Financial reporting quality, cost of capital, and firm's financing decisions.

Course	: Master' thesis Accounting, Auditing & Control
Student	: Lucas Adrianus Theodorus Maria Boons
Student number	: 389396
Master Track	: Accounting and Auditing
Supervisor	: J. Bae
Co-reader	: R. van der Wal.
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Abstract

Financing decisions are important for firms to stay or grow in their market positions. These decisions are partly determined and based on different cost types. The cost of equity and the cost of debt are the cost types. Firms want to reduce these costs to attract stakeholders. The decisions of firms are influenced by the quality of their financial reports. The results of this paper show a significant positive correlation between the quality of the financial reports and equity and debt financing. This effect is stronger for equity financiers, because the financial reports are a larger information provision for them compared to debt financiers, who have more possibilities to achieve information about the firm. The findings suggest that firms with higher financing needs are likely to increase their financial reporting quality, which, in turn, will lead to a lower cost of capital. Stakeholders are able to recognize these moments and take advantage of this situation by selling their stocks for example.

Key words: Cost of equity, cost of debt, financial reporting quality, and financing decisions.

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1 Introduction

The capital structure of a firm has been a discussion topic for years in financial economics. Firms have different opinions about the optimal capital structure and depend on different characteristics as industry, growth opportunities and different types of risks (Frank & Goyal, 2009). These factors, among other things, affect the cost of capital and therefore the capital structure of firms. The risks of debt- and equity holders are based on information asymmetry between them and the managers of the firm. This asymmetry creates suspicion and leads to higher costs of capital (Verrecchia, 2001). Firms want to have low cost of capital, because lower costs means higher profits ceteris paribus. The financial reports provide information to investors, creditors and other users and reduce the information asymmetry, which influences the risks for the cost of capital. This thesis investigates the relation between the quality of the financial reports and the decisions concerning the capital structure of firms and attempts to provide an answer to the following research question:

RQ: Does the financial reporting quality have an effect on the firm's financing decisions?

This research question relates to theories behind the financing decisions on the capital structure of firms. As to which capital structure is best, theories differ. The pecking order theory describes a hierarchical way of financing. Those decisions are based on the costs due to information asymmetry between the managers of the firm and the shareholders (Myers & Majluf, 1984). Therefore firms decide to finance with debt before equity. The trade-off theory describes an optimal capital structure between debt and equity of the firm, based on cost- benefit approach. Bharath et al. (2009) measured an increase of capital for U.S firms with the greatest extent of information asymmetry, which is in line with the pecking order theory. On the other hand Leary and Roberts (2010) examined the relation between information asymmetry and capital structure for U.S firms without result in line with the pecking order theory. In short, the high number of studies that are associated with the impact, in any form whatsoever, of financial reporting on information asymmetry or capital structure and the mixed results of prior research reveal the importance of these topics. Moreover, the other link between the influence of financial reporting and information asymmetry is unclear. Lundholm (1991) showed that more frequent financial reporting reduces information asymmetry if the amount of information available for investors increases. However several other studies showed that investors have

incentives to acquire information from the manager to anticipate for future disclosures. There will be more chances for the investors to take advantages from acquired information from the manager when the frequency of financial reporting increases. As a result, the information asymmetry will increase (Healy & Palepu, 2001; Verrecchia, 2001). Another important reason to have an answer of this research question is for the stakeholders and the managers of the firm. If the relation between the quality of financial reports and financing decisions actually exist, managers and shareholders could use this information to attract more debt (Biddle, Hilary, & Verdi, 2009).

The research question has been answered using OLS regressions for the hypotheses. These regressions described the correlation between financial reporting quality and financing decisions for US listed firms for the period 2000 to 2015. The first part measured the impact of the quality of the financial reports on the cost of equity and cost of debt. After that, the second part measured the relation between the quality of the financial reports on the actual financing decisions of firms. The findings of the paper endorsed the research question. The relation between the quality of the financial reports and the cost of equity is significant negative as expected. Also the financing decisions regarding equity increased significantly, which is also the result for debt financing. Therefore the research question can be answered for both types of cost. The influence of the quality of the financial reports does matter for financing decisions.

This paper contributes to existing studies by measuring the change in financing decisions, which are the consequences of changes of cost types. These change of costs is the result of the influence of the quality of financial reports. This paper shows the effect of the quality of financial reports on the actual financing decisions, which are not always in line with the expectations of the literature.

Earlier studies showed one side of the influence of information asymmetry on the cost of capital. This paper is divided in the cost of equity and the cost of debt. Lower information asymmetry leads to lower cost of equity, which results in lower costs for the firm. The first part of this paper will focus on these lower costs. This paper also analyses the influence of these lower costs on the decisions of firms with regard to financing. The expectations are in line with the results, only the increased debt financing was not directly expected. These findings could influence the decisions of firms and stakeholders, because with this information in mind, firms could increase the quality of their financial reports before issuing stocks. Stakeholders could react on these changes by buying or selling stocks.

2 Theoretical Background

This chapter focuses on theoretical prediction on financing decisions. The general theories on the leverage of firms will also be described. The first part gives an overview about financial reporting quality, followed by the second part, which explains theories about financing firms. Finally, the mechanism behind these topics is information asymmetry, which is described at the end of this chapter.

2.1 Financial Reporting Quality

Financial reports are sets of financial information which provide the financial condition of an economic entity. These statements properly represent the results of the past and reflect information for the future (Weetman, 2006). Financial reporting has the primary objective to provide useful information of economic entities for economic decision making. The quality of these financial reports is important for capital providers, creditors and other possible users in making rational investments, credit, and similar decisions (FASB, 1978). The FASB (1978) defines financial reporting quality as the precision with which financial reporting conveys information about the firm's operations, in particular the expected cash flows, that inform equity investors for making economic decisions based on the assessing of the expected firm cash flows.

The measures regarding the quality of financial reports depend on different characteristics. The relevance of information gives users the capability to make the difference in the decisions. The predictive value of the expected cash flows is the most important indicator of the relevance of information (Francis, LaFond, Olsson, & Schipper, 2003). Furthermore the relevance of information has a confirmatory value "if it confirms or changes past (or present) expectations based on previous evaluations" (IASB, 2008). The relevance of information will be higher when the information is in line with the activities over time.

Another quality characteristic is the faithful representation of the provided information. Faithful representation is a combination of neutrality, completeness, free from material errors and verifiability (Kim, 2011). This combination is difficult to measure because financial reports can never be completely free from biases. There are many estimations in the reports, which implicit some, not material, errors. When these estimations are well argued, the possibility of material errors will be lower and the faithful representation higher (Maines & Wahlen, 2006).

Understandability is the third characteristic of the quality of financial reporting. This characteristic refers to the extent in which of financial reports is classified and clear. When the reports are well-defined, it is easier for the users to extract information. When the information extraction is less costly, the information asymmetry between the firm and users is lower (Weetman, 2006).

Another characteristic is the comparability of the financial reports. The comparability of the financial reports is the quality of information that enables users to identify similarities in and differences between two sets of economic phenomena (IASB, 2008). The comparability of financial reports depends on the consistency of the accounting procedures within the economic entity and also compared with other economic entities over time. The consistency is a means to achieve comparability. The usefulness of information is higher, when the information can be compared.

The last characteristic of the quality of financial reporting is timeliness. "Timeliness means having information available to decision makers before it loses its capacity to influence decisions" (IASB, 2008). Early availability of relevant information could improve the capacity to influence the decision. Missing information could lead to different decisions.

These characteristics classify the quality of financial reporting. The quality of financial reporting has a negative influence on information asymmetry between investors, creditors and other users of the financial reports (Leuz & Verrecchia, 2004; Verrecchia, 2001). For example a higher level of financial reporting quality could allow companies to attract capital with lower interest payment, because the risks for the provider of the capital will be lower, because of this lower information asymmetry. The information can stimulate investments by reducing adverse selection and information risk (Lambert, Leuz, & Verrecchia, 2007). Consequently these higher quality financial reports leads to lower costs for the firm.

2.2 Financing Decisions

The financing decisions of a firm influence the capital structure, which describes how the firm is financed. Capital structure depends on different factors as industry, market position and financial status of the firm etc. (Frank & Goyal, 2009). Important theories explain different views on financing decisions. The pecking order theory is explained in the section 2.2.1 and the trade-off theory is explained in the section 2.2.2 and gives a general overview on capital structures decisions.

2.2.1 Pecking Order Theory

The pecking order theory (Myers & Majluf, 1984) focuses on financing choices. This theory assumes that firms will not have an optimal capital structure and follow the pecking order from internal funds (retained earnings), to debt and to equity for financing the firm. These preferences are created based on information asymmetry between managers and the market which leads to higher adverse selection costs. Firstly, the internal funds have no adverse selection problem and also the costs are lower in the form of no issuing costs (Myers, 1984). Debt has a small adverse selection risk premium compared to equity, because an investor will have a higher rate of return on equity than on debt. Firms will only use external equity when the firm reaches the "debt capacity" (Frank & Goyal, 2003). When a firm uses this external equity, investors know that managers have more (private) information. Managers will issue risky securities, when the firm is overvalued. On the other hand investors are aware of this, which leads to lower prices of the issues. The existing shareholders will have problems because of these lower prices and will not support the investment and may forego profitable investments if they must be financed with risky securities (Fama & French, 2005; Lemmon & Zender, 2010). So firms will prefer debt over equity, when the firm has to use external equity, because of these risks. If a firm would be in financial distress, the firm would issue equity to finance investments or to pay the debts. This depends on the manager as optimistic managers will issue debt over equity, because they believe in, or they know, future outcomes for the firm (Lucas & Mcdonald, 1990).

2.2.2 Trade-off Theory

The trade-off theory prescribes an optimal capital structure of debt and equity. The trade-off theory is about the tax benefits of borrowed money and control of free cash flow problems. These arguments suggest to use more debt in financing. However too much debt could lead to costs of financial distress or bankruptcy. This trade-off theory describes value-maximizing of the capital structure, which will be realized when the benefits equates to the costs at margin. The curve of the optimal financing structure has a top at one point (fig 1). The top of the curve depends on the size and status of the firm. Large profitable firms can use high debt ratios to maximize their financial structure (Shyam-Sunder, L., & Myers, 1999). This trade-off model with the one-pointed maximum is called the static version.

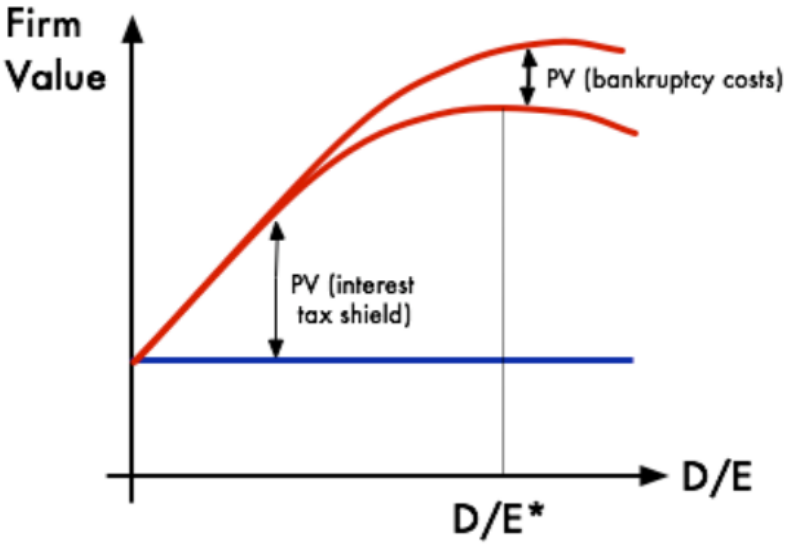

Figure 1. As the leverage ratio (debt/ equity) increases, there is an optimal trade-off between the interest tax shield and bankruptcy.

Another trade-off theory is the dynamic version, which describes a possible deviation of the optimal capital structure (Leary & Roberts, 2005). This version states that there is an optimum-interval. The optimum for a firm is between boundaries and changing to a 'better' leverage leads to transaction costs. Only when the boundaries of the interval are reached an adjustment can lead to a better leverage. The firm will issue a combination of debt and equity at the target level in the middle of the interval (Fischer, E., Heinkel, R., & Zechner, 1989).

2.3 Information asymmetry

Information asymmetry explains the difference between (potential) investors and managers or differences within investors. This asymmetry creates adverse selection problem in the market, which leads to higher costs (Verrecchia, 2001). These problems are the result of private informed investors, who will trade based on this information. Lundholm and Myers (2002) showed a negative relation between the quality of financial reporting and the information asymmetry. The incentive for investors to acquire private information is lower when the quality of financial reporting is higher and results in lower adverse selection costs.

The pecking order theory describes a hierarchical preference between debt and equity. This preference is based on costs from information asymmetry. When the quality of the financial reporting increases, the information asymmetry reduces, suggesting a lower cost of capital (Amihud, Y & Mendelson, H, 1986; Diamond & Verrecchia, 1991). Myers and Majluf (1984) endorse that information asymmetry problems drive the capital structure of firms. Cost of capital is the costs of funds used for financing a business (Modigliani & Miller, 1958). The

decisions of a firm to invest relate to the return of this investment compared to the cost of capital. The return of the investment should always exceeds the cost of capital, which includes the cost of equity and the cost of debt. The cost of equity is the compensation that the market demands in exchange for owning and bearing the risk of ownership in the equity of a company (expected rate of return) (Botosan, 1997). The cost of debt refers to the effective rate a firm pays on the current debts. The financing decisions of the firm are influenced by the costs of those types of financing. Following the pecking order theory firms will use debt before equity, because of the lower risks due to information asymmetry. Debt holders have a smaller risk premium compared to equity holders (Sengupta, 1998). They want to be "safe" and create specific terms and conditions to eliminate those risks. Debt holders take the priority in terms of repayment compared to the equity holders. Debt contracts could give debt holders the possibility to achieve more information or on more timely basis than equity holders, therefore the risks are lower for debtholders and the rate of return will be higher on equity than on debt (Bulow, J; Shoven, 2016; Frank & Goyal, 2003). By using this information, equity holders are more dependent on the information of the financial reports. This suggests that the influence of higher quality of financial reporting will lead to a lower cost of debt and the cost of equity will be even lower. These changes in costs could influence the capital structure of firms, but from the pecking order theory perspective equity will only be used when the debt capacity is reached. If equity issues will increase, the implications of the pecking order theory become limited. Firms prefer debt over equity in financing decisions, in order to avoid reasons that involve information asymmetry problems (Fama & French, 2005).

The capital structure of firms depends on the cost of equity or cost of debt. These costs depends on the underlying information asymmetry, which creates adverse selection costs. Debtholders provide a service to a firm, for which receive compensation, (mostly interest payments) and have the possibility to get all the related information to their services instead of the equity holders. The information provision of debt holders is therefore much higher compared to the equity holders. Equity holders are more dependent on the information from the financial reports than the debt holders. The influence of the quality of financial reports, which is an information provision for both, is higher for the equity holders, because of the relative influence of these information on the other information provision. The prediction is a relative higher change in cost of equity and increasing amount of equity financing compared to the debt.

3 Hypothesis development

Prior research shows mixed results among the influence of information asymmetry on the capital structure of firms. The trade-off theory and the pecking order theory describe different strategies and focus on different costs or limitations. Information asymmetry is a major influencer in the pecking order theory, because the hierarchical distribution is based on this phenomenon (Myers & Majluf, 1984). Potential investors wants to have more information before they invest. When the information asymmetry is high, the moral hazard and adverse selection risks for investors are higher. They have to trust on less information and will ask for more requirements to the firm, which results in higher cost of capital. Firms will decrease their information asymmetry for getting lower cost of capital to increase their returns (Fama & French, 2005).

The influence of financial reporting on the information asymmetry leads to mixed results. Lang & Lundholm (1993) show an increase in the information quality, and because of more frequent financial reporting the intermediaries could provide higher information quality to the potential investors. The paper of Healy and Palepu (2001) shows the opposite, the increased frequency of financial reporting leads to a higher information asymmetry. Both investigations measured the influences of the frequency of financial reporting. The different results in the paper of Healy and Palepu (2001) can be explained by the more possibilities to take advantages from acquired information from the manager when the firm provides more financial reports. Investors base their actions on the received information, this is all about the quality of the information. When the information reduces the (potential) risks, the cost of capital will be lower. For example, if the financial reporting quality increases, the shareholders have more ability to monitor the actions of the managers, which reduces the risks of moral hazard and therefore the investors will have more certainty (Biddle et al., 2009). This certainty results in lower cost of capital. The discussion about the influences of the quality of financial reporting leads to the following hypothesis:

H1.Financial reporting quality is more negatively associated with the cost of equity compared to the cost of debt.

The cost of capital components equity and debt reflects the risks associated with equity and debt. The cost of debt is based on the interest of the debt contracts, which is an elaboration of the risks and alternatives. Normally debt holders have the possibility to have more knowledge about the firm performance included in the debt contracts, therefore the interest will be lower as a result of reduced risks compared to cost of equity. The cost of equity represent the

compensation from the demand of the market for owning and bearing risks. This compensation comes from the market and is a reaction based on the information the market has received. The compensation is the rate of return of the risks of the investments. The (potential) shareholders, the investors in the equity of the firm, have higher risks and therefore the dividends, the rewards for the equity holder, will be higher. The information asymmetry is mostly of a higher level for equity holders compared to debt holders, which explains the higher returns for equity holders. Their information provision consist mainly of financial reports and other publicly available information. Debt holders have the possibility to extract additional information from the company, what is not public available. This possibility results in lower risks for them and create lower interest costs (Frank & Goyal, 2003). Following the pecking order theory, regarding the hierarchical subdivision based on information asymmetry, the change in higher quality of financial reports will affect the cost of equity more compared to the cost of debt, because the influence of the financial reports is much higher for equity holders. This is addressed in the first hypothesis. Thereafter the financing decisions of firms will change, based on the changes of costs as a reaction on the increasing quality of the financial reports. Therefore the following hypothesis will measure the change in financing decisions:

H2.Financial reporting quality effects more the financing decisions regarding equity compared to debt.

The types of costs react different to the increasing financial reporting quality. Therefore the hypothesis will be measured separately, to create an overview for the influences on the debt and equity. The second hypothesis is the consequence of the first hypothesis, which measures the costs. The second hypothesis is focused on the direct influence of the financial reporting quality on the decisions firms made. The combination of those hypotheses creates an answer to the question about the influence of the financial reporting quality on the financing decisions. The second hypothesis answers not only the research question, but also measures the differences between the types of costs in response to changing quality of financial reports.

4 Research Design

In the first part of this chapter, the research design shows the dataset used for the statistical analyses of this study. The second part describes the proxies for the dependent, independent and

control variables. These variables are based on the academic literature to measure the hypotheses, which answer the research question. Appendix A shows an overview of the research divided into the two hypotheses by means of Libby boxes.

4.1 Sample selection

The sample consists of US firms from Wharton Research Data Services for the period 2000 to 2015. The data about the financial reporting quality is retrieved from Compustat Fundamentals Annual database. This database also forms the basis for the data of the cost of debt. The cost of equity includes the stock prices of firms at year-end. The stock prices are used from the Center for Research in Security Prices (CRSP) database. Another part of the cost of equity is the value of the forecast of the earnings per share. This part comes from Institutional Broker's Estimate System (I/B/E/S) database, which collects predicted future values.

The initial collected panel data consisted of 227,183 observations from Compustat. After the merge of the three databases, the sample had shrunk to 33,172 observations. Besides of the missing values due to the merges, the cost of equity depends on the forecasts of earnings per share, which was not always available and therefore recused the sample. The sample had also some extreme outliers, which were managed by winsorizing rather than dropping these extreme outliers. Table 1 shows an overview of the sample process. The final sample of 33,153 observations is based on the highest observations of a variable. The number of observations in the regression models is considerably lower, because the independent variable (financial reporting quality) contains many variables that are missing and thus results in 16,818 observations. This decrease can be explained by the new created variables; lagged and future Cash flow (CFO_{t-1}, CFO_{t+1}), because firms with gaps in the data period were dropped. These missing observations are also the reason for the lower number of observations for the dependent variables of the two hypotheses. For the equity and debt changes over time is the lagged period needed. Appendix B gives a definition overview of the different variables.

Table 1. Summary of sample selection process

	Number of observations
Total number of observations from Compustat	227,183
Total number of observations from CRSP data	129.719
Total number of observations from IBES data	53,758
Total number of observations of merged data	33,172
Total number of observations with missing variables	(19)
Final Sample	33,153
Financial Reporting Quality	16,818

The final sample consist of 33,153 observations. The number of observations differs for each variable over the year 2000 to 2015. Table 2 contains an overview of the number of observations, mean, standard deviation, minimum, and maximum values for each variable. The standard deviation of the variables provides information about the distribution of the variable. The numbers of the change in equity (chE) are remarkable. These numbers are reasonable in the context of the minimum and maximum. Equity changes more than debt, partly because debt is often fixed for longer periods. The standard deviation of sales and the standard deviation of cash-flows are almost the same. Both measures use a form of revenues and total assets, but the standard deviation of cash-flows are excluded the total current accruals. The value of the assets and sales are much larger, which explains the similarities between those control variables. The correlation between the standard deviation of sales and the standard deviation of cash-flow is 0.1019. The correlation between the variables are explained in the Pearson Correlation Matrix in appendix C.

Table 2. Descriptive Statistics

Variables	Observations	Mean	Std. Dev	Minimum	Maximum
COE	23,810	0.055	0.032	0.006	0.197
COD	23,098	0.030	0.089	-0.226	0.654
chE	33,153	-141.247	704.940	-4199.000	1811.917
chD	24,250	0.172	0.378	-3135.121	1220.494
FRQ	16,818	-0.303	0.007	-0.447	-.0,001
Size	24,999	5.797	1.762	-2.303	11.893
RoA	32,312	0.003	0.159	-1.102	0.309

MTB	32,617	0.603	0.347	0.057	2.151
Leverage	32,459	1.009	1.596	0	10.578
STsales	24,469	1410.035	0.032	1409.789	1410.056
STcfo	24,469	1410.025	1.121	1235.796	1410.056

Note: COE = Cost of Equity, COD= Cost of Debt, chE= changes in Equity, chD= changes in Debt, FRQ= Financial Reporting Quality, Size= ln (assets), RoA= Return on Assets, MTB= Market-to-book, leverage= Debt/equity, STsales= standard deviation of sales, STcfo= standard deviation of cash-flows.

Fama & French (1997) create 12 different industry groups, based on their businesses. This paper follows that industry classification according to the SIC codes. Appendix D gives an extensive representation of the different industry groups. This classification is important for the influences on the cost of capital of firms. The industry groups are implemented in the regression analyses to control for effects based on the industry. Table 3 gives an overview of the distribution of the observations over the different industries. All the industries are represented in the final sample. Finance firms (Money) are the largest group in the sample (25.39%). The cost of capital is strongly subject to the businesses, and therefore the financing decisions of firms.

Table 3. Distribution of the industries

Industry	Frequency	Percent	Cumulative
BusEq	5,495	16.57	16.57
Chems	779	2.35	18.91
Durbl	623	1.88	20.79
Enrgy	1,612	4.86	25.65
Hlth	3,666	11.05	36.70
Manuf	2,991	9.02	45.72
Money	8,421	25.39	71.11
NoDUr	1,149	3.46	74.57
Other	4,242	12.79	87.36
Shops	1,766	5.32	92.68
Telcm	1,070	3.23	95.91
Utils	1,358	4.09	100.00
Total	33,172	100.00	

Note: Appendix D gives an extensive overview of the different industry groups

4.2 Regression Formulas

The regression formulas show the link between the dependent variables, $COE_{i,t}, COD_{i,t},$ and the independent variable, $FRQ_{i,t}$. These formulas are a simplistic mathematical overview of the research. In the overview below the control variables are merged and are explained in section 4.6. The first two formulas (EQ1 and EQ2) are related to the first hypothesis and measuring the cost of debt and the cost of equity separately. Following the pecking order theory is the choice of financing based on the costs. Therefore the different financing methods are measured. After these results, the amount of equity or debt could change. The theory prescribed a change in equity or debt, when the costs are lower for a financing method. The last two formulas (EQ3 and EQ4) measure these changes and answer the second hypothesis. In section 4.6 the control variables are explained and processed in the final regression formulas. The regression formulas to answer both hypothesis are:

$$(\boldsymbol{EQ1})\ COE_{i,t} = \beta_0 + \beta_1 * FRQ_{i,t} + \beta_2 * Controls_{i,t} + \varepsilon_{i,t}$$

$$(\boldsymbol{EQ2})\ COD_{i,t} = \beta_0 + \beta_1 * FRQ_{i,t} + \beta_2 * Controls_{i,t} + \varepsilon_{i,t}$$

$$(\boldsymbol{EQ3})\ \Delta Equity_{i,t} = \beta_0 + \beta_1 * FRQ_{i,t} + \beta_2 * Controls_{i,t} + \varepsilon_{i,t}$$

$$(\boldsymbol{EQ4})\ \Delta Debt_{i,t} = \beta_0 + \beta_1 * FRQ_{i,t} + \beta_2 * Controls_{i,t} + \varepsilon_{i,t}$$

$COE_{i,t} = average\ Cost\ of\ equity\ of\ firm\ i\ in\ period\ t,$
$COD_{i,t} = Cost\ of\ debt\ of\ firm\ i\ in\ period\ t,$
$FRQ_{i,t} = Financial\ Reporting\ Quality\ of\ firm\ i\ in\ period\ t,$
$\Delta Equity_{i,t} = Change\ in\ the\ amount\ of\ equity\ of\ firm\ i\ in\ period\ t$
$\Delta Debt_{i,t} = change\ in\ the\ amount\ of\ debt\ of\ firm\ i\ in\ period\ t,$

4.3 Dependent Variables

The dependent variables of the regression formulas of the first hypotheses are the cost of equity and cost of debt, respectively. The cost of equity is not directly measurable, it is an estimation. Earlier researches shows different methods and a universal method is missing (Botosan, 1997) . The cost of debt is based on the interest expenses related to the interest-bearing debt (Palepu, Healy, & Peek, 2013)

4.3.1 Cost of equity

Prior research shows that the factor models of Fama and French (1997) provided poor proxies for the cost of equity capital (El Ghoul, Guedhami, Kwok, & Mishra, 2011). These models have the problems that the risk factors of the model are already captured in the market beta of the model, which makes the model limited and depending on the market beta. Following this assumption of the model, the disclosure could only impact the cost of equity capital by the market beta, which has not theoretical substantiation and is therefore not widely used by researchers (Hail & Leuz, 2006).

Earlier models have their problems with measuring the cost of equity. The basis of the estimation of the cost of equity are the residual income valuation model and the abnormal growth valuation model. These models assume that the cost of equity is already implemented in the stock prices of firms and the analyst forecasts (El Ghoul et al., 2011). The different approaches lead to different outcomes of the cost of equity (Dhaliwal, Heitzman, & Li, 2005; El Ghoul et al., 2011). It is therefore decided to combine the methods of Easton (2004,ES) and Ohlson and Juettner-Nauroth (2005,OJ). The model of Easton is a generalization of the Price-earnings-growth (PEG) model, which provides a cost of equity capital estimations that are consistently and predictably related to risk (Reverte, 2012). This model is the most reliable proxy for the cost of equity capital, because of the realized returns and the incorporated risks (Botosan, Plumlee, & Wen, 2011). Easton adds the assumption that $FEPS_{t+2} \geq FEPS_{t+1} > 0$. The model of Ohlson and Juettner-Nauroth works directly with earnings and applied dividends in their model with the assumption that dividends are constant over time and the model does not use forecasts of book values or return on equity (ROE). The use of forecasts is accompanied by assumptions that limit the research (Gode & Mohanram, 2003). This explains the chosen models for estimating the cost of equity capital.

Appendix E shows an extensive description of the models. The cost of equity capital values are measured separately and denoted as COE_{ES} and COE_{OJ}, respectively. After the independent measurement of the models, the average of those models is used for the dependent variable, the cost of equity capital, COE_{avg}. The use of the average has the advantage of lower possibility of abnormal results due to noise of individual measurement (Dhaliwal et al., 2005). The correlation between the different cost of equity models is shown in table 4. The correlation between the models are significant for 1%. The correlation is significant and strongly positive (0.901 and 0.773) for both models. This is a logical consequence, because the COE_{avg} is determined on the basis of an average of the models and measures the same dependent variable.

Table 4. Pearson correlations among different cost of equity methods

	COE_{avg}	COE_{OJ}	COE_{ES}
COE_{avg}	1.000		
COE_{OJ}	0.901***	1.000	
COE_{ES}	0.773***	0.421***	1.000

Note: * significant at 10% ** significant at 5%. *** significant at 1%.

4.3.2 Cost of debt

The other dependent variable is the cost of debt. This variable is essential to answer the hypotheses and equations (EQ2 and EQ4). The cost of debt is the return that a firm provides to his debt- and bondholders. This return, the effective incremental borrowing cost of a firm as it is based on the actual amount received by the firm, is the compensation for the risk exposure of these holders (Sengupta, 1998). The cost of debt is directly quantifiable in the ratio of the interest expenses after tax divided by the average interest-bearing debt (Palepu et al., 2013). The interest expenses after tax (IEAT) captures the interest expenses of the debts multiplied by the effective interest rate. These interest expenses are the result of long-term debt financing and short-term debt due to long-term debt. The average of the long-term debt is calculated by the interest-bearing debt at year t and the year before, t-1. The effective interest rate is the result of the tax expenses divided by the net income (Palepu et al., 2013).

$$(\boldsymbol{EQ5})Cost\ of\ Debt_{i,t} = \frac{Interest\ expenses\ after\ Tax\ (IEAT)}{\left(\frac{Interest\ bearing\ debt_{i,t} + Interest\ bearing\ debt_{i,t-1}}{2}\right)}$$

4.4 Independent Variable

This examination is based on the influence of the financial reporting quality on the cost of equity and cost of debt. The independent variable is the financial reporting quality. The quality of the financial reports can be defined as the precision with which the financial reports reflects information about the operations of the firm (Biddle et al., 2009). Especially the information that is important for the equity investors, for example the cash flows and the accruals. Investors use the financial reports to base their investment decision. Therefore the quality of those reports is important to reduce the adverse selection costs and the costs of the potential risks (Verrecchia, 2001).

The influence of the quality of the financial reporting is measured by three proxies: the accruals quality (AQ), the modified accrual quality (AQWi) and the average of these two proxies (FRQ). These measurements are derived from prior work (Biddle et al., 2009; Francis et al., 2003; Mcnichols, 2002; Verdi, 2008). The idea of using accruals is the ability to reduce matching and timing problems of cash flows in the process of recognition earnings. Accruals are estimates of future cash flows, which are useful for the forecast of earnings (Biddle et al., 2009). The quality of financial reporting is determined on the basis of the normalized average of two accruals quality proxies, the accrual quality (AQ) and the modified accrual quality (AQWi) of Wysocki (2008). This third proxy summarize the effects of the two proxies in one independent variable.

The first proxy, accrual quality, is based on a combination of the accrual model of Dechow & Dichev (2002) and the Jones model (1991). The model of Dechow & Dichev measures the quality of the accruals as a whole. On the other hand Jones separates the discretionary accruals (DA) from the nondiscretionary accruals (NDA). The idea of the models together is to strengthen the results by reducing the errors of the separate models. This combination leads to a regression of working capital accruals (WC) total current accruals (TA) on the cash flows, revenues and property, plant and equipment.

The quality of the accruals is based on the standard deviation of the residuals, the difference between the reported cash flow operations and the cash flow related to the period t. The standard deviation of the residuals explains the absolute variance of the dependent variable on the explanatory variable instead of the relative variation in accruals. The model includes different periods of cash flows to reduce the problems of timing and matching. The recognition of cash flows could deviate from the realized cash flows. Therefore the model includes the period's t-1 and t+1 for the cash flows. This results in the following equation:

(EQ6)

$$\Delta WC_t = \beta_0 + \beta_1 * CFO_{t-1} + \beta_2 * CFO_t + \beta_3 * CFO_{t+1} + \beta_4 * \Delta Sales_t + \beta_5 * PPE_t + \in_t$$

$\Delta WC_t = change\ in\ working\ capital\ in\ period\ t,$

$CFO_{t-1}, CFO_t, CFO_{t+1} = Cashflows\ of\ the\ lagged, current\ and\ future\ periods,$

$\Delta Sales_t = change\ of\ sales$

$PPE_t = Level\ of\ property, plant\ and\ equipment$

The change in working capital (ΔWC_t) is defined in line with Dechow & Dichev, including change in accounts receivable, inventory accounts payable, taxes payable and other

assets. The change of sales and the level of property, plant and equipment is from the Jones model.

The second proxy for financial reporting quality aims to focus on the accruals quality based on the connection between the current accruals and the cash flows from the periods t-1 and t+1 rather than the current accruals and the current cash flows. The reason of this different approach is the possibility of earnings management of accruals and cash flow in the same period (Wysocki, 2008). This proxy consists of two parts. The first part is a model that applies only a regression of the working capital accruals on current cash flows:

(EQ7) $A_t = \alpha + \beta_1 * CF_{t-1}^{t} + \beta_2 * (CF_t^{t+1} + CF_t^{t-1}) + \beta_3 * CF_{t+1}^{t} + \in_t$

(EQ7a) $A_t = CF_{t-1}^{t} - (CF_t^{t+1} + CF_t^{t-1}) + CF_{t+1}^{t} + \in_{t+1}^{t} - \in_t^{t-1}$

$A_t = Working\ capital\ accruals\ in\ period\ t$

CF_{t-1}^{t} = *Cash flows recognized in period t and received in period t-1*

CF_t^{t+1}, CF_t^{t-1}

$= Cash\ flows\ recognized\ in\ period\ t, received\ respectively\ in\ lagged\ or\ future\ period.$

$\mathrm{CF}_{t+1}^{t} = Cash\ flows\ recognized\ in\ period\ t\ and\ received\ in\ period\ t+1$

The second part of this proxy is the original Dechow & Dichev (2002) model with a regression of the working capital accruals on the three periods of cash flows (lagged, current and future).

(EQ8) $A_t = \alpha + \beta_1 * CFO_{t-1} + \beta_2 * CFO_t + \beta_3 * CFO_{t+1} + \in_t$

The differences, measurement error, between **(EQ7)** and **(EQ8)** are shown highlighted in the equations below (Wysocki, 2008):

(EQ9a) $CFO_{t-1} = CF_{t-1}^{t} + (\boldsymbol{CF_{t-1}^{t-1}} + \boldsymbol{CF_{t-1}^{t-2}})$

(EQ9b) $CFO_t = (CF_t^{t+1} + CF_t^{t-1}) + (\boldsymbol{CF_t^{t}})$

(EQ9c) $CFO_{t+1} = CF_{t+1}^{t} + \left(\boldsymbol{CF_{t+1}^{t+1}} + \boldsymbol{CF_{t+1}^{t+2}}\right)$

The highlighted part shows cash flows of operations related to the three periods. These cash flows are captured in the model of Dechow & Dichev (2002) compared to the first model (EQ7). All the highlighted parts, the measurement errors, are related to the lagged or future periods in time, except $(\boldsymbol{CF_t^t})$. $(\boldsymbol{CF_t^t})$ is the measurement error of the current period t, in which the cash

flow recognized and received in earnings and therefore the working capital accruals are equal to zero. These measurement errors exist with the underlying theoretical assumption that $\beta_1 = \beta_3 = 1\ and\ \beta_2 = -1$ for EQ7. The negative β_2 captures the received cash flows in the current period, which is related to the lagged or future period (EQ7a). After that, the standard deviation of the residuals of the first model (EQ7) divided by the standard deviation of the residual of the Dechow & Dichev model (EQ8) creates the ratio between the two models ($STDModel_1/STDModel_2$).

Finally, the financial reporting quality is determined by the normalized average of those two methods of accrual quality. This combined measure for financial reporting quality called FRQ index.

4.5 Financing Decisions Measures

The second hypothesis provides an answer on the research question, where the first hypothesis forms the basis. The cost of financing influences the choices of firms for the methods of financing their firms or investments. The theories already show the considerations of firms about using debt or equity. The first hypothesis provides an answer by means of the costs as central point. The second hypothesis measures the influences of the quality of the financial reporting on the financing of firms. This would be in line with the results of the first hypothesis, because the theories show that the choices are based on the costs. For example in a situation higher financial reporting quality leads to relative lower cost of equity compared to the cost of debt, firms decided to finance their firm or investments by using equity instead of debt. The financial reporting quality affects the choices of the firm financing decisions.

The financing decisions of firms are measurable in a simple way. This measure is based on changes over time. The formula is identical for equity as for debt (see EQ3 and EQ4). The change over time reflects the choices of firms concerning the financing actions and captures the influences of the financial reporting quality on the decisions of firms. The formula of the dependent variables is as follows:

$$(\boldsymbol{EQ10a})\ \Delta Equity = (Equity_t - Equity_{(t-1)})/\ Equity_{(t-1)}$$

$$(\boldsymbol{EQ10b})\Delta Debt = (Debt_t - Debt_{(t-1)})/\ Debt_{(t-1)}$$

4.6 Control Variables

In this paper some control variables are implemented for effects that could affect the results of the findings. The cost of equity and cost of debt could be affected by different factors and therefore the model includes control variables to minimize those influences on the dependent variables. The firm size is such a control variable measured as the natural logarithm of total assets. Francis et al. (2003) showed that the firm size negatively influences the cost of capital (R_E, R_D) of a firm, because risks depend on the size of firms (Palepu et al., 2013). The firm leverage could influences the capital structure due to taxes. The capital structure also affects the firms risks. When firms have relatively high leverage, which means a relatively high level of debt compared to the assets, they also have high cost of capital. Leverage is measured as the interest-bearing debts divided by the total assets (Francis et al., 2003).

The quality of accruals and the cost of capital are sensitive to cash flow and sales volatility (Liu & Wysocki, 2007). Following that paper, this research accounts for those by the individual standard deviation divided by the total assets ($\sigma(CFO)\ and\ \sigma(SALES)$). The financing decisions of firms is affected by the growth of the firm. When firms have a high level of growth, investments are upcoming and the decisions of firms are affected. The measure for the growth of firms is Market-to-book ratio (MTB) and the long-term growth (LTG). These proxies are commonly used in other research (Biddle & Hilary, 2006; Dhaliwal et al., 2005; Frank & Goyal, 2003; Hail & Leuz, 2006). MTB measures the ratio between the market value of total assets and the book value of total assets. LTG is the forecast of the expected long-term growth and is measured by the mean of the long-term growth reported in June of each year (Dhaliwal et al., 2005). The expected influences on risks is positively and therefore also positive against the cost of capital. LTG has been processed in the cost of equity method of Ohlson and Juettner-Nauroth.

Another control variables is the return on Assets (ROA). This variable measures the firm performance (Francis, Nanda, & Olsson, 2008). The thought behind this measurement is that better performing firms receive lower cost of capital and therefore the variable is predicted to be negative. Industry controls are included in the regression model to check for differences independent of the capital structure due to the risks of the industries (Dhaliwal et al., 2005). This control variable is based on the method of Fama & French (1997) of section 4.1. Appendix D gives an overview of the different industry groups. These control variables are important to measure the influence of the independent variable, the financial reporting quality, on the

dependent variables, the cost of equity or the cost of debt. The implementation of these variables leads to following regression models for the first hypothesis:

$$(\boldsymbol{EQ12})\ COE_{i,t} = \beta_0 + \beta_1 FRQ_{i,t} + \beta_2 ROA_{i,t} + \beta_3 markettobook_{i,t} + \beta_4 leverage_{i,t} + \beta_5 \sigma(SALES)_{i,t} + \beta_6 \sigma(CFO)_{i,t} + \beta_7 Size_{i,t} + \beta_8 INDUSTRY_{i,t} + \varepsilon_{i,t}$$

$$(\boldsymbol{EQ12})\ COD_{i,t} = \beta_0 + \beta_1 FRQ_{i,t} + \beta_2 ROA_{i,t} + \beta_3 markettobook_{i,t} + \beta_4 leverage_{i,t} + \beta_5 \sigma(SALES)_{i,t} + \beta_6 \sigma(CFO)_{i,t} + \beta_7 Size_{i,t} + \beta_8 INDUSTRY_{i,t} + \varepsilon_{i,t}$$

The second hypothesis measure the influence of the financial reporting quality on the change in equity or debt financing. The control variables are not changed and the regression models for the second hypothesis are therefore as follows:

$$(\boldsymbol{EQ13})\ \Delta Equity_{i,t} = \beta_0 + \beta_1 FRQ_{i,t} + \beta_2 ROA_{i,t} + \beta_3 markettobook_{i,t} + \beta_4 leverage_{i,t} + \beta_5 \sigma(SALES)_{i,t} + \beta_6 \sigma(CFO)_{i,t} + \beta_7 Size + \beta_8 INDUSTRY_{i,t} + \varepsilon_{i,t}$$

$$(\boldsymbol{EQ14})\ \Delta Debt_{i,t} = \beta_0 + \beta_1 FRQ_{i,t} + \beta_2 ROA_{i,t} + \beta_3 markettobook_{i,t} + \beta_4 leverage_{i,t} + \beta_5 \sigma(SALES)_{i,t} + \beta_6 \sigma(CFO)_{i,t} + \beta_7 Size_{i,t} + \beta_8 INDUSTRY_{i,t} + \varepsilon_{i,t}$$

5 Empirical results and Analysis

This chapter focuses on the results of the hypotheses. The results answers the hypotheses by regression models and provides a conclusion that answers the research question. Firstly, the financial reporting quality is provided by different accrual quality models. Then the univariate results will be discussed, before the multivariate results of the hypotheses will be discussed.

5.1 Financial reporting quality

The quality of the financial reports is the result of the difference between the expectation and the actual values of the financial reports. The expectations are based on the normalized average of the models of Wysocki and a combination of Dechow & Dichev and Jones model. Linking the models to strengthen both approaches and to reduce the possible errors associated with the individual models. The estimations of the coefficients are presented in table 5 of the model of Dechow & Dichev and Jones. The results are consistent with the estimations of McNichols (2002). Both models have significant results for the cash flows from operations. The lagged and future cash flows have significant positive effect on the accruals and the opposite applies to current cash flows, which is in line with the model of McNichols. Only the coefficients of the FRQ estimation are higher compared to that model. The strongest association with accruals is with the CFO_t (-0.408).

Table 5 Estimation Results from regression of ΔWC on CFO, sales, and PPE

VARIABLES	FRQ estimation	P-value	St.Dev
$\boldsymbol{Intercept}$	21.737***	0.000	(3.814)
$\boldsymbol{CFO_{t-1}}$	0.194***	0.000	(0.022)
$\boldsymbol{CFO_t}$	-0.408***	0.000	(0.023)
$\boldsymbol{CFO_{t_+1}}$	0.204***	0.000	(0.020)
$\boldsymbol{\Delta Sales_t}$	125.003***	0.000	(10.159)
$\boldsymbol{PPE_t}$	-17.802	0.136	(5.680)
$\mathbf{R-squared}$	0.4428		
$\boldsymbol{N}$	43,115		

Note: The FRQ estimation results are obtained through a basic OLS regression .P-value shows the level of significance. St. Dev means the standard deviation. FRQ estimation are the coefficients of the model.
**** significant at 10% ** significant at 5%. *** significant at 1%.***

The differences between the actual accruals and the estimations creates the quality of the accruals. This accruals quality is multiplied by minus one so that the accruals quality is increasing the quality of the financial reports. These results are combined with the results of the

Wysocki model about the ratio of the standard deviation of the residuals from the current accruals on the current cash flows and the original Dechow and Dichev model of the working capital accruals on lagged, current, and future cash flows. The normalized average of these two models form the financial reporting quality.

5.2 Univariate Analyses

Firstly, this paper measures the influences of the financial reporting quality (FRQ) on the different dependent variables. These results are shown in table 6. FRQ is significant for the cost of equity (COE), change in equity (chEquity), and change in debt (chDebt). For these dependent variables is the constant variable also significant in the same way as the FRQ. For the other models is the influences of the FRQ insignificant. Concluding remarks based on these results are difficult, because the explanatory power of financial reporting quality on the different dependent variables is in all the different models below the 1% (R-squared). The results do not adequately reflect the influence of FRQ on the different dependent variables. Better representation of the real influences should be achieved by multivariate analyses opposed to univariate analyses. Model 5 of table 6 is an expansion of the second hypothesis. The details of this model can be found in subparagraph 5.3.2.

Table 6 Univariate Results

	(1)	(2)	(3)	(4)	(5)
VARIABLES	**COE**	**COD**	**chEquity**	**chDebt**	**ED**
FRQ	-0.602***	-0.107	16,266.61***	12584.120***	15,507.120
	(0.000)	(0.577)	(0.000)	(0.000)	(0.386)
Constant	-0.132***	-0.002	4,790.832***	3,721.592***	4,614.141
	(0.000)	(0.976)	(0.000)	(0.000)	(0.395)
Observations	11,611	13,795	16,811	16,075	12,670
R-squared	0.007	0.000	0.007	0.008	0.000

Note: The univariate results are obtained through a basic OLS regression. The five components reflects the dependent variables. ED is a new variable and is used for the last hypotheses. ED means the change in equity divided by the change in debt.
significance in parentheses
**** significant at 10% ** significant at 5%. *** significant at 1%.***

5.3 Multivariate Analyses

The multivariate analyses of this paper include next to the financial reporting quality variable also control variables and industry fixed effects. These variables makes it possible to

have a better view of the influences of the FRQ on the different dependent variables. The first hypothesis measures the influences of FRQ on the different costs and the second hypothesis measures the influences of FRQ on the financing decisions.

5.3.1 First Hypothesis

The influences of the FRQ on the different costs is represented in table 7. Also the control variables (RoA, market-to-book, Leverage, standard deviation of sales and cash flow, and size) are included in the model. FRQ has for both cost types a negative influence (-0.202, and -0.149). These negative coefficients were expected by the theory of information reduction; the increasing FRQ reduces the information asymmetry and therefore a lower cost of capital. FRQ is for both cost types negative, but only significant for the cost of equity at the level of 0.01. The first hypothesis states that FRQ affects COE more strongly than COD. The results of table 7 with the p-value in parentheses are in line with the first hypothesis. COE reacts significant negative on FRQ compared to only a negative sign on the COD. The table includes also the control variables. These coefficients are mostly opposite between the COE and COD from positive to negative and vice versa. Especially in the model of the COD, almost all control variables are significant at the level of 0.01. The coefficients of those control variables are in line with the expectations. The control variables, market-to-book ratio, leverage, standard deviation of sales, and size, are also significant for COE. This difference in sign can be explained by the fact that firms are financed with a combination of debt and equity. If the amount of debt increases, the risks will be higher and leads to higher COD. However, the coefficient of RoA (return on assets) is for both types of cost negative, because return on assets is a proxy for the efficiency of a firm. A higher level of efficiency reduces the cost of capital, although the influence is doubtful, since RoA is not significant for COE.

Table 7 Multivariate results of hypotheses 1.

VARIABLES	COE	COD
FRQ	-0.202***	-0.149
	(0.002)	(0.446)
RoA	-0.002	-0.064***
	(0.193)	(0.000)
Markettobook	-0.005***	0.020***
	(0.000)	(0.000)
Leverage	-0.003***	0.005***
	(0.000)	(0.000)
STsales	0.017*	-0.064**
	(0.096)	(0.041)

STcfo	-0.003 (0.424)	0.008 (0.551)
size	-0.005*** (0.000)	0.003*** (0.000)
Industry fixed effects	Yes	Yes
Constant	20.259 (0.103)	-78.740** (0.024)
R-squared	0.1504	0.0227

Note: The multivariate results are obtained through a basic OLS regression. FRQ is only significant at 1% for the cost of equity (COE). Significance in parentheses
**** significant at 10% ** significant at 5%. *** significant at 1%.***

5.3.2 Second Hypothesis

The second hypothesis measures the influences of FRQ on the actual financing decisions. The pecking order theory and the trade-off theory outlines a situation in which firms makes choices based on costs. Following the results of the first hypothesis, a higher FRQ would lead to a greater change of equity compared to debt, because of a higher change of COE than COD. Table 8 shows the changes of equity and debt on FRQ including control variables. The coefficients of FRQ are large in size, because FRQ is based on a normalized average and therefore a change of this average leads to large differences of the dependent variables. For both types of costs is the correlation with FRQ positive and significant. The second hypothesis suggest a greater change of equity, but that cannot be deduced from the data of table 8. For this, further research has been carried out, the results are explained after table 8 (Table 9).

The control variables, market-to-book ratio, leverage, standard deviation of sales, and size, are significant at the level of 0.01. The standard deviation of sales (STsales) the sign of the control variables changed in most cases compared to the coefficients of table 7. This can be explained by the reasoning that the first hypothesis focusses on the costs of financing and the second hypothesis on the changes in financing decisions. Usually lower costs lead to higher attraction, which is a negative correlation and therefore the sign will change.

Table 8 Multivariate results of hypotheses 2.

VARIABLES	**chE**	**chD**
FRQ	5,888.288*** (0.000)	5,574.803*** (0.000)
RoA	49.392	-37,388

	(0.165)	(0.139)
Markettobook	77.729***	-501.160***
	(0.000)	(0.000)
Leverage	-43.733***	27.487***
	(0.000)	(0.000)
STsales	-567.622***	-313,123**
	(0.006)	(0.036)
STcfo	99.418	40,435
	(0.175)	(0.436)
size	108.298***	84,687***
	(0.000)	(0.000)
Industry fixed effects	Yes	Yes
Constant	-657.873,7***	-382,036.2**
	(0.009)	(0.034)
R-squared	0.0986	0.1329

Note: The multivariate results are obtained through a basic OLS regression. FRQ is significant at 1% for both dependent variables. Significance in parentheses
**** significant at 10% ** significant at 5%. *** significant at 1%.***

The results of table 8 shows significant results for both cost types. Therefore, further research has been done about the magnitude of the changes of debt and equity financing. To measure the difference of the cost types, the regression formulas of the second hypothesis has been merged (EQ13 and EQ14). The change in equity and debt is still in accordance with equation 10a and 10b. The regression formula is as follows:

EQ15) $$\Delta Equity_{i,t} \Big/ \Delta Debt_{i,t} = \beta_0 + \beta_1 FRQ_{i,t} + \beta_2 ROA_{i,t} + \beta_3 markettobook_{i,t} + \beta_4 leverage_{i,t} + \beta_5 \sigma(SALES)_{i,t} + \beta_6 \sigma(CFO)_{i,t} + \beta_7 Size + \beta_8 INDUSTRY_{i,t} + \varepsilon_{i,t}$$

The additional test measures the changes of equity financing divided by the changes of debt financing. The second hypothesis suggests more effect on financing decisions regarding equity, because of the quality of the financial reports. The results of this additional test is represented in table 9. The influence of the FRQ on the new dependent variable is significant at a level of 0.10 (0.074). The coefficient of FRQ is 58.604, which reflects the ratio of equity on debt over time in a change of FRQ. Most control variables are not significant, only leverage and RoA are significant. The constant variable in the model is very large (5,491.346), but is insignificant. The explanatory power of the model (R-squared) is 0.005. The relation of FRQ on the ratio of equity on debt over time is small, but reliable (significant).

Table 9 Extra Multivariate results of hypotheses 2.

VARIABLES	ED
FRQ	58.604*
	(0.074)
RoA	3.653*
	(0.080)
Markettobook	1.622
	(0.111)
Leverage	1.378***
	(0.000)
STsales	-1,404
	(0.900)
STcfo	-2.503
	(0.611)
size	-0.061
	(0.719)
Industry fixed effects	Yes
Constant	-5,491.346
	(0.659)
R-squared	0.0050

Note: The multivariate results are obtained through a basic OLS regression. FRQ is only significant at 10%. Significance in parentheses
**** significant at 10% ** significant at 5%. *** significant at 1%.***

The results of table 8 showed significant results of FRQ on changes of equity and debt. Both financing options are significant and therefore the additional test of table 9 has been done. This test is a combination of the models of table 8. The change over time of equity divided by the change over time of debt is the dependent variable. The result is a significant coefficient for the FRQ on this dependent variable, which is the answer of the second hypotheses. The effect of FRQ is stronger regarding equity compared to debt, which is in line with the expectation of the second hypothesis. The control variables are mostly significant for both models, only the last model (table 9) has different results for the control variables.

6 Conclusions

Economic theories provides mechanisms of firms financing decisions. These theories are based on the costs of the different financing methods. The trade-off theory assumes an optimal capital structure with the tax benefits of debt financing to a value-maximizing. The pecking

order theory described a mechanism of using debt before equity, because of adverse selection costs as a result of information asymmetry. This information asymmetry affects the financing decisions of firms. Debtholders have more possibilities to achieve more information or on more timely basis than equity holders. Therefore firms decide to use debt over equity. This information asymmetry is the difference of information between investors and managers or debtholders of the firm. Investors depend on the financial reports for their information provision on the status of the firm, while managers or debtholders have more possibilities to achieve information. The financing decisions of firms is based on the costs, which is the result of information asymmetry. The research question is focussed on the influence of the quality of these report on the financing decisions of firms. Answering this question, the thesis is divided in two parts. Firstly, the correlation is measured between the financial reporting quality on the cost of debt and equity. Theories described that information asymmetry affects the costs of financing. In this paper is the quality of the financial reports the measure of the information asymmetry. The results were clear, the correlation with the cost of equity was significant negative, compared to an insignificant result for the cost of debt. This means that a higher quality of financial reports reduces the cost of equity. The cost of debt is insignificant correlated with the quality of the financial reports. After the observation that the quality of the financial reports affects the cost of equity, is the second part focussed on the influence of the quality of the financial reports on the actual financing decisions. The earlier theories described a mechanism of using the lowest type of cost for financing the firm. With the results of the first hypothesis, the expectations suggests an increase of equity financing compared to debt financing. The results of the second hypothesis are partly in line with these expectations. There is an increase of equity financing, however the debt financing has also increased. Based on these results, the research question can be answered, because the results are significant for both. The second hypothesis focussed also on the difference between the types of cost. Therefore the additional test of table 9 has been done. These results show a limited level of significance. With all the results the research question about the effect of financial reporting quality on firm's financing decisions can be answered with a yes. There is a significant effect of the quality of the results on the decisions of firms concerning financing. The quality of the reports reduces the cost of equity, which results in more equity financing. An interesting point is debt financing. The cost of debt is negative, but insignificant correlated with the quality of the reports. However debt financing is significant positive correlated with the quality of the reports. The additional test showed a limited significant stronger effect for equity financing compared to debt

financing. This can be explained by the first hypothesis, who showed only a significant result for the cost of equity.

This paper is an addition to the existing knowledge of financing decisions. Earlier research is focussed on the cost of financing related to the quality of financial reports without measuring the consequences of these results to the decisions of firms, which can be different than the cost of financing suggests. The findings in this paper could affect the stakeholders of the firm about new financing methods, using more equity for example. The findings suggests that firms with higher financing needs are likely to increase their financial reporting quality, which, in turn, will lead to a lower cost of capital. Stakeholders can recognize these moments and take advantage of this situation by selling their stocks for example. Also the firm itself could use these findings to pursue a higher quality of the financial reports before issue new stocks or other financing method. Another explanation is that the results of the additional test are not significant at a level of 0.01, and therefore can challenge the greater influence of the quality of the financial reports on equity financing compared to debt financing.

This research is an addition for stakeholders and firms to know the influence of the quality of financial reports. However, this research has also some limitations and other interesting questions for further research. The paper assumes that the quality of the financial reports is directly correlated with information asymmetry and therefore the costs fall. Another limitation of the research is that the method of financing only is influenced by the costs of financing without other reasons for financing decisions. The decision for debt financing can be explained by the fact that lenders has no say in how you manage your company. Another reason for debt financing is the volatility. The loan does not fluctuate in the same amount as equity financing, which results in lower risks and could be better choice in some situations. The implementation of these facts for financing decisions would increase the results of the model. An interesting question for further research is to find the positive link between debt financing and financial reporting quality with the fact that the cost of debt is insignificantly correlated with the quality of financial reports.

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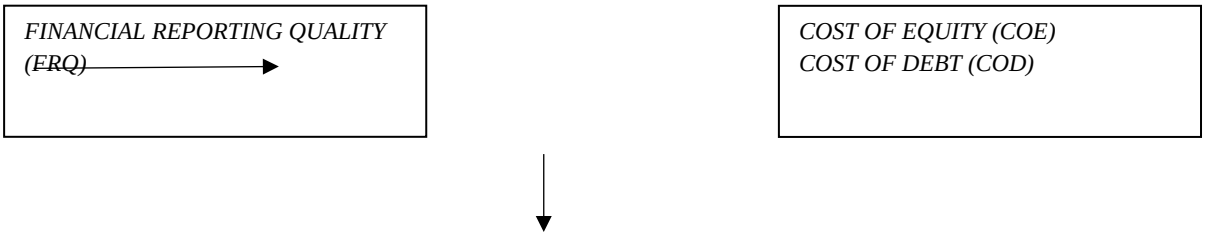
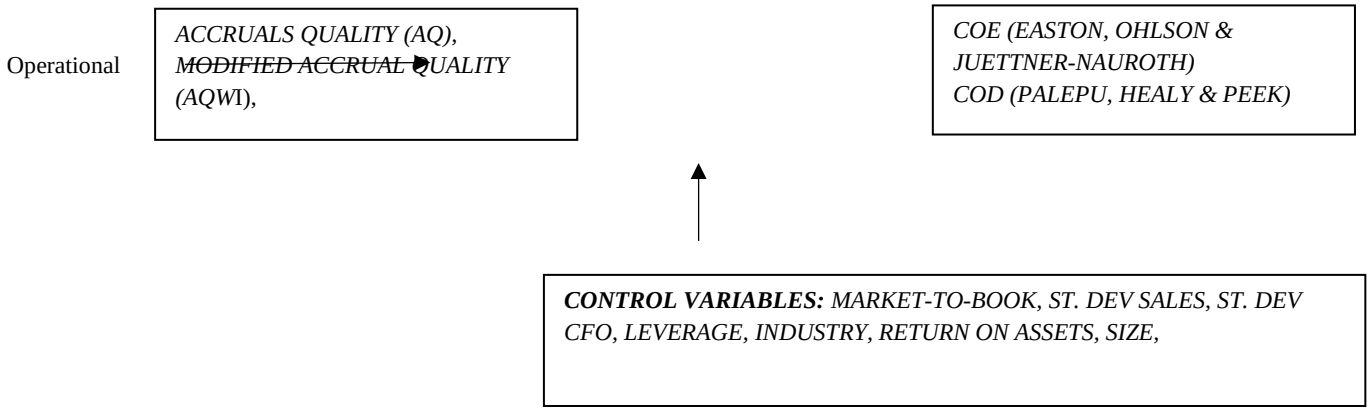
8 Appendix

Appendix A - Libby Boxes

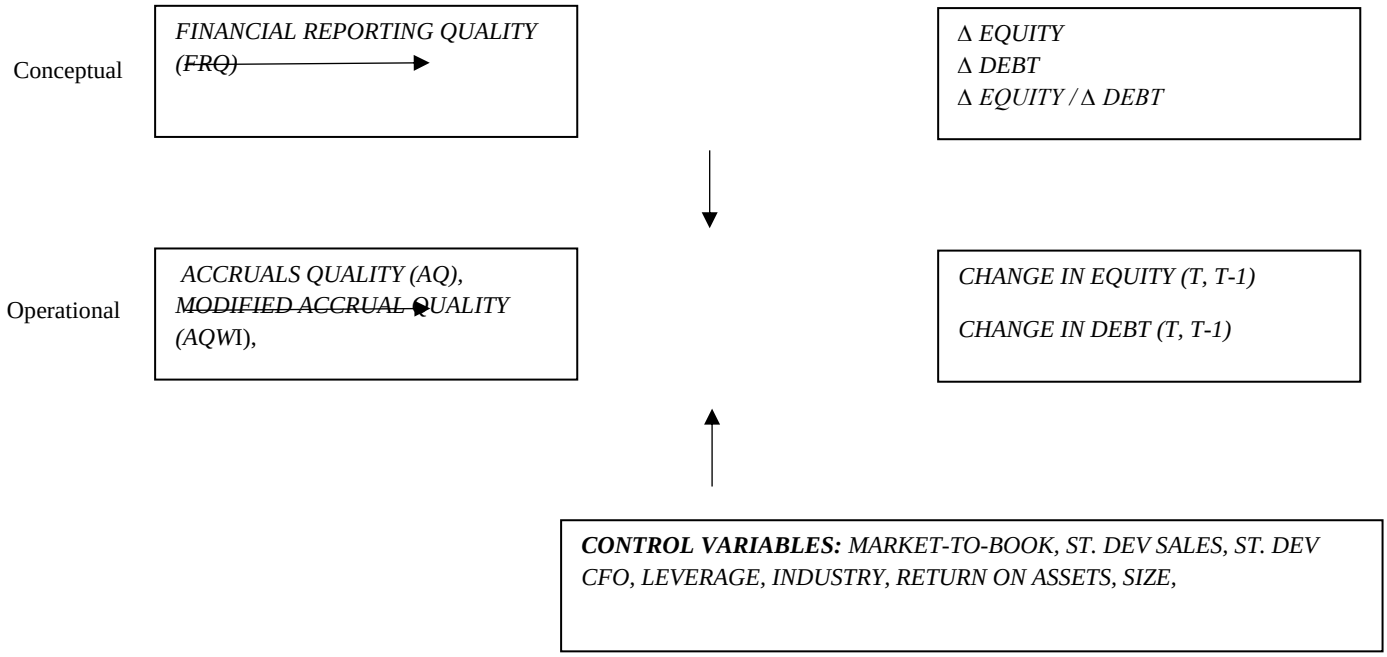
Appendix A.1 Hypotheses 1

Conceptual





Appendix A.2 Hypotheses 2



Appendix B – Variable definitions

Dependent Variables:

$Cost\ of\ Equity\ (COE)$ is measured by the residual income valuation and the abnormal growth valuation model. The model of Easton (R_E) is a generalization of the Price-earnings- growth (PEG) model. The model uses the forecast of the earnings per share of two years and the current price to calculate the cost of equity. The model of

Ohlson and Juettner-Nauroth (R_{OJ} applied long-term growth rates and dividends in their model. The normalized averages of these models creates the value of the cost of equity.

$Cost\ of\ Debt\ \ (COD)$ is the total interest cost of the firm on his interest-bearing debts. This is the effective rate of interest. The cost of debt is measured by the interest expenses reduces by the tax, divided by the total interest-bearing debts.

$Change\ in\ Equity\ (chE)$ is the change in equity is a reconciliation of the beginning and ending balances in a company's equity during a reporting period. $\Delta Equity = (Equity_t - Equity_{(t-1)})/\ Equity_{(t-1)}$

$Change\ in\ Debt\ (chD)$ is the change in debt over time. The change is measured as the difference between the beginning and ending balances in a company's debt during a reporting period. $\Delta Debt = (Debt_t - Debt_{(t-1)})/\ Debt_{(t-1)}$.

Financial Reporting Quality:

$Accruals\ Quality\ (AQ)$ is the measure for the financial reporting quality and based on a combination of the models of Dechow & Dichev and Jones. The model measures the quality of the accruals by the standard deviation of the residuals. The model is a regression of working capital accruals on cash flows in the periods: t-1, t, t+1 plus the change in sales and the property, plant and equipment (PPE).

$Accruals\ Quality\ (AQWi)$ is a modified version to measure the accruals quality (Wysocki 2008). The model focuses on the connection between the current accruals and the cash flows close to the current period. This measure emphasis the possibility of earnings management of accruals and cash flows in the same period. The measurement is based on the comparison of the standard deviation of the residuals of the simple model, who focus on the current period, and the full model of Dechow and Dichev (2002) ($STDModel_1$/$STDModel_2$).

$(FRQindex)$	is a measure of the accruals quality and is determined by the normalized average of AQ and AQWi.

Control variables:

$Market - to - book$	is the ratio between the market value of total assets and the book value of total assets.
$\sigma(CFO)$	is the standard deviation of the cash flows from operations divided by the total assets.
$\sigma(SALES)$	is the standard deviation of sales divided by the total assets.
$Leverage$	is the ratio between interest-bearing debts and total assets.
$long - term\ Growth\ (LTG)$	is the forecast of the expected long-term growth
$Size$	is measured as the natural logarithm of total assets (LogAssets)
$Industry$	is measured based on the classification by Fama & French (12 industries)
$Return\ on\ Assets$ (RoA)	is the proxy for the firm performance and measured as the ratio between the net income divided by total assets.

Appendix C- Pearson Correlation Matrix

Table 6. Pearson correlations among financial reporting quality, financing decisions, and operating variables

	COE	COD	FRQ	RoA	Markettobook	leverage	STsales	STcfo	size	chEquity	chDebt
COE	1.000										
COD	-0.035***	1.000									
FRQ	-0.082***	-0.005	1.000								
RoA	0.100***	0.107***	-0.075***	1.000							
Markettobook	-0.053***	-0.043***	-0.011	-0.017***	1.000						
leverage	0.206***	-0.073***	0.005	-0.005	-0.257***	1.000					
STsales	-0.081***	0.014*	-0.006	0.006	0.012*	-0.026***	1.000				
STcfo	0.006	0.007	0.048***	-0.013**	-0.002	0.004	0.102***	1.000			
size	0.257***	-0.017**	-0.161***	0.310***	-0.276***	0.138***	0.028***	0.024***	1.000		
chEquity	-0.073***	0.009	-0.074***	-0.074***	0.045***	-0.009	0.036***	-0.001	-0.258***	1.000	
chDebt	-0.077***	0.040***	0.089***	-0.072***	-0.149***	-0.066***	0.028***	0.013	-0.234***	0.169***	1.000

*** significant at 10% ** significant at 5%. *** significant at 1%.**

Appendix D – Industry Distribution (Fama & French Classification)

1 NoDur Consumer NonDurables -- Food, Tobacco, Textiles, Apparel, Leather, and Toys
SIC Codes: 0100-0999, 2000-2399, 2700-2749, 2770-2799, 3100-3199, and 3940-3989

2 Durbl Consumer Durables -- Cars, TV's, Furniture, and Household Appliances
SIC Codes: 2500-2519, 2590-2599**,** 3630-3659**,** 3710-3711, 3714-3714, 3716-3716, 3750-3751**,** 3792-3792, 3900-3939, and 3990-3999

3 Manuf Manufacturing -- Machinery, Trucks, Planes, Off Furn, Paper, Com Printing
SIC Codes: 2520-2589, 2600-2699, 2750-2769, 3000-3099, 3200-3569, 3580-3629, 3700-3709, 3712-3713, 3715-3715, 3717-3749, 3752-3791¸ 3793-3799, 3830-3839, and 3860-3899

4 Enrgy Oil, Gas, and Coal Extraction and Products

SIC Codes: 1200-1399, and 2900-2999

5 Chems Chemicals and Allied Products

SIC Codes: 2800-2829, and 2840-2899

6 BusEq Business Equipment -- Computers, Software, and Electronic Equipment

SIC Codes: 3570-3579, 3660-3692, 3694-3699, 3810-3829, and 7370-7379

7 Telcm Telephone and Television Transmission

SIC Code: 4800-4899

8 Utils Utilities

SIC Code: 4900-4949

9 Shops Wholesale, Retail, and Some Services (Laundries, Repair Shops)

SIC Codes: 5000-5999, 7200-7299, and 7600-7699

10 Hlth Healthcare, Medical Equipment, and Drugs

SIC Codes: 2830-2839, 3693-3693, 3840-3859, and 8000-8099

11 Money Finance

SIC Codes: 6000-6999

12 Other -- Mines, Constr, BldMt, Trans, Hotels, Bus Services, Entertainment

Appendix E – Models of Cost of equity Capital

Appendix E.1 – Easton Model (2004)

This model is a generalization of the Price-Earnings-Growth (PEG) model, which provide a cost of equity capital estimation that is consistently and predictably related to risk. The model captures the stock market price plus one and two-year ahead earnings forecasts. After these years the model assumes a constant rate of earnings growth. Another assumption of the model is the dividend payment of zero. This results in a change of the formula for the cost of equity, because DPS_{t+1} is zero. This results in the second formula for the cost of equity:

$$p_t = \frac{EPS_{i,t+2} + R_E * DPS_{t+1} - EPS_{i,t+1}}{R_E}$$

Assumption: $DPS_{t+!} = 0$, leads to the short formula for the cost of equity:

$$R_E = \sqrt{\frac{EPS_{i,t+2} - EPS_{i,t+1}}{P_{0,i}}}$$

Where:

$R_E = Cost\ of\ equity\ following\ the\ model\ of\ Easton$

$P_{0,i} = stock\ market\ price\ of\ the\ share\ of\ firm\ i\ at\ the\ forecast\ date\ (end\ of\ year\ t)$

$EPS_{i,t+2}, EPS_{i,t+1}$

$= Forecasts\ of\ earnings\ per\ share\ for\ firm\ i\ for\ on\ -year\ and\ two\ -year\ ahead, respectively$

Appendix E.2 – Ohlson and Juettner-Nauroth (2005)

The model is based on the model of Gode and Mohanram (2003) and relates to firm's share price, forecast earnings per share and different types of growths of earnings per share (short and long). This model uses only the forecast of one year's earnings, after that the earnings grow with a near-term rate to the perpetual rate, expected inflation rate. The model assumes a constant dividend per share over time. This results in the following cost of equity model:

$$R_{OJ} = A + \sqrt{A^2 + \frac{FEPS_{t+1}}{P_t}(g_2 - (\gamma - 1))}$$

Where:

$$A = \frac{1}{2}\left((\gamma - 1) + \frac{DPS_{t+1}}{P_t}\right)$$

$$DPS_{t+1} = DPS_0$$

$$g_2 = \frac{STG + LTG}{2}$$

$$STG = \frac{FEPS_{t+2} - FEPS_{t+1}}{FEPS_{t+1}}$$

$$(\gamma - 1) = r_f - 0.03$$

$Note: This\ model\ requires\ FEPSt + 1 > 0\ and\ FEPSt + 2 > 0$

$R_{OJ} = Cost\ of\ equity\ following\ the\ Ohlson\ and\ Juettner - Nauroth\ model$

$DPS_{t+1}, DPS_0 = Dividend\ per\ share\ in\ period\ t + 1, t_0, respectively$

$P_t = Price\ of\ the\ share\ in\ period\ t$

$STG = Short - term\ growth$

$LTG = Long - term\ growth$

$FEPS_{t+2}, FEPS_{t+1} = Forecast\ earnings\ per\ share\ in\ period\ t + 2, t + 1\ , respectively$

$r_f = The\ yield\ on\ a\ ten - year\ US\ Treasury\ note\ of\ year\ t$