0.0771 respectively. In Table 10 the t-test shows that the cost of capital is significantly lower (t(2970)=-

2.306; p<0.05) for the mandatory IFRS adopters. The difference in the cost of capital between mandatory adopters and non-adopters is significant.

From the listed results of the test on the mean comparison the following observation can be made: the cost of capital is improved for the IFRS adopters in general, however, the significant improvement is shown for IFRS mandatory adopters. Based on these test results I can reject the hypothesis H_0 meaning that the introduction of IFRS might improve the cost of capital factor in EU markets.

Now I do the same t-test per country comparing the mean for the cost of capital of IFRS adopters (including both early and mandatory adopters) with one of non-adopters.
For all enclosed "Group Statistics" tables in this chapter the following is valid: "1" represents IFRS adopters group and "0" – non-adopters.

6.1.1 The Netherlands

Group Statistics

	IFRSadop	N	Mean	Std. Deviation	Std. Error Mean
CapCost	1	108	.1100037	.05905256	.00568234
	0	178	.1276450	.06566267	.00492162

Table 11

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CapCost	Equal variances assumed	5.331	.022	-2.287	284	.023	-.01764124	.00771516	-.03282739	-.00245508
	Equal variances not assumed			-2.347	244.555	.020	-.01764124	.00751740	-.03244835	-.00283412

Table 12

Table 11 tells us that the mean cost of capital for IFRS adopters in the Netherlands is 0.11003 and the standard deviation is 0.05905. For non-adopters these values are 0.12764 and 0.065662 respectively.

Table 12 tells us that the variances are not equal and this result is significant (t(244555)= -2347, p<0.05). It means that the cost of capital was reduced significantly in the Netherlands after the IFRS adoption.

6.1.2 Germany

Group Statistics

	IFRSadop	N	Mean	Std. Deviation	Std. Error Mean
CapCost	1	392	.1276757	.06681153	.00337449
	0	185	.1435657	.08510968	.00625739

Table 13

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CapCost	Equal variances assumed	10.835	.001	-2.435	575	.015	-.01588997	.00652637	-.02870839	-.00307154
	Equal variances not assumed			-2.235	294.850	.026	-.01588997	.00710930	-.02988136	-.00189857

Table 14

Table 13 demonstrate that the mean cost of capital for IFRS adopters in Germany is 0.12767 and the standard deviation is 0.066811. For non-adopters these values are 0.14356 and 0.08510 respectively.

Table 14 explains that the variances are not equal and this result is significant (t(294850)= -2235, p<0.05). It means that the cost of capital was reduced significantly in Germany after the IFRS adoption.

6.1.3 France

Group Statistics

	IFRSadop	N	Mean	Std. Deviation	Std. Error Mean
CapCost	1	401	.1165045	.05974153	.00298335
	0	582	.1227056	.06613433	.00274136

Table 15

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CapCost	Equal variances assumed	7.168	.008	-1.502	981	.133	-.00620110	.00412797	-.01430177	.00189956
	Equal variances not assumed			-1.531	912.682	.126	-.00620110	.00405159	-.01415262	.00175042

Table 16

Table 15 shows that the mean cost of capital for IFRS adopters in France is 0.11650 and the standard deviation is 0.059741. For non-adopters these values are 0.12270 and 0.066134 respectively.

Table 16 says that the variances are not equal but this result is not significant (t(912682)= -1531, p>0.05). So we can conclude that there is no significant difference between the cost of capital of IFRS adopters and non-adopters in France.

6.1.4 The United Kingdom

Group Statistics

	IFRSadop	N	Mean	Std. Deviation	Std. Error Mean
CapCost	1	741	.0775626	.07172283	.00263480
	0	1036	.0776829	.07520897	.00233663

Table 17

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CapCost	Equal variances assumed	13.249	.000	-.034	1775	.973	-.00012029	.00354950	-.00708193	.00684136
	Equal variances not assumed			-.034	1637.520	.973	-.00012029	.00352165	-.00702770	.00678713

Table 18

Table 17 shows that the mean cost of capital for IFRS adopters in the UK is 0.07756 and the standard deviation is 0.07172. For non-adopters these values are 0.07768 and 0.07520 respectively.

Table 16 gives us an interesting result that the variances are assumed to be not equal but this result is far from significant (t(1637520)= -0.034, p>0.05). It means that we can assume that there is no significant difference between the costs of capital in the UK after the IFRS adoption. The assumption, that the costs of capital in the UK before and after the IFRS introduction are not the same, is challenged. My result supports the conclusion of the test of Kim and Shi (2007), to some extent, that the cost of capital-reducing effect of IFRS adoption is lower when the IFRS adopters are from countries with strong institutional infrastructures (Kim and Shi, 2007, p. 34). The United Kingdom is a country with strong institutional environment and we can see that the cost of capital reducing effect of IFRS adoption, which Kim and Shi (2007) are mentioning, is lower for this country.

6.1.5 Sweden

Group Statistics

	IFRSadop	N	Mean	Std. Deviation	Std. Error Mean
CapCost	1	173	.1097940	.06707951	.00509996
	0	228	.1354205	.06789225	.00449627

Table 19

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CapCost	Equal variances assumed	.803	.371	-3.763	399	.000	-.02562646	.00681024	-.03901490	-.01223801
	Equal variances not assumed			-3.769	372.689	.000	-.02562646	.00679898	-.03899562	-.01225729

Table 20

Table 19 shows that the mean cost of capital for IFRS adopters in Sweden is 0.10979 and the standard deviation is 0.06707. For non-adopters these values are 0.13542 and 0.06789 respectively.

Table 20 says that the means are assumed to be different and this result is significant (t(399)= -3763, p>0.05). It means that the cost of capital was significantly reduced in Sweden after the IFRS adoption.

All in all, the test results show that there are evidences that the cost reduction effect of the IFRS introduction is present in general. Looking at the country level I observe that this effect is different per country. In the Netherlands, Germany and Sweden the cost of capital are significantly decreased after the IFRS adoption. Meanwhile, they stay almost unchanged in the UK and in France. My results partially support the observation of Daske et al. (2008) stating that the larger the differences between local GAAP and IFRS used to be the bigger the cost-reduction effect was from the IFRS implementation. Based on my theoretical investigation of national development of GAAPs I can see that the local standards in the Netherlands, Germany and Sweden were indeed far from IFRS principles. During several years the local authorities of these companies were seriously focused to move local accounting rules towards the international standard. The UK authorities spent also time on the way to the harmonisation of accounting rules and principles. However, the UK GAAP had already a high level of disclosure quality. Therefore the results for the UK follow the expectations and are in line with the previous studies. As far as France is concerned, there were significant differences between two accounting standards and these differences were not significantly reduced due to the amendments of the local accounting. As shown in Table 4 the local authorities were not serious about the convergence between two accounting sets of principles. That is why I would expect the large cost reduction effect of the IFRS adoption in France. I can find the possible explanation for the test outcome in the transition effect. In France the majority of companies from the selection applied IFRS in 2005-2006.

6.2 Regression test

As the sample of the research in general fulfils the assumption for the linear regression I can use the multiple regression test. This is the first recommended model to start considering using because of its simplicity and clarity on results. The test on variability, non-zero variance, non perfect multicollinearity, homoscedasticity, normally distributed errors and independence give positive results. There are, however, concerns about independent errors and linearity tests. The independent errors test (Durbin-Watson test) checks the autocorrelation behaviour. As is stated by Field (2006, p. 170) even if the results is good it will still leave some doubts about the correctness of a sample and a model. The less linearity in the sample will limit the generalisability of the findings.
Having addressed some potential shortcomings of the model, I will continue with the analysis. The created sample includes 4039 companies-years listed on the German (Frankfurt), French (Paris), Swedish (Stockholm), Dutch (Amsterdam) and British (London) stock exchanges over the period of 2001-2007.

Table B in the Appendix A gives the outcome of the linear regression model in Eq. (4) on the correlation. In the first column we can see that cost of capital (CapCost) and the indicator on mandatory and early IFRS adoptions (IFRSman and IFRSadop respectively) have negative correlation. In case of mandatory IFRS adoption the correlation with cost of capital is significantly negative (see also Tabel C of the Appendix A). That means that mandatory and early IFRS adopters benefit from lower capital costs. It is according to our expectations and also supports the results of previous studies (e.g. Kim and Shi, 2007). What might be surprising is that the correlation between cost of capital and US-GAAP (USGAAP) is positive. The theory suggests that this correlation should be also negative as US-GAAP requires high quality disclosure and is recognised as the international standards. The possible explanation can be that most researchers, who conclude that the cost of capital for US-GAAP adopters should be lower, created a benchmark from world-wide companies including US companies as well. As my sample does include EU companies the US-GAAP standard might not be so recognisable by EU investors to lower the cost of capital. The level of US-GAAP adoption is also very low in my sample to make any conclusions based on that result.

Table D reports the results for the linear regression. The coefficient for IFRS adoption ($\boldsymbol{\beta_1}$ in the Eq. (4)) is equal -0.232, however, with the significant level of more than 5%. This coefficient can be interpreted as IFRS adopters having a reduction in cost of capital by about 23 basis points in comparison to non-adopters. According to my hypothesis H_0 beta $\boldsymbol{\beta_1}$ should equal to null. This gives one more proof that the hypothesis H_0 can be rejected.

The coefficient for the US-GAAP adoption is equal 0.055 which is significant with the less than 5% level. This results can be explained in the way that US-GAAP adopters in EU markets obtain increase by 5.5 basis points in cost of capital. This outcome supports once more the observation that US-GAAP adopters did not benefit in EU markets from the lower cost of capital.

The coefficient for the *Interaction* is equal 0.318 with less than 5% significant level. The parameter *Interaction* was calculated as the multiplier of IFRS Voluntary indicator with Legal parameters: legal origin (*Law*), the degree of mandatory disclosure requirement (*Disclosure*), protection of shareholder indicator (*AntiDir*), efficiency of legal environment parameter (*EffJud*), assessment of law infrastructure in the country (*LawRule*), composition of legal paremeters AntiDir, EffJud and LawRule (InvPro), burden of proof (BurdoPr), public enforcement index (PubEnf) and composite score of Disclosure, Burden of proof and public enforcement index (SecReg). The positive coefficient for this interaction parameter means that the cost of capital reduction effect becomes weaker for countries with strong institutional infrastructure and other way around – the effect becomes stronger for

countries with weaker institutional infrastructure. This result is in line with previous studies supporting the statement that the cost of capital effect differs for countries with different legal structure. Kim and Shi obtained the significantly positive coefficient for such kind of interaction parameter as well. (Kim and Shi, 2007, p. 22). It is interesting enough that the same results is received on the EU sample including one extensively researched country from each origin (according to my work) and on the worldwide sample having several countries representing each legal origin (according to the study of Kim and Shi, 2007). The regression method, which Kim and Shi, 2007 uses, is the second stage OLS (Ordinary Least Squares) regression. In my regression model I use the linear regression method. Although we use different methods and different samples, we come to the same conclusion. Based on that, I can make an assumption that the same legal origin factor concentrates/represents the similar traditions, cultural level and people behaviour.

That can also mean that the IFRS introduction has more influence on countries with weak governance infrastructure than on countries with strong one. Elaborating on that I can say that requirements towards accounting rules (like the level of disclosure) is already stronger in countries with strong institutional infrastructure and therefore IFRS brings less changes in the internal procedures of companies.

With respect to the sign and the significance of company specific control variables my results are not always consistent with previous findings. For instance, Size has a positive coefficient in my test (the significance level is more than 5%) and Inflation has a positive coefficient (the significance level is more than 5%). In previous studies these control variables have significantly negative coefficients. In my regression test except US-GAAP and Interaction indicators which are described above, the variables ROA, Interest rate and Foreign Sales have significantly negative, negative and positive coefficients respectively. The negatively significant coefficient on ROA indicates that markets consider more profitable companies more stable and less risky and hence demand lower returns (Kim and Shi, 2007, p. 23). The positive coefficient on Inflation demonstrates that investors from countries with high inflation demand high return. The significantly negative coefficient on Interest rate shows that shareholders require more return when the interest rate is low. The significantly positive coefficient on Foreign Sales means that investors would like to see more return from companies who have more trade transactions oversees.

6.3 Country specific hypotheses results

I use the One Way ANOVA for comparison of several means to test my country specific hypotheses. I have selected only IFRS adopters for this test. By using ANOVA I can compare means of the cost of capital of IFRS followers per country. As the sample sizes are different it is advisable (Field, 2006, p.341) to use Gabriel's procedure to compare means. I use also the Games-Howell procedure for the extra check.
Table K in the Appendix D gives the mean and standard deviation values for the cost of capital parameter for five countries. Without any analysis we all can already see that the UK companies IFRS adopters have the lowest cost of capital in comparison with other EU countries from the research. I expect to see that a common law country would have lower cost of capital because of its traditionally strong institutional infrastructure.

Table L tells us the Levene's test is significant meaning that the variances are significantly different. Let us have a look at Table M which demonstrates multiple comparisons of the cost of capital means per country. Indeed, my first impression that the cost of capital of UK firms who adopted IFRS, is different from one of the rest of countries, is supported by the test results. In Table M the reader can see the difference between the means of UK firms and firms in France, Germany, the Netherlands and Sweden are significant different. The cost of capital of UK companies is significant lower. Based

on these data the hypothesis H_a' (*the cost of capital in the UK does not differ from one in other legal origin countries (France, Germany, the Netherlands and Sweden) after the IFRS adoption*) can be rejected.

The means of the cost of capital are significantly different for companies in Sweden and Germany. I do not have enough evidence to reject my hypothesis H_0* saying the cost of capital for IFRS adopters in Sweden and Germany does differ significantly.
The hypothesis H_0'' (*the cost of capital in France does not differ from one in other legal origin countries (Germany, Sweden, the Netherlands and the UK) after the IFRS adoption*) can be rejected because the mean for the cost of capital for French companies and the UK firms are significant different.

I can reject the hypothesis H_0** (*the cost of capital in the Netherlands and France does differ significantly from each other after the IFRS adoption*) as Table M shows that the mean comparison for FR and NL is not different significantly. France and the Netherlands are countries from one legal origin – French. However, some differences could have been expected due to the "special" nature of accounting in the Netherlands which I mentioned before in this paper.

Graph N gives a simple overview of means of the cost of capital per country. Where the highest cost of capital is observed in German companies (German legal origin), UK companies (English legal origin) have the lowest equity costs, Dutch and Swedish firms (French and Scandinavian legal origin respectively) cost of capital seems to be equal on the average. French companies (French legal origin) are in the middle.

Summing up, I would like to note that there are enough evidences that the IFRS introduction changed the behaviour of investors expressed in the modifications in the cost of capital in EU markets. Not only this change is visible at the total level (on five EU markets) but also the change in the behaviour of investors on different markets is present and it is different. The factor which can explain such investors' conduct in different markets is the country specific like a legal origin indicator. Kim and Shi (2007) make a research on the comparison between the cost of capital of IFRS adopters and non-adopters including the factor – institutional infrastructure. It is a more comprehensive country institutional structure characteristic (see the chapter 4.7) than the legal origin indicator. The institutional infrastructure includes also the legal law factor indicator (civil or common). In their study they come to the same conclusion as I do in my study – the cost of capital are lower for IFRS adopters in comparison to non-adopters. However, the period and the sample of their study and mine are very different. They collect data from 34 countries and define the benchmark from countries who do not adopt IFRS. My research period is extended to three more years after the mandatory IFRS introduction. Another their conclusion that the institutional infrastructure plays an important role in the IFRS adoption process is also supported by my test results.

Hail and Leuz (2007) extend the period of their research to one year of IFRS adoption. Their research period include 5 years (2001-2005). Like Kim and Shi (2007) they construct the benchmark from non-IFRS adopters' countries. Despite the difference in the approach in samples constructions and methods and the observed period their conclusions are the same as mine – the cost of capital is lower for the IFRS adopters in comparison with non-IFRS adopters.

Like Platikanova (2007) I receive different results of the cost of capital development after the IFRS implementation based on the legal origin countries. Based on obtained data I can assume that the behaviour of investors was influenced by the IFRS introduction and their reaction contains differences based on the legal origin of a country where an investor operates. Platikanova (2007) uses the market liquidity in her study as the proxy for the market participants' behaviour. In my research I use the cost of capital as the proxy to estimate the investors' conduct. Her findings shows

that the level of adverse selection component of bid-ask spread increases for UK and Swedish companies whereas German and French companies benefit from the decrease after the IFRS adoption. The adverse selection indicator is also important factor for the cost of capital which I use in my study. The usage of different proxies can explain the difference in our outcomes. The result of my study shows that the cost of capital in UK companies stays the same before and after the IFRS adoption and the conclusion of Platikanova (2007) shows that the level of adverse selection for the UK firms increases after the IFRS implementation. The explanation can be found in the differences between two accounting standards. The UK-GAAP had reasonable high demands towards the disclosure level before the IFRS implementation. That can be the reason why the cost of capital reduction was not significantly improved after the IFRS introduction and in the case of Platikanova (2007) the level of adverse selection had even increased.

6.4 Sensitivity test results

I use the cost of capital calculation following the formula of the Easton (2004) model. To control the empirical results on robustness I need an alternative method of cost of capital calculation – the Ohlson and Juettner-Nauroth (OJ, 2005) model. Having estimated the value of cost of capital using the formulas (6)-(8) and run the descriptive statistic analysis I obtain the following results.

Group Statistics

	Model	N	Mean	Std. Deviation	Std. Error Mean
Costcap	0	3665	.131786350	.1453463140	.0024008611
	1	3526	.156103066	.1788665876	.0030122296

Table 21

The PEG model is indicated as a model 0 in the table 21 and the model OJ – as the model 1. The mean value and the standard deviation of cost of capital calculated by means of PEG are 0.13179 and 0.14535 respectively. The mean value and the standard deviation of cost of capital measure by the model of OJ are 0.15610 and 0.17887 correspondingly.

Correlations

		CostcapPEG	CostcapOJ
CostcapPEG	Pearson Correlation	1	.811**
	Sig. (2-tailed)		.000
	N	3665	3526
CostcapOJ	Pearson Correlation	.811**	1
	Sig. (2-tailed)	.000	
	N	3526	3526

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

Table 22

The table 22 shows the results of Peason correlation. The correlation between cost of capital calculated using the model of OJ and the model of PED is 0.811 with the significance level of 0.000 ($p<<0.05$). Based on this result I can say that the proxies for the cost of equity capital under different valuation models (PEG and OJ) are significantly positively correlated with each other. The previous study (e.g. Kim and Shi, 2007) has the same results for the sensitivity test.

7 Summary and Conclusion

My study examines how the adoption of IFRS influences the behaviour of investors in European markets. Through the chain of theoretical conclusions I build the framework for the research by linking the disclosure quality of financial statement with the cost of equity capital. The later is the proxy which I use to measure the investors' behaviour in the markets. I look at the period of 2001-2007 and five EU countries – France, Germany, the Netherlands, Sweden and the United Kingdom from different legal origins. The research is executed mainly empirically by means of a regression model. I extend the regression test results by some statistical analysis (e.g. the mean comparison).

My main results are as follows: I find that there are evidences that the cost of capital is lower for IFRS adopters than for non-adopters in the European markets. These evidences are stronger for IFRS mandatory adopters than for voluntary ones. It can be explained by the lower level commitment towards the higher level disclosure of voluntary adopters.

This finding suggests that the IFRS adoption has economic consequences on the decision making process of investors. Companies benefit from their disclosure commitments by having a reduction in the cost of equity capital meaning that firms can raise the capital easily and against lower costs. This provides better performance for firms and improving efficiency in markets which one, using the definition of Zeff (1978, p. 56), can call the economic consequences. This result holds irrespectively from the governance and legal structure in a country. However, there is a difference how different EU markets based on different legal origin country characteristic react to the IFRS introduction. In common law countries the cost of capital is the lowest however the capital cost-reduction effect of the IFRS introduction is not significant. These results are in line with previous studies. Depending on the countries this effect is stronger or not significant. I can assume that shareholders make their investing decisions also depending on the country where they are doing business.

Indirectly in my study I observe that companies from countries with the weak institutional infrastructure benefit more from the IFRS adoption than companies from countries with the strong one.

The results of my research are robust to the sensitivity check.

To my best knowledge this study is the first which looks at the cost of capital behaviour after-IFRS mandatory-introduction period (2006-2007). The body of previous studies limits the research period by the year of the IFRS introduction. By extending the timelines I can observe that that the previous findings on the negative connection between the high level international accounting standard (IFRS) disclosure and the capital factor (the cost of capital) holds.

My proposal for further study is to extend the period by even more years and make the detailed research on the cost of capital of private companies who continue following the local GAAP standards. This will provide more reliable results on the investors' behaviour and also the development of the cost of capital structure in markets.

Finally, I would like to say that this research and a lot of others in this domain give important information to accounting standard setters, policy makers and auditors about the significance of the regulation requirements on the accounting field and demands to public disclosure, in particular, for the improvements in the economy as the whole.

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9 Appendix A – Accounting Standard indicator

In the Compustat database the parameter Accounting Standard (ACCTSTDCD) takes the following values:

DA	Domestic standards generally in accordance with International Accounting Standards Committee (IASC) and Organisation for Economic Cooperation and Development (OECD) guidelines
DD	Domestic standards for parent companies and domestic subsidiaries; Native country or United States' standards for overseas subsidiaries
DI	Domestic standards generally in accordance with or fully compliant with International Financial Reporting Standards (IFRS).
DO	Domestic standards generally in accordance with OECD
DR	Accounts reclassified to show allowance for doubtful accounts and/or accumulated depreciation as a reduction of assets rather than liabilities
DS	Domestic standards
DT	Domestic standards in accordance with principles generally accepted in the United States and generally in accordance with IASC and OECD guidelines
DU	Domestic standards generally in accordance with United States GAAP
LJ	Combination DR and MI
MI	Accounts reclassified by Standard & Poor's to combine separate life insurance and nonlife insurance accounts
MU	Modified United States' standards (Japanese companies' financial statements translated into English)
ND	Not Determined
US	United States' standards

Table A

As Kim and Shi (2007) I use the stricter classification of full adopters. Only companies which have DI are considered IFRS full adopters (mandatory for the period 2005-2007 and early adopters for the period 2001-2004). The followers of US-GAAP are indicated separately. The companies who have DU and US are considered as the full US-GAAP adopters.

10 Appendix B - Results of Empirical Test

	CapCost	IFRSman	IFRSadop	USGAAP	Size	Variability	Leverage	ROA	ROE	Inflation	InterRate	Law	Disclosure	AntiDir	EffJud	LawRule	InvPro	BurdoPr	PubEnf	SecReg	Cross
CapCost	1.000	-.035	-.021	.126	.051	-.014	-.028	-.095	-.029	.033	-.094	-.313	-.260	-.301	-.194	.241	-.266	-.220	-.148	-.260	.122
IFRSman	-.035	1.000	.808	-.148	.124	-.031	-.024	.133	.057	.163	.440	.001	.014	.008	-.040	-.045	-.025	-.138	.011	-.071	.032
IFRSadop	-.021	.808	1.000	-.184	.100	-.024	-.027	.119	.046	.160	.463	-.019	-.074	-.076	-.063	-.063	-.109	-.214	-.086	-.177	.117
USGAAP	.126	-.148	-.184	1.000	.065	.007	-.012	-.070	-.025	-.058	-.039	-.165	-.280	-.272	-.085	.098	-.232	-.213	-.260	-.304	.261
Size	.051	.124	.100	.065	1.000	.011	-.029	.169	.057	.019	-.002	-.098	-.107	-.133	-.103	.026	-.149	-.101	-.068	-.115	.244
Variability	-.014	-.031	-.024	.007	.011	1.000	.006	.005	.001	-.002	-.012	.027	-.006	.012	.044	-.002	.030	.019	-.028	-.001	.016
Leverage	-.028	-.024	-.027	-.012	-.029	.006	1.000	-.038	-.003	.001	-.012	.028	.026	.030	.021	-.017	.029	.030	.017	.031	-.027
ROA	-.095	.133	.119	-.070	.169	.005	-.038	1.000	.205	.030	.095	.014	.011	.018	.025	.008	.028	.037	.004	.026	-.024
ROE	-.029	.057	.046	-.025	.057	.001	-.003	.205	1.000	.034	.057	.026	.017	.025	.031	-.007	.033	.036	.004	.027	-.025
Inflation	.033	.163	.160	-.058	.019	-.002	.001	.030	.034	1.000	.486	-.139	-.084	-.113	-.054	.164	-.070	.149	-.008	.057	.000
InterRate	-.094	.440	.463	-.039	-.002	-.012	-.012	.095	.057	.486	1.000	.073	.057	.077	.069	-.034	.085	.053	.023	.056	-.019
Law	-.313	.001	-.019	-.165	-.098	.027	.028	.014	.026	-.139	.073	1.000	.735	.898	.658	-.765	.818	.634	.342	.714	-.272
Disclosure	-.260	.014	-.074	-.280	-.107	-.006	.026	.011	.017	-.084	.057	.735	1.000	.925	.132	-.773	.592	.455	.884	.893	-.482
AntiDir	-.301	.008	-.076	-.272	-.133	.012	.030	.018	.025	-.113	.077	.898	.925	1.000	.494	-.701	.842	.637	.651	.888	-.462
EffJud	-.194	-.040	-.063	-.085	-.103	.044	.021	.025	.031	-.054	.069	.658	.132	.494	1.000	-.035	.860	.715	-.307	.337	-.124
LawRule	.241	-.045	-.063	.098	.026	-.002	-.017	.008	-.007	.164	-.034	-.765	-.773	-.701	-.035	1.000	-.300	-.163	-.600	-.550	.172
InvPro	-.266	-.025	-.109	-.232	-.149	.030	.029	.028	.033	-.070	.085	.818	.592	.842	.860	-.300	1.000	.805	.213	.721	-.384
BurdoPr	-.220	-.138	-.214	-.213	-.101	.019	.030	.037	.036	.149	.053	.634	.455	.637	.715	-.163	.805	1.000	.194	.785	-.337
PubEnf	-.148	.011	-.086	-.260	-.068	-.028	.017	.004	.004	-.008	.023	.342	.884	.651	-.307	-.600	.213	.194	1.000	.750	-.456
SecReg	-.260	-.071	-.177	-.304	-.115	-.001	.031	.026	.027	.057	.056	.714	.893	.888	.337	-.550	.721	.785	.750	1.000	-.509
Cross	.122	.032	.117	.261	.244	.016	-.027	-.024	-.025	.000	-.019	-.272	-.482	-.462	-.124	.172	-.384	-.337	-.456	-.509	1.000
ForSales	.049	.036	.031	.075	.345	.000	-.003	-.010	-.002	.013	.013	-.018	-.048	-.047	-.009	.007	-.040	-.010	-.048	-.038	.180

Table B - Pearson Correlation Matrix

	CapCost	IFRSman	IFRSadop	USGAAP	Size	Variability	Leverage	ROA	ROE	Inflation	InterRate	Law	Disclosure	AntiDir	EffJud	LawRule	InvPro	BurdoPr	PubEnf	SecReg	Cross
	.	.014	.086	.000	.001	.190	.037	.000	.032	.019	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
IFRSman	.014	.	.000	.000	.000	.023	.061	.000	.000	.000	.000	.486	.179	.308	.005	.002	.054	.000	.242	.000	.022
IFRSadop	.086	.000	.	.000	.000	.060	.041	.000	.002	.000	.000	.111	.000	.000	.000	.000	.000	.000	.000	.000	.000
USGAAP	.000	.000	.000	.	.000	.334	.217	.000	.054	.000	.007	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Size	.001	.000	.000	.000	.	.246	.033	.000	.000	.111	.441	.000	.000	.000	.000	.051	.000	.000	.000	.000	.000
Variability	.190	.023	.060	.334	.246	.	.351	.371	.479	.441	.218	.045	.348	.223	.003	.451	.029	.114	.037	.464	.161
Leverage	.037	.061	.041	.217	.033	.351	.	.008	.413	.475	.232	.039	.051	.030	.095	.146	.033	.027	.146	.023	.043
ROA	.000	.000	.000	.000	.000	.371	.008	.	.000	.026	.000	.194	.250	.133	.053	.314	.036	.009	.396	.049	.066
ROE	.032	.000	.002	.054	.000	.479	.413	.000	.	.017	.000	.048	.146	.055	.026	.336	.018	.011	.388	.041	.053
Inflation	.019	.000	.000	.000	.111	.441	.475	.026	.017	.	.000	.000	.000	.000	.000	.000	.000	.000	.317	.000	.496
InterRate	.000	.000	.000	.007	.441	.218	.232	.000	.000	.000	.	.000	.000	.000	.000	.016	.000	.000	.070	.000	.112
Law	.000	.486	.111	.000	.000	.045	.039	.194	.048	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.000	.000
Disclosure	.000	.179	.000	.000	.000	.348	.051	.250	.146	.000	.000	.000	.	.000	.000	.000	.000	.000	.000	.000	.000
AntiDir	.000	.308	.000	.000	.000	.223	.030	.133	.055	.000	.000	.000	.000	.	.000	.000	.000	.000	.000	.000	.000
EffJud	.000	.005	.000	.000	.000	.003	.095	.053	.026	.000	.000	.000	.000	.000	.	.013	.000	.000	.000	.000	.000
LawRule	.000	.002	.000	.000	.051	.451	.146	.314	.336	.000	.016	.000	.000	.000	.013	.	.000	.000	.000	.000	.000
InvPro	.000	.054	.000	.000	.000	.029	.033	.036	.018	.000	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.000
BurdoPr	.000	.000	.000	.000	.000	.114	.027	.009	.011	.000	.000	.000	.000	.000	.000	.000	.000	.	.000	.000	.000
PubEnf	.000	.242	.000	.000	.000	.037	.146	.396	.388	.317	.070	.000	.000	.000	.000	.000	.000	.000	.	.000	.000
SecReg	.000	.000	.000	.000	.000	.464	.023	.049	.041	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.	.000
Cross	.000	.022	.000	.000	.000	.161	.043	.066	.053	.496	.112	.000	.000	.000	.000	.000	.000	.000	.000	.000	.
ForSales	.001	.010	.024	.000	.000	.496	.426	.263	.441	.209	.209	.125	.001	.001	.289	.325	.005	.264	.001	.008	.000

Table C – p-values for Pearson Correlation Matrix

	B	Std. Error	Beta	t	Sig.
(Constant)	.156	.021		7.566	.000
IFRSman	.002	.005	.013	.421	.674
IFRSadop	-.035	.023	-.232	-1.485	.138
USGAAP	.020	.006	.055	3.094	.002
Size	.001	.001	.020	1.135	.256
Variability	-7.092E-6	.000	-.008	-.542	.588
Leverage	-2.050E-6	.000	-.021	-1.412	.158
ROA	.000	.000	-.083	-5.288	.000
ROE	-4.111E-7	.000	.000	-.032	.975
Inflation	.002	.002	.017	.880	.379
InterRate	-.003	.002	-.049	-1.943	.052
SecReg	-.103	.012	-.236	-8.762	.000
Cross	.000	.003	-.003	-.155	.877
ForSales	2.016E-7	.000	.032	1.900	.058
Interaction	.001	.001	.318	2.051	.040
Year Dummies	Included				
Industry Dummies	Included				
Country Dummies	Included				
N	4039				
R square	14,2%				

Table D – Results of the regression model in Eq. (4)

11 Appendix C - Institutional infrastructure characteristics

Country	Law	Disclosure	AntiDir	EffJud	LawRule	InvPro	BurdoPr	PubEnf	SecReg
the Netherlands	common	0.5	2	10	10	7.33333333	1	0.38	0.62666667
Germany	common	0.42	1	9	9.23	6.41	0	0.25	0.22333333
French	common	0.75	3	8	8.98	6.66	0.22	0.8	0.59
the United Kingdom	civil	0.83	5	10	8.57	7.85666667	0.66	0.67	0.72
Sweden	common	0.58	3	10	10	7.66666667	0.33	0.44	0.45

Table E – Institutional infrastructure control variables used in the regression model (source: La Porta et al. 1998, 2002 and 2006).

12 Appendix D – Mean comparison test for country specific hypotheses

Descriptives

CapCost

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
NL	108	.1100037	.05905256	.00568234	.0987391	.1212683	.00000	.38676
DE	392	.1276757	.06681153	.00337449	.1210413	.1343101	.00000	.42784
FR	401	.1165045	.05974153	.00298335	.1106395	.1223695	.01984	.51571
GB	741	.0775626	.07172283	.00263480	.0723901	.0827352	.00000	.52763
SE	173	.1097940	.06707951	.00509996	.0997274	.1198606	.00000	.42310
Total	1815	.1019922	.07016062	.00164685	.0987623	.1052221	.00000	.52763

Table K – Descriptive statistics for ANOVA One way test

In Table K countries are represented by its ISO codes: the Netherlands (NL), Germany (DE), France (FR), United Kingdom (GB) and Sweden (SE).

Test of Homogeneity of Variances

CapCost

Levene Statistic	df1	df2	Sig.
2.705	4	1810	.029

Table L – Levene's Test

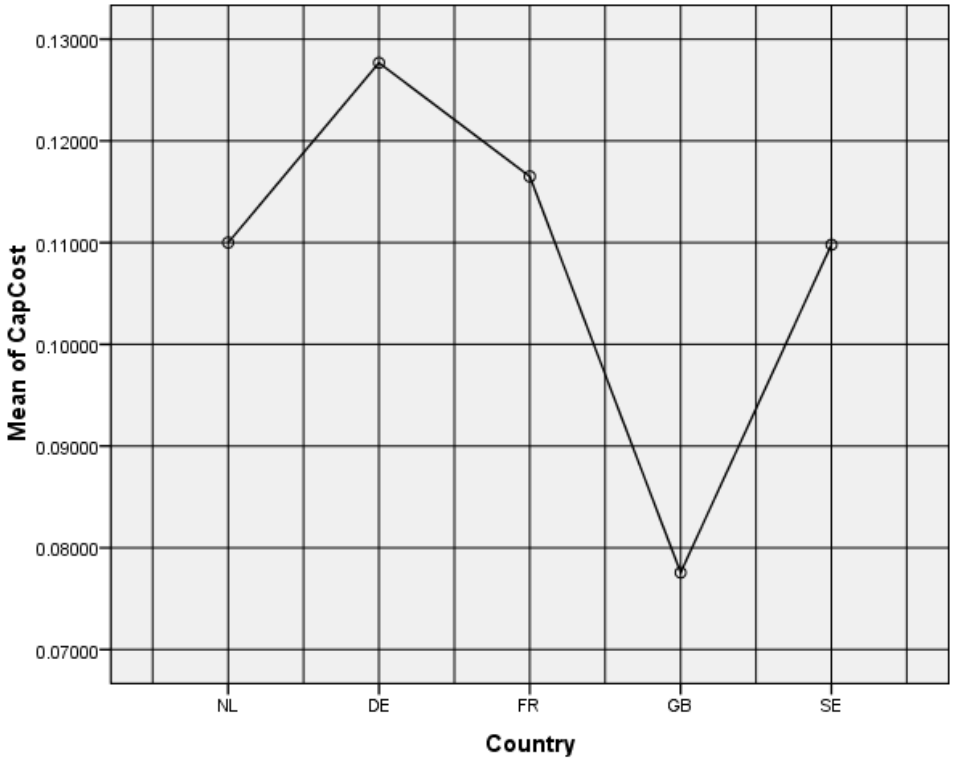
Multiple Comparisons

	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Gabriel	NL	DE	-.01767200	.00728196	.106	-.0371586	.0018146
		FR	-.00650077	.00726429	.986	-.0259117	.0129101
		GB	.03244107*	.00690162	.000	.0147834	.0500987
		SE	.00020972	.00821744	1.000	-.0226661	.0230856
	DE	NL	.01767200	.00728196	.106	-.0018146	.0371586
		FR	.01117122	.00475926	.175	-.0021682	.0245107
		GB	.05011306*	.00418486	.000	.0385268	.0616993
		SE	.01788172*	.00611612	.029	.0010773	.0346861
	FR	NL	.00650077	.00726429	.986	-.0129101	.0259117
		DE	-.01117122	.00475926	.175	-.0245107	.0021682
		GB	.03894184*	.00415403	.000	.0274313	.0504524
		SE	.00671050	.00609507	.951	-.0100182	.0234392
	GB	NL	-.03244107*	.00690162	.000	-.0500987	-.0147834
		DE	-.05011306*	.00418486	.000	-.0616993	-.0385268
		FR	-.03894184*	.00415403	.000	-.0504524	-.0274313
		SE	-.03223134*	.00565795	.000	-.0472068	-.0172558
	SE	NL	-.00020972	.00821744	1.000	-.0230856	.0226661
		DE	-.01788172*	.00611612	.029	-.0346861	-.0010773
		FR	-.00671050	.00609507	.951	-.0234392	.0100182
		GB	.03223134*	.00565795	.000	.0172558	.0472068
Games-Howell	NL	DE	-.01767200	.00660879	.062	-.0358742	.0005302
		FR	-.00650077	.00641789	.849	-.0241959	.0111944
		GB	.03244107*	.00626348	.000	.0151554	.0497267
		SE	.00020972	.00763535	1.000	-.0207715	.0211910
	DE	NL	.01767200	.00660879	.062	-.0005302	.0358742

		FR	.01117122	.00450417	.096	-.0011441	.0234865
		GB	.05011306*	.00428128	.000	.0384095	.0618167
		SE	.01788172*	.00611529	.030	.0011074	.0346561
	FR	NL	.00650077	.00641789	.849	-.0111944	.0241959
		DE	-.01117122	.00450417	.096	-.0234865	.0011441
		GB	.03894184*	.00398027	.000	.0280637	.0498199
		SE	.00671050	.00590847	.787	-.0095066	.0229276
	GB	NL	-.03244107*	.00626348	.000	-.0497267	-.0151554
		DE	-.05011306*	.00428128	.000	-.0618167	-.0384095
		FR	-.03894184*	.00398027	.000	-.0498199	-.0280637
		SE	-.03223134*	.00574036	.000	-.0479955	-.0164672
	SE	NL	-.00020972	.00763535	1.000	-.0211910	.0207715
		DE	-.01788172*	.00611529	.030	-.0346561	-.0011074
		FR	-.00671050	.00590847	.787	-.0229276	.0095066
		GB	.03223134*	.00574036	.000	.0164672	.0479955

*. The mean difference is significant at the 0.05 level.

Table M – Multiple Comparisons of means



Graph N – Mean of Cost of Capital per country