Who will be the new auditor ?

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Abstract

In this paper I try to assess the factors that affect auditor choice after dismissal of the incumbent auditor. Therefore I use the information in the financial statements of Belgian companies that changed their auditor in the period from 1989 to 1994. It should however be clear that reasons for auditor *choice* as opposed to reasons for auditor *change* are the subject of this research.

I build an auditor choice model that is testable with Belgian data using four theories on the choice of audit firms: agency theory, signaling theory, scale effects and insurance theory. Except for Weets and Jegers (1999) this paper is to my knowledge the first paper that attempts to test for these theories in a comprehensive model.

A contribution of this paper is that I do not have to deal with confusing observations arising from the fact that clients possibly have an auditor with less than optimal audit quality because it costs too much to change. Next to that, I adapt the traditional B6/NB6-model to the fact that in Belgium the audit market can be divided into three approximately equal audit client groups: B6-clients, clients of other audit companies (OFF-clients) and clients of auditors that work alone (O-clients).

My results are consistent with the existence of scale effects and referrals for companies that are part of a group of companies and the need for insurance of users of the financial statements. I cannot find evidence of auditor choice being influenced by agency costs between managers and owners and between providers of external financing and owners. Also signaling seems to have an impact on auditor choice in Belgium. The use of the B6/OFF/B6-model and the model with a continuous size measure for audit quality reveal that these models have also explanatory power in the Belgian context, and that the results of the B6/NB6-model hold for the other proxies for audit quality.

1. Introduction

Suppliers on the worldwide audit market can be divided into two groups. At the present moment five international audit firms, the so-called "Big Five", dominate the market for large and/or listed companies, while a lot of smaller audit firms audit smaller clients. This dichotomous structure can also be found in Belgium (Weets and Jegers (1997)). For the sample period of this paper and the literature review of previous research, I however will refer to the "Big Six" (B6) as opposed to the "Non Big Six" (NB6) since the merger of Coopers and Lybrand and Price Waterhouse only dates from 1998, and is therefore not relevant here.

Price studies indicate that the fees of B6-auditors are, ceteris paribus, higher than those of smaller audit firms (e.g. Loits (1994), Ezzamel et al. (1996) and Davis and Simon (1992)). Also, audit quality studies suggest that the probability of finding and reporting a material error in the financial statements of the client[2] by B6-auditors is higher than for auditors that belong to a smaller audit firm (e.g. Ettredge et al. (1988) and Weets and Jegers (1998)). The fact that some companies prefer a B6-auditor and are willing to pay a higher price for their services suggest that there is more to it than the legal obligation to appoint an auditor to certify the financial statements.

Research on audit demand reveals that the choice of an auditor can be explained by agency problems, scale effects, insurance theory, signaling theory and business policy (Weets and Jegers (1999)). This paper, to my knowledge, was the first to combine all these theories into a comprehensive auditor choice model. Weets and Jegers (1999), however, have as an important shortcoming that their observed auditor-client combinations are sometimes not optimal because companies only change auditors when the benefits of that change (e.g. decrease in agency costs when the new auditor delivers services of higher quality, fee reduction when the services are of lower quality) are larger than the costs (adaptation of the new auditor).

In this paper I try to remedy to this shortcoming by the limitation of the auditor-client observations to clients that just made their auditor choice. In other words I look at new auditor-client combinations. To that end I use the information in the financials statements of Belgian companies that changed their auditor in the period from 1989 to 1994. Assuming rational agents means that for these companies the benefits from an auditor switch are larger than the cost of changing.

An additional contribution to the research on auditor choice is the fact that, next to the measurement of audit quality by the B6/NB6-partitioning of the audit market supply side, I measure audit quality by a continuous size variable, assuming audit quality directly relates to the size of the audit company, and also by a B6/OFF/O-partitioning which takes into account the fact that the Belgian audit market is composed by one third of the audit clients audited by B6, one third audited by an audit firm with at least two auditors (OFF) and one third by an auditor that works alone (O).

The descriptive statistics also give an insight of the effects of the three years tenure period in Belgium.

The paper is organized as follows: in the second and third section I briefly overview the theories on the choice of audit firms and describe the Belgian context. Next, an auditor choice model is built that is testable with Belgian data. In the fifth section the sample selection procedure is discussed. The results and the empirical analysis are reported in the sixth section. I end the paper with the summary of the results and a conclusion.

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[2] This definition of audit quality is due to DeAngelo (1981)

2. Theories on the choice of an audit firm

2.1. Agency theory

Agency theory gives an explanation for companies' voluntary decision to appoint an auditor in an unregulated environment and for the heterogeneous demand for audit quality when an auditor appointment is mandatory. In this paper I concentrate on the heterogeneous demand for auditors.

According to the agency theory the extent of the information asymmetry between agents and principals in a company determines the desired audit quality. In general it is said that an auditor limits the possibilities of agents to hide self-interest behavior that is at the expense of the principal. Research on quality of audit services suggests that large, international auditors (in most cases B6-firms) provide services of higher quality and therefore have a larger mitigating effect on agency-problems (DeAngelo (1981), Palmrose (1986), Davidson and Neu (1993), Weets and Jegers (1998)). These audit firms however have larger fees (Loits (1994), Ezzamel et al. (1996) and Davis and Simon (1992)). To decide whether or not a company will appoint a B6-auditor then directly relates to the difference between the reduction in agency costs and the marginal cost of the larger auditor. Therefore, important agency problems increase the probability of choosing a "high quality" audit firm.

Agency costs cannot be measured directly. It is generally recognized that agency costs increase with size, complexity and diversification of a company because the potential transfer of wealth from the principals to the agents relates directly to these variables. The control by the principals over the agents' actions is inversely related to size, complexity and diversification of the firm. I use the natural logarithm of the client's total assets for the general measurement of agency costs.

In the audit literature I found three specific agency relationships where an auditor can attenuate agency problems: managers as agents of the owners, owners as agents of external investors and other employees as agents of managers. In the next sections we concentrate on these relationships.

2.1.1. The manager-owner relationship

The most obvious agency relationship leading to the purchase of auditing services is that between owners and managers. Owners employ managers to run the company on their behalf. The possibility of opportunistic behavior by the managers combined with the existence of asymmetric information, where the managers are better informed, creates agency problems.

These problems make it necessary for the principals to set up incentive schemes that make the managers act as perfect agents and for the manager to signal non-opportunistic behavior in order to get more than the minimal compensation. The choice of the audit firm is one possibility to reduce the information asymmetry between managers and owners.

Two variables are often used to measure agency costs due to differences between utility functions of managers and that of owners: the presence of management compensation plans and the percentage of shares held by managers. To my knowledge, the empirical testing of the influence of management compensation plans on the choice of the auditor did not result in any significant conclusions so far (Palmrose (1984), Francis and Wilson (1988)). Francis and Wilson (1988) and Firth and Smith (1992) report that the percentage shares owned by the managers inversely relates to the probability of choosing a B6-auditor, while all other studies find no significant influence (Chow (1982), Eichenseher and Shields (1985), Francis and Wilson (1988)).

For Belgium there is no data on the presence of management compensation plans and the percentage of shares hold by managers. Therefore, I calculate the ratio of shares held by unknown shareholders (bearer shares) to total number of shares. For bearer shares, as opposed to registered shares (shares held by known shareholders), the company does not know who the shareholder is.[3] These shares are easily sold and passed on. Since registered shares are usually not used for speculation due to the administrative procedure that has to be followed to pass these shares on, registered shareholders can be assumed to be more involved with daily management of the company than holders of bearer shares. Therefore I assume that opportunistic behavior is less probable when there are relatively less bearer shares and that a high quality auditor is in that case less necessary to mitigate agency-problems between managers and owners.

2.1.2. The owner-creditor relationship

The presence of creditors is a second incentive for companies to appoint an auditor and will also influence the choice of audit quality.

Asymmetric information creates the possibility for owners to maximize their own interests at the expense of the creditors. The greater the proportion of debt in a company's capital structure, the greater the potential wealth transfers from creditors to owners (Watts and Zimmerman (1986)). This can lead to suboptimal investment policies. Since the creditors will take this possible self-interest behavior into account when determining interest rates, there can be a potential gain to owners from limiting their abilities to transfer wealth (Chow (1982)).

The appointment of an auditor is one way of limiting their opportunistic behavior. The owner will compare the cost of possible suboptimal investment policies with the cost of an external audit to decide on hiring an auditor. The size of the agency cost will also influence the choice of audit quality. If I assume that large auditors are more successful in limiting owners, I expect a positive relationship between the relative amount of external financing and the size of the external auditor.

Eichenseher and Shields (1985), Francis and Wilson (1988) and Firth and Smith (1992) report a positive relationship between debt to total assets and the size of the auditor, Simunic and Stein (1987) report a negative relationship between leverage and the size of the auditor. I will use the ratio book value of equity to total assets to measure potential agency problems between owners/managers and creditors for the Belgian sample. Agency theory makes me predict that companies with a large equity to total assets ratio have less incentives to appoint a B6-companies than companies with a lot of external debt.

2.1.3. The relationship other employees-owner/manager.

Actions of employees are more difficult to observe as their number increases. An external auditor can be used to diminish this "loss-of-control" (Abdel-Khalik (1993)).

Abdel-Khalik (1993) uses the logarithm of the number of employees to measure the number of hierarchical levels in a company. His results suggest that in companies with more employees, the auditor delivers more audit work to provide assurance on the loss of control in that company. To my knowledge, no further results are published on this specific topic.

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[3] This ratio is also used by Raffournier (1995) to measure ownership diffusion.

2.2. Signaling theory

In markets where there is asymmetric information on the quality of the goods sold consumers cannot differentiate between goods. The price they are willing to pay is that of a good of average quality. Producers of goods with a higher quality are pushed out of the market at this price and disappear. Signaling better quality is one possibility to correct for this market failure (Akerlof (1970)).

Signaling theory can also be applied to the choice of external auditors. Asymmetric information between corporate insiders and others on future cash flows and agency-relationships leads to undervaluation of the company, which is most clear in the valuation of shares. This threatens the wealth of the existing shareholders when managerial expectations on future cash flows are above average. Therefore insiders have an incentive to signal this positive information.

The selection of a high quality auditor is a possibility to signal favorable expectations, if we assume that high quality auditors only accept clients with favorable expectations. Since high quality auditors will lose substantial reputation capital and wealth if they are involved in litigation, these firms are less willing to audit risky clients (Firth and Smith (1995)). However, results of empirical research on this matter highly depend on the institutional environment of the audit companies: Research in Canada (Clarkson and Simunic (1994)) and New Zealand (Firth and Smith (1995) shows a positive relationship between client risk and the size of the auditor, while in the US a negative relationship is observed (Clarkson and Simunic (1994), Raghunandan and Rama (1999)). The fact that auditors in Belgium are rarely involved in litigation makes me suspect that the situation in Belgium is more like that of Canada, but research should be done on this matter.

Beaty (1989), Balvers et al. (1988) and Michaely and Shaw (1995) empirically find a diminishing effect of higher audit quality on the undervaluation of new stock. Firth and Smith (1992) find no significant correlation for the New Zealand Stock Exchange.

Companies will compare the cost of external auditing with the cost of being undervalued. Since large auditors are assumed to provide higher quality services, and thus to lower uncertainty about future cash flows and agency problems, I expect that the size of the auditor is positively related to the expectations on future cash flows (Michaely and Shaw (1995)).

The number of companies in my sample that are listed on the Brussels Stock Exchange is too small to investigate the influence of being listed on auditor choice. I am only able to analyze the relationship between some financial ratios and the auditor choice. In my model I have three financial ratios: leverage, liquidity and profitability. I can say that the larger the profitability, the healthier the company, and the more a B6 could be used to signal this health. As the liquidity ratio should be positive but not maximized, as well as leverage, these ratios seem less appropriate as indicators of future cash flows

2.3. Insurance theory

Users of financial statements can endure losses due to material misstatements. The probability of recovering these losses is larger when the company has an auditor and the probability of recovering losses increases with the size and the reputation of the auditor. Large auditors have so called "deep pockets", that "insure" investors against the consequences of incorrect financial statements (Simunic and Stein (1995)).

However, the price of this "insurance" will depend on the reputation of the auditor. As was discussed in the previous section, high-quality auditors have substantial reputation capital and wealth at stake and will avoid auditing risky clients (Firth and Smith (1995)). Relating the fee to the client risk is one way of deterring clients with too high a risk. This would explain why the combination high-risk company - large auditor is sometimes not observed in reality.

In this perspective I can formulate the following hypothesis.

To limit the negative effects of their business risk, high-risk clients prefer large auditors to protect outsiders accepting higher fees. I can therefore expect a positive relationship between risk ratios and the size of the auditor. Especially the liquidity ratio gives an indication of the probability that a company goes bankrupt. This means that I expect that companies with a low liquidity ratio will use a B6- auditor to ensure their investors.

It is important to notice that insurance theory and signaling theory lead to conflicting predictions on how auditor size is related to client risk. Following the insurance theory I expect that companies with unfavorable financial ratios prefer B6-auditors to NB6-auditors, contrary to the signaling theory.

2.4. Economies of scale

Since large audit firms are able to spread the cost of development and support for specialized services, it is profitable for these firms to specialize in large and/or listed clients (Eichenseher and Danos (1981), Benston (1985), Pong and Whittington (1994), Johnston et al. (1995)). All studies report positive coefficients for their client size variable. Chow (1982) finds the expected sign for the influence of being listed on the stock exchange, while the result of Palmrose (1984) is not significant.

In the same vein it can be argued that firms belonging to a group of firms (be it national or multinational) involve more auditing complexities, leading to a preference for larger audit firms.

2.5. Referrals

The reasoning of all the theories on auditor choice mentioned in the preceding sections implicitly assumes that companies are completely free in their auditor choice. For multinational groups lack of information on local auditors, unity of control and production efficiencies often induces these companies to opt for a single, world wide, auditor. Since B6-firms have a broad network of affiliated offices and use standardized procedures in all these offices the choice of a B6-auditor is the most obvious decision. Branson and Breesch (1998) calculated that 75% of the Belgian daughter companies have the same auditor company as that of the mother company. In 63% of the cases a B6-auditor was chosen.

Therefore, I expect that companies with national or international links are more likely to choose a B6-auditor than independent firms.

Since Belgian companies have to specify their debts with and their claims on affiliated companies, it was straightforward to build a dummy variable that indicates whether the client company belongs to a group or not and to investigate the relationship between this dummy and the auditor choice.

3. The Belgian Context

The two most important Belgian accounting profession bodies are the Institute of Certified Public Accountants (IBR/IRB) founded by the law of the 22 of July 1953[4] and the Institute of Accountants (IDAC). The members of the IBR/IRE, which we will call auditors and which are the subject of this research, enjoy a legal monopoly in the certification of a number of financial statements.

In Belgium, an auditor, be it a physical person or a company, is appointed by the shareholders of the client company for a period of 3 years and is primarily responsible for the audit of the financial statements produced by management. Large[5] companies, companies that are required to have an industrial relations council and public companies are obliged to appoint a member of the Institute of Public Accountants to certify their statements.

The Belgian audit market is characterized by a specific structure: one third of the market is audited by a B6-auditor, one third by other audit companies and one third by auditors that are not affiliated with other auditors. This means that the B6/NB6-dichotomy is less clear than in other countries and that B6-companies endure significant competition of large Belgian, NB6 companies. For example in 1989 and 1990 the largest audit company in Belgium was a Belgian NB6-company (Weets and Jegers (1997)). This specific Belgian structure has encouraged me to build a B6/OFF/O-model in addition to the traditional B6/NB6-model and the model were the size of the audit company is measured by its clients' turnover.

4. Empirical model of auditor choice

The cost for changing auditors can make it rational for some companies to have an auditor with a quality level that is not optimal. Therefore, I confine myself in this paper to companies that choose a new auditor. However, I am not analyzing the reasons for auditor change but I only look at some characteristics that can determine the choice of the quality level of the new auditor. Clearly, I do take into account that the possibility that the change of auditor can be a reaction on changed circumstances or can precede the changes in certain characteristics of the company. However, in Belgium companies have, in theory, only every three year a possibility to change auditors. Therefore, the choice of a new auditor is analyzed by using explanatory variables 1, 2 and 3 years before the auditor change, in the year of the change and 1 and 2 years after the change.

I carefully examined the supply side of the audit market to be sure only real changes were taken into account (i.e. no changes because of audit firm mergers or because of auditors leaving one audit firm to affiliate with an other). Also, sometimes the 3 years tenure period is by-passed by temporarily appointing two auditors. I choose the moment the second auditor was appointed as the auditor change moment.

Based on the theories reviewed in section 2 the following model is tested for the Belgian audit market using three different dependent variables:

$$AUD_t = f(LNSIZE, SHARES, LEVERAGE, EMPL, GROUP, PROF, LIQUI)_{t+i}$$

$$\text{With } i=-3,-2,-1,0, 1, 2$$

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[4] Law of the 22nd of July 1953 concerning the foundation of the Institute of Certified Public Accountants, Official Gazette 02/09/1953.

[5] The criteria to determine whether a company is large or not are set by the law of the 17th of July 1975 and include threshold levels for total assets, sales and number of employees. A company is large when it has more than 100 employees, also it is categorised as large for the period 1989-1991 when more than one of the following criteria is exceeded: personnel: 50, sales 145 million BEF or total assets 70 million BEF. For the period 1992-1995 the criteria for sales and total assets were increased to, respectively, 200 million BEF and 100 million BEF (1 EURO = 40.3399 BEF].

Variable (expected sign)	Measurement
AUD_t	Quality level of the audit firm: - Dummy: B6 (1) or NB6 (0). - Continuous variable that measures the size of the auditor by the sum of the square roots of its clients' turnovers - Nominal variable that takes the values B6, OFF (NB6 with at least two CPAs) and O (auditors that work alone)
LNSIZE (+)	Natural logarithm of the book value of total assets.
SHARES (+)	Percentage bearer shares to total number of shares.
LEVERAGE (-)	Equity on total assets (book value).
EMPL (+)	Number of employees.
GROUP (+)	If the company filled in a value in the section 'links with affiliated companies and those in which the company participates', this dummy variable takes value 1.
PROF (+)	Return on total assets
LIQUI (-)	Current ratio.

Two explanatory variables are novel for this kind of research: the fraction of bearer shares and the measurement of links to affiliated and other related companies. Furthermore this is, to my knowledge, the first study where the NB6-group is split into offices and auditors that work alone.

5. Data collection and descriptive statistics

For this research data of the Belgian National Bank with the financial statements of 2000 of the most important Belgian companies are used. Because of the idiosyncrasy of the financial statements of insurance and financial companies and the fact that they have to appoint an auditor with special qualifications, I restricted the sample, like in previous research (e.g. Raghunandan and Rama (1999)), to industrial, trade and service companies.

The auditor in charge was found on the CD-ROMs of the Belgian National Bank. After eliminating outliers[6] by drawing the box-plot in SPSS, I have samples over the period from 909 to 961 companies. An auditor change is defined as a change in the name of the auditor <u>and</u> a change in the name of the audit company. By this strict definition we control for "false" switches due to mergers between audit firms and due changes in the audit firm they are affiliated to.

In table 1 the direction of the auditor changes is visualized. Approximately one third of the changes in the sample occurred within the B6-group. This could be an indication of the competition between these large audit firms. 104 clients choose a "larger"[7] audit company. Growth of the companies in the sample (I confined myself to companies for which data was available for the whole research period) and the increased importance of the auditor as an insurance can explain this tendency. 79 companies replaced their NB6-auditor with a B6-auditor.

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[6] Outliers are defined as values more than 1.5 box-lengths from 75th percentile in the SPSS manual (Norusis (1992)). We also performed the analyses for the whole sample without elimination of the outliers. No important differences were found. These results can be obtained from the author.

[7] We assume that B6-auditors are "larger" than OFF-auditors and that OFF-auditors are larger than O-auditors.

In table 1 we can also see that the three year tenure period creates "boom" years in auditor switching. The law applies from 1985: meaning that in 1988, 1991 and 1997 we should see more changes. 1991 was also the year of the big mergers that made the Big Six out of the Big Eight.

Table 1: Direction of the auditor group change						
	1989-1990	1990-1991	1991-1992	1992-1993	1993-1994	1989-1994
B6→B6	22	15	28	21	15	101
B6→OFF	4	2	6	4	4	20
B6→O	3	3	1	0	0	7
OFF→B6	10	8	17	16	2	53
OFF→OFF	7	10	7	3	3	30
OFF→O	5	9	3	0	0	17
O→B6	3	4	9	7	3	26
O→OFF	2	3	14	4	2	25
O→O	3	4	0	0	0	7
Total	59	58	85	55	29	286

Legend: B6: Big Six auditor
OFF: NB6-auditor that works in an office with at least two CPAs
O: CPA that works alone

6. Statistical analysis

The Mann-Whitney test is used as a univariate test. OLS- and logit regressions are used for multivariate analysis. I describe my results for the three dependent variables that measure audit quality. First the results of the so-called B6/NB6-model are described. In this model the dependent variable is a dummy that takes the value 1 when the audit client chooses a B6-auditor and 0 when a NB6-auditor was preferred. In the second model the dependent variable is a continuous variable that measures the size of the new auditor by the sum of the square roots of its clients' turnovers assuming that audit firm quality directly relates to audit firm size. And finally the B6/OFF/O model is used where the dependent variable is a nominal variable that takes the values B6, OFF (NB6 with at least two CPAs) and O (CPAs that work alone) depending on the audit firm group where the new auditor belongs to.

The three models look for significant financial characteristics of audit clients that influence the auditor choice 3, 2 and 1 year before the auditor switch, the year of the auditor switch and 1 and 2 years after the auditor switch. Notice that only the auditor choice is examined. When additionally analyzing the reasons for an auditor switch, a model in first differences of explanatory variables could be useful. This is not the case for the analysis of auditor choice.

6.1. B6/NB6-model

6.1.1. Univariate tests

According to the results of the Mann-Whitney test reported in table 2 there are only significant differences between B6- and NB6-clients for the variables SHARES and LIQUIDITY.

Table 2: Results of the Mann-Whitney test for differences between the clients with a new B6 and clients with a new NB6-auditor (p-values).						
	-3	-2	-1	0	+1	+2
LNSIZE	NS	NS	NS	NS	NS	NS
	(0.55)	(0.75)	(0.71)	(0.30)	(0.28)	(0.17)
SHARES	B6<NB6*	B6<NB6**	B6<NB6***	B6<NB6***	B6<NB6**	B6<NB6**
	(0.10)	(0.02)	(0.00)	(0.01)	(0.02)	(0.02)
LEVERAGE	NS	NS	NS	NS	NS	NS
	(0.99)	(0.89)	(0.20)	(0.16)	(0.58)	(0.80)
LIQUI	B6<NB6**	B6<NB6**	B6<NB6*	NS	B6<NB6*	B6<NB6*

	(0.03)	(0.03)	(0.06)	(0.80)	(0.06)	(0.06)
PROF	NS	NS	NS	NS	NS	NS
	(0.24)	(0.57)	(0.88)	(0.78)	(0.90)	(0.21)
EMPL	NS	NS	NS	NS	NS	NS
	(0.34)	(0.88)	(0.54)	(0.37)	(0.98)	(0.42)

Legend: -3,-2,-1,0,+1,+2,+3: 3 years before the change, 2 years before the change, 1 year before the change, year of the change, 1 year after the change and 2 years after the change;
LNSIZE: Natural logarithm of total assets, SHARES: Percentage bearer shares, LEVERAGE: Equity on total assets, LIQUI: Current ratio, PROF: Return on total assets EMPLOY: Number of employees;
B6>NB6: For the variable under study the mean rank of the new B6-clients is larger than the new NB6-clients
B6<NB6: For the variable under study the mean rank of the new B6-clients is lower than the new NB6-clients
* Mean rank significantly from 0 using the MW-test with α=0.10
** Mean rank differs significantly from 0 using the MW-test with α=0.05
*** Mean rank differs significantly from 0 using the MW-test with α=0.01

The analysis suggests that B6-clients have less bearer shares than NB6-clients. This is opposite to the expectations we formulated based on the agency theory. An extra analysis of the percentage bearer shares of group and non-group companies is reported in table 3 and indicates that the number of registered shares in non-group companies is very limited. Therefore, I adapted the multivariate model and restricted the variable SHARES to the percentage of bearer shares in group companies by multiplying SHARES with GROUP.

Table 2 also shows that the liquidity ratio of the B6-clients is smaller than that of the NB6-clients. This result can be explained using the insurance theory: companies with a bad liquidity ratio and thus a larger probability of going bankrupt, prefer high quality auditors to protect investors against the consequences of incorrect financial statements. Also, investors will be less concerned when the bad liquidity ratio is accompanied by a clean audit report signed by a B6-auditor than when it were signed by a NB6-auditor (assuming that B6-auditors have a larger probability of finding and reporting going concern problems).

Table 3: Number of group and non-group companies with registered shares .												
	-3		-2		-1		0		+1		+2	
	G	NG	G	NG	G	NG	G	NG	G	NG	G	NG
Number of companies with registered shares	40	4	50	7	53	13	52	8	48	6	44	4
Number of companies without registered shares	81	5	114	4	143	6	139	5	132	5	113	3
Total	121	9	164	11	196	19	191	13	180	11	157	7

Legend: -3,-2,-1,0,+1,+2,+3: 3 years before the change, 2 years before the change, 1 year before the change, year of the change, 1 year after the change and 2 years after the change
G: Companies that belong to a group of companies, NG: Companies that do not belong to a group.

6.1.2. Multivariate tests

The results of our logit analysis, reported in table 4, show that next to the variables SHARES*GROUP before and after the new auditor choice and LIQUIDITY in the years preceding the auditor switch, also the variables LEVERAGE (before the switch) and GROUP (before and after the switch) significantly influence the choice of the new auditor.

Table 4: Results of the Logit regressions (p-values) *Dependent variable is a dummy which is 1 when the new auditor belongs to a B6-auditfirm and 0 when the new auditor is a NB6-auditor.*						
	-3	-2	-1	0	+1	+2
CONSTANT	2.46	2.74	2.26	-1.83	0.62	-0.78
	(0.51)	(0.44)	(0.44)	(0.52)	(0.83)	(0.79)
LNSIZE	-0.11	-0.19	-0.20	0.01	-0.08	0.03
	(0.69)	(0.44)	(0.36)	(0.98)	(0.69)	(0.88)
LIQUI	-2.06***	-1.16**	-1.35***	-0.21	-0.68	-0.55
	(0.01)	(0.04)	(0.01)	(0.66)	(0.11)	(0.17)
PROFI	-3.64	-0.04	-0.69	-4.18	-0.48	3.41
	(0.39)	(0.99)	(0.82)	(0.17)	(0.88)	(0.38)
LEVERAGE	3.95**	0.85	2.98***	2.21**	1.23	-0.11
	(0.03)	(0.54)	(0.01)	(0.05)	(0.23)	(0.92)
EMPLOY	6.03×10^{-5}	0.6×10^{-3}	0.2×10^{-3}	0.4×10^{-3}	0.5×10^{-3}	0.001
	(0.91)	(0.30)	(0.76)	(0.53)	(0.48)	(0.21)
SHARES*GROUP	-0.67	-0.82**	-1.14***	-1.15***	-0.83**	-0.83**
	(0.15)	(0.03)	(0.00)	(0.00)	(0.02)	(0.04)
GROUP	1.88**	1.96***	2.35***	2.59***	1.77**	1.21
	(0.02)	(0.01)	(0.00)	(0.00)	(0.02)	(0.18)
-2 Log Likelihood	144	199	247	240	236	199
Goodness of fit	120	166	204	197	189	154
Cox and Snell R²	0.12	0.10	0.15	0.13	0.08	0.8
Nagelkerke R²	0.16	0.14	0.20	0.18	0.11	0.11
Number of observations	125	168	211	202	191	156

Legend: -3,-2,-1,0,+1,+2,+3: 3 years before the change, 2 years before the change, 1 year before the change, year of the change, 1 year after the change and 2 years after the change
LNSIZE: Natural logarithm of total assets, SHARES: Percentage bearer shares, LEVERAGE: Equity on total assets, LIQUI: Current ratio, PROF: Return on total assets EMPLOY: Number of employees;
* Coefficient differs significantly from 0 using the t-test with α=0.10
** Coefficient differs significantly from 0 using the t-test with α=0.05
*** Coefficient differs significantly from 0 using the t-test with α=0.01

The models where variables three years and one year before the change are used have the most coefficients that differ significantly form zero. Two years after the change only the coefficient of the SHARES*GROUP variable differs significantly from zero (α=0.05). Since, this variable does not tend to vary much over the years, this result is not surprising. This could imply that companies adapt the quality level of the auditor services to their financial situation and do not anticipate by changing auditors when they expect a change in the financial situation.

According to this analysis the "size" variables (i.e. EMPL en LNSIZE) and profitability have no significant influence on the choice of a new auditor. This result differs from earlier results where changing and non-changing audit clients from the same basic sample were taken into consideration.

Like in Simunic and Stein (1987) and Weets and Jegers (1999) I find that B6-clients have less debt to total assets than NB6-clients before the auditor switch. The results contradict the agency theory where a B6-auditor is more valuable in companies with a large proportion of

debt in their capital structure because they have a more mitigating effect on agency problems between managers/owners and providers of external financing. Simunic and Stein (1987) explain this by the possibility that an auditor is more important as a mechanism for reducing agency costs of external equity than for reducing the agency costs of debt.

The smaller liquidity ratio for B6-clients than for NB6-clients could mean that these companies could run into short term problems (as opposed to the better long-term position revealed by the leverage ratio) and need the B6-auditor to insure the users of their financial statements. However, if there are problems with the going concern assumptions of a company the auditor is obliged to make a qualification in his report. Since the number of audit qualifications is very limited in Belgium and B6-auditors have a larger probability of writing (going-concern) qualifications, I interpret this result as follows: companies with a liquidity ratio that could be wrongfully interpreted to reflect short-term financial difficulties insure their financial statement users by appointing a B6-auditor and signal that there is no financial distress problem by choosing an auditor with a larger probability of making going-concern qualifications in his report.

As expected, companies that are affiliated to a group prefer a B6-auditor. We cannot determine if this is due to scale effects or referrals from the results of the GROUP-variable. However, within the group companies the companies with relatively more registered shares are even more likely to choose a B6-auditor. This means for companies with strong group influence (measured by the percentage of registered shares) B6-auditors are preferred, possibly due to referrals.

6.2. Model with a continuous dependent variable.

For the model where the dependent variable, i.e. audit quality, is built by the sum of the square roots of the auditor's client's turnovers, we use OLS to analyze the determinants of the auditor choice. In this model it is assumed that the auditor size directly relates to the quality of its services. This assumption is not unrealistic for the Belgian market because the dichotomy B6/NB6 of the supply side of the audit market seems less clear than in other countries (Weets and Jegers (1997)).

Table 5: Results of the OLS-regressions (p-values) Dependent variable: Sum of the square root of the turnover of the clients of the new audit firm						
	-3	-2	-1	0	1	2
CONSTANT	36666*	32962	34043**	23329	19412	5419
	(0.10)	(0.12)	(0.05)	(0.15)	(0.27)	(0.77)
LNSIZE	-847	-1116	-1390	-816	-207	651
	(0.58)	(0.44)	(0.26)	(0.47)	(0.87)	(0.63)
LIQUI	-10539***	-8064**	-6752**	-2990	-2902	-921
	(0.01)	(0.02)	(0.02)	(0.27)	(0.26)	(0.72)
PROF	-9087	23577	3189	-22854	-1279	13523
	(0.71)	(0.25)	(0.85)	(0.19)	(0.49)	(0.59)
LEVERAGE	18427**	6448	12948**	13524**	12022**	4106
	(0.05)	(0.43)	(0.05)	(0.04)	(0.05)	(0.54)
EMPL	1.17	3.40	5.18	3.21	1.20	2.50
	(0.69)	(0.23)	(0.21)	(0.31)	(0.74)	(0.48)
SHARES*GROUP	-2594	-4815**	-7004***	-7815***	-6492***	-7069***
	(0.35)	(0.05)	(0.00)	(0.00)	(0.01)	(0.01)
GROUP	8329*	14664***	13949***	13654***	8819**	7734
	(0.08)	(0.00)	(0.00)	(0.00)	(0.05)	(0.18)
R^2	0.09	0.12	0.14	0.13	0.08	0.08
Adj R^2	0.03	0.09	0.11	0.10	0.04	0.04
F-statistic	1.63	3.24***	4.72***	4.18***	2.23**	1.82*
	(0.14)	(0.00)	(0.00)	(0.00)	(0.03)	(0.09)

Legend: -3,-2,-1,0,+1,+2,+3: 3 years before the change, 2 years before the change, 1 year before the change, year of the change, 1 year after the change and 2 years after the change.
LNSIZE: Natural logarithm of total assets, SHARES: Percentage bearer shares, LEVERAGE: Equity on total assets, LIQUI: Current ratio, PROF: Return on total assets EMPLOY: Number of employees;
* Coefficient differs significantly from 0 using the t-test with α=0.10
** Coefficient differs significantly from 0 using the t-test with α=0.05
*** Coefficient differs significantly from 0 using the t-test with α=0.01
T-tests are robust for heteroscedasticity.

The results of the OLS-analysis are reported in table 5. Again we see that the number of coefficients that differ from zero and the R^2 are largest in the model were financial information on the audit client before the auditor switch is used. This could mean that the choice of a new auditor is a result of a changed situation and does not precede a change in financial situation. Two years after the change there is only a significant correlation between SHARES and the choice of the new auditor. The analysis reveals that like for the B6/NB6-model the size of the audit client (measured by LNSIZE and EMPL) has no statistically significant influence on the choice of the size of the auditor. Next to that the same direction of the influence of LIQUIDITY, LEVERAGE, SHARES and GROUP as in the B6/NB6-model can be observed. These results sustain the insurance theory (clients with a large probability of going bankrupt prefer a B6-auditor to ensure their investors) and the presence of scale effects and/or referrals for clients belonging to a group of companies.

6.3. B6/OFF/O-model

Typical for the Belgian audit market is the fact that we have three groups of audit clients that are approximately equal in size: B6-clients, OFF-clients and O-clients (Weets and Jegers (1997)). Therefore it seems relevant to look at differences in financial characteristics between these three groups. Table 6 reports the number of B6-, OFF- and O-clients I could use for each explanatory model.

Table 7: Differences between the clients of the different auditor groups (B6/OFF/O- model) according to the Mann-Whitney test (p-values)

	-3 B6	-3 OFF	-2 B6	-2 OFF	-1 B6	-1 OFF	0 B6	0 OFF	+1 B6	+1 OFF	+2 B6	+2 OFF
SIZE												
OFF	NS (0.54)		NS (0.56)		NS (0.87)		NS (0.65)		NS (0.50)		NS (0.27)	
O	NS (0.95)	NS (0.86)	NS (0.60)	NS (0.40)	NS (0.60)	NS (0.65)	NS (0.15)	NS (0.27)	NS (0.23)	NS (0.41)	NS (0.28)	NS (0.74)
EMPLOYEES												
OFF	NS (0.43)		NS (0.99)		NS (0.81)		NS (0.97)		NS (0.61)		NS (0.96)	
O	NS (0.36)	NS (0.54)	NS (0.66)	NS (0.70)	<* (0.07)	<** (0.05)	<* (0.06)	<* (0.06)	NS (0.37)	NS (0.23)	NS (0.13)	NS (0.13)
BEARER SHARES												
OFF	>** (0.02)		>*** (0.01)		>*** (0.00)		NS (0.16)		NS (0.12)		>** (0.03)	
O	NS (0.19)	<* (0.08)	NS (0.66)	NS (0.43)	>*** (0.01)	NS (0.67)	>*** (0.00)	>* (0.06)	>** (0.02)	NS (0.31)	NS (0.16)	NS (0.79)
LEVERAGE												
OFF	NS (0.99)		NS (0.79)		NS (0.20)		<* (0.09)		NS (0.47)		NS (0.80)	
O	NS (0.91)	NS (0.94)	NS (0.29)	NS (0.32)	NS (0.57)	NS (0.88)	NS (0.85)	NS (0.38)	NS (0.94)	NS (0.76)	NS (0.90)	NS (0.99)
LIQUI												
OFF	>** (0.02)		>*** (0.01)		>* (0.07)		NS (0.83)		>* (0.06)		NS (0.16)	
O	NS (0.98)	NS (0.45)	NS (0.51)	<** (0.02)	NS (0.29)	NS (0.71)	NS (0.37)	NS (0.34)	NS (0.40)	NS (0.87)	<* (0.10)	NS (0.65)
PROFI												
OFF	NS (0.11)		NS (0.25)		NS (0.83)		NS (0.32)		NS (0.68)		NS (0.20)	
O	NS (0.14)	<** (0.04)	NS (0.22)	NS (0.15)	NS (0.97)	NS (0.76)	NS (0.28)	NS (0.12)	NS (0.65)	NS (0.52)	NS (0.56)	NS (0.71)

Legend: -3,-2,-1,0,+1,+2,+3: 3 years before the change, 2 years before the change, 1 year before the change, year of the change, 1 year after the change and 2 years after the change;

LNSIZE: Natural logarithm of total assets, SHARES: Percentage bearer shares, LEVERAGE: Equity on total assets, LIQUI: Current ratio, PROF: Return on total assets EMPLOY: Number of employees;

B6: B6-clients, OFF: Clients of Audit firms with at least 2 CPA's,O: Clients of auditors that work alone

>: Auditor group of the row scores significantly higher on the explanatory variable than the group of the column (e. g. The number of bearer shares of OFF-clients is in average larger than the number of bearer shares of the B6-clients.

<: Auditor group of the row scores significantly lower on the explanatory variable than the group of the column (e. g. O-clients are less liquid than OFF-clients).

NS: Not significant.

* Mean rank significantly from 0 using the MW-test with α=0.10

** Mean rank differs significantly from 0 using the MW-test with α=0.05

*** Mean rank differs significantly from 0 using the MW-test with α=0.01

Table 6: Number of B6-, OFF- and O-clients						
	-3	-2	-1	0	+1	+2
B6-clients	88	114	132	126	120	90
OFF-clients	39	50	60	55	52	43
O-clients	3	11	23	23	19	24
Total	130	175	215	204	191	157

Table 7 reports the results of Mann-Whitney-tests that compare the mean rank of the explanatory variables for B6-, Off- and O-clients. In Table 8, 9 and 10 I report the results of three logit analysis: comparison of OFF-clients with B6-clients, comparison of O-clients with B6-clients and O-clients with Off-clients.

Table 8: Results of the LOGIT-regressions OFF versus B6 (p-values)						
	-3	-2	-1	0	+1	+2
CONSTANT	-2.74	-3.28	-2.16	1.35	-1.84	0.39
	(0.48)	(0.40)	(0.51)	(0.67)	(0.56)	(0.91)
LNSIZE	0.12	0.19	0.16	0.03	0.15	-0.01
	(0.66)	(0.48)	(0.51)	(0.91)	(0.51)	(0.98)
LIQUI	2.11***	1.42**	1.37**	0.11	0.83*	0.32
	(0.01)	(0.02)	(0.02)	(0.84)	(0.08)	(0.51)
PROF	5.24	0.30	0.54	1.97	-1.26	-4.15
	(0.24)	(0.94)	(0.87)	(0.55)	(0.71)	(0.37)
LEVERAGE	-4.20**	-0.78	-3.21**	-2.04*	-1.20	0.31
	(0.03)	(0.60)	(0.02)	(0.10)	(0.28)	(0.79)
EMPL	$-0.2\ 10^{-3}$	-0.0006	$0.3\ 10^{-3}$	$-9.8\ 10^{-5}$	$-0.5\ 10^{-3}$	$-0.7\ 10^{-3}$
	(0.74)	(0.31)	(0.68)	(0.87)	(0.56)	(0.38)
SHARES*GROUP	0.82*	0.96**	1.14***	0.84**	0.65*	0.87**
	(0.08)	(0.02)	(0.00)	(0.04)	(0.10)	(0.05)
GROUP	-2.04***	-2.07***	-2.32***	-2.68***	-1.94***	-1.50
	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.12)
Log Likelihood	135	174	206	199	197	155
Goodness of fit	115	156	183	175	170	131
Cox and Snell R²	0.14	0.12	0.14	0.11	0.08	0.08
Nagelkerke R²	0.19	0.17	0.20	0.15	0.11	0.11
Number of observations	122	158	189	179	172	132

Legend: -3,-2,-1,0,+1,+2,+3: 3 years before the change, 2 years before the change, 1 year before the change, year of the change, 1 year after the change and 2 years after the change

LNSIZE: Natural logarithm of total assets, SHARES: Percentage bearer shares, LEVERAGE: Equity on total assets, LIQUI: Current ratio, PROF: Return on total assets EMPLOY: Number of employees;

* Coefficient differs significantly from 0 using the t-test with α=0.10

** Coefficient differs significantly from 0 using the t-test with α=0.05

*** Coefficient differs significantly from 0 using the t-test with α=0.01

A positive sign means that the auditor group that is first mentioned has an increased probability of being chosen compared to the second group. A negative sign means that the probability that the client chooses an auditor from the second group increases.

Tables 7 and 8 show that clients with lower liquidity ratio's before the auditor switch prefer a B6-auditor to an OFF-auditor, as predicted by the insurance theory and confirming the results of the preceding sections. Also, based on these tables we can see that audit clients belonging to a group of companies and with less strong group relations (measured by the percentage of bearer shares) prefer an OFF-auditor to a B6-auditor. Table 8 also reveals that companies with less debt prefer B6-auditors to OFF-auditors. All these results are similar to the results of section 6.1. and section 6.2. and can be interpreted in the context of the insurance theory, the signaling theory

and the presence of scale effects and/or referrals. I have no evidence for the auditor playing a role in mitigating agency problems that cannot be explained otherwise.

There is no significant relationship between the leverage ratio and the O/B6-choice (table 7 and table 9). According to the logit analysis profitable companies prefer O-auditors to B6-auditors in the year of the change. The results for bearer shares and group affiliation are similar to the preceding results. Using the univariate tests we see that B6-clients have more employees one year before the switch and in the year of the switch than O-clients the logit analysis does not confirm this result.

Table 9: Results of the LOGIT-regressions O versus B6 (p-values)						
	-3	-2	-1	0	+1	+2
CONSTANT	-23.19	-0.35	-5.31	0.43	0.18	0.17
	(1.00)	(0.96)	(0.28)	(0.93)	(0.97)	(0.96)
LNSIZE	0.14	-0.02	0.33	-0.04	-0.13	-0.14
	(0.88)	(0.97)	(0.36)	(0.91)	(0.67)	(0.62)
LIQUI	2.69	-0.30	1.48*	0.16	0.33	1.12**
	(0.30)	(0.79)	(0.09)	(0.83)	(0.66)	(0.06)
PROF	-33.14	-2.06	-0.62	10.72**	4.24	-1.35
	(0.19)	(0.78)	(0.91)	(0.04)	(0.41)	(0.81)
LEVERAGE	-1.60	-1.49	-2.01	-1.58	-0.72	0.01
	(0.76)	(0.60)	(0.30)	(0.38)	(0.70)	(1.00)
EMPL	-0.0003	-0.0003	-0.003	-0.002	-0.0005	-0.001
	(0.76)	(0.77)	(0.14)	(0.31)	(0.67)	(0.31)
SHARES*GROUP	-1410	0.18	0.97*	1.75***	1.18**	0.90
	(0.90)	(0.82)	(0.08)	(0.00)	(0.03)	(0.11)
GROUP	16.79	-1.15	-2.29**	-2.45***	-0.93	-0.85
	(1.00)	(0.37)	(0.02)	(0.05)	(0.48)	(0.54)
Log Likelihood	20	67	111	106	103	108
Goodness of fit	73	118	143	139	140	119
Cox and Snell R²	0.07	0.02	0.09	0.14	0.06	0.08
Nagelkerke R²	0.27	0.04	0.17	0.23	0.10	0.12
Number of observations	86	120	152	148	139	114

Legend: -3,-2,-1,0,+1,+2,+3: 3 years before the change, 2 years before the change, 1 year before the change, year of the change, 1 year after the change and 2 years after the change

LNSIZE: Natural logarithm of total assets, SHARES: Percentage bearer shares, LEVERAGE: Equity on total assets, LIQUI: Current ratio, PROF: Return on total assets EMPLOY: Number of employees;

* Coefficient differs significantly from 0 using the t-test with $\alpha=0.10$

** Coefficient differs significantly from 0 using the t-test with $\alpha=0.05$

*** Coefficient differs significantly from 0 using the t-test with $\alpha=0.01$

A positive sign means that the auditor group that is first mentioned has an increased probability of being chosen compared to the second group. A negative sign means that the probability that the client chooses an auditor from the second group increases.

Statistical analysis for the OFF/O choice should be carefully interpreted due to the very limited number of O-clients in our sample which makes the logit analysis for t=-3 even impossible. Table 7 reveals that O-clients are less profitable than OFF-clients three years before the auditor switch using the MW-test, which could be evidence for the signaling theory. I could not find any significant differences in financial characteristics between O- and OFF clients when using the logit analysis (see table 10).

Table 10: Results of the LOGIT-regressions O versus OFF (p-values)						
	-3	-2	-1	0	+1	+2
CONSTANT		7.69	-0.64	-0.99	5.69	0.57
		(0.37)	(0.89)	(0.84)	(0.34)	(0.91)
LNSIZE		-0.50	0.01	-0.07	-0.55	-0.22
		(0.41)	(0.97)	(0.84)	(0.20)	(0.56)
LIQUI		-2.31	-0.26	0.42	-0.61	0.90
		(0.17)	(0.78)	(0.64)	(0.43)	(0.17)
PROF		-1.95	-1.99	10.10	8.92	6.15
		(0.80)	(0.70)	(0.11)	(0.14)	(0.35)
LEVERAGE		0.15	2.01	-1.85	-1.35	-2.26
		(0.97)	(0.42)	(0.47)	(0.49)	(0.27)
EMPL		$0.8 \ 10^{-3}$	-0.004*	-0.003	$4.03 \ 10^{-5}$	-0.002
		(0.63)	(0.06)	(0.17)	(0.98)	(0.31)
SHARES*GROUP		-0.71	-029	0.98	0.79	-0.20
		(0.44)	(0.65)	(0.12)	(0.25)	(0.75)
GROUP		0.70	0.23	0.62	1.21	1.71
		(0.59)	(0.78)	(0.52)	(0.30)	(0.20)
Log Likelihood		48	89	83	75	81
Goodness of fit		48	78	72	69	64
Cox and Snell R²		0.09	0.07	0.13	0.10	0.08
Nagelkerke R²		0.15	0.10	0.19	0.14	0.10
Number of observations	42	58	81	77	71	66

Legend: -3,-2,-1,0,+1,+2,+3: 3 years before the change, 2 years before the change, 1 year before the change, year of the change, 1 year after the change and 2 years after the change

LNSIZE: Natural logarithm of total assets, SHARES: Percentage bearer shares, LEVERAGE: Equity on total assets, LIQUI: Current ratio, PROF: Return on total assets EMPLOY: Number of employees;

* Coefficient differs significantly from 0 using the t-test with α=0.10

** Coefficient differs significantly from 0 using the t-test with α=0.05

*** Coefficient differs significantly from 0 using the t-test with α=0.01

A positive sign means that the auditor group that is first mentioned has an increased probability of being chosen compared to the second group. A negative sign means that the probability that the client chooses an auditor from the second group increases.

7. Summary and conclusion

In order to remedy confusing observations when relating auditor characteristics to client characteristics due to the cost of auditor change, I consider only auditor clients that change auditors to analyze the determinants of auditor choice. 5 mechanisms are used to predict auditor choice. According to the agency theory an auditor helps to reduce agency costs and therefore predicts that companies with large agency cost will choose a high quality auditor to reduce these costs. In the signaling theory the auditor is seen as a mean to signal future cash flows to external financiers of the company and expects companies with favorable expectations to choose a B6-auditor to reveal these expectations. According to the insurance theory companies in financial distress will use a B6-auditor to insure investors form losses due to material mistakes in the financial statements. B6-auditors will diminish the probability of these mistakes <u>and</u> have more wealth to reimburse victims of their mistakes.

Next to these theories the presence of scale economies and referrals probably induces large companies and group companies to choose a B6-auditor. Table 11 summarizes the proxies I used to measure agency costs, expected future cash flows and financial distress.

Table 11: Summary of results			
Theory	Proxy	Expected Sign	Result
Agency theory	Percentage of bearer shares	+	-
	Equity/Total Assets	-	+
	Number of Employees	+	NS
Signaling theory	Profitability	+	NS
Insurance theory	Liquidity	-	-
Presence of scale economies	Affiliation to a group	+	+
	LNSIZE	+	NS
	Number of employees	+	NS
Presence of referrals	Affiliation to a group	+	+

The results of my analysis can in each case be explained by other theories than the agency theory. Therefore I conclude that we have no evidence for the auditor in Belgium playing a role as a in mitigating agency costs. Also I have no evidence of auditor characteristics being used as a signal for expected cash flows. The limited number of listed companies in our sample can explain this latter result.

Financial distress, measured by the liquidity ratio, makes companies choose for a B6-auditor rather than a NB6-auditor. Two explanations were given: companies with a bad liquidity ratio insure their financial statement users by appointing a B6-auditor and signal that there is no financial distress problem by choosing an auditor with a larger probability of making going-concern qualifications in his report. This means that we have evidence for the use of the auditor as insurance for possible losses due to material mistakes in the financial statements.

Our analysis also reveals that companies that are affiliated to a group prefer a B6-auditor. We can however not distinguish the role of scale effects and referrals in this. Within the sample of group companies the companies with more registered shares, probably the companies were the group influence is stronger, have an extra tendency to prefer B6-auditors. Here I think the referrals play an important role.

Next to the fact that this paper is one of the first to try to combine all these possible explanations for auditor choice in one testable model, a contribution of this paper is also the fact that next to the traditional B6/NB6-dichtomy which is used in other research to distinguish between high- and low quality auditors, the specific characteristics of the Belgian audit market made me add two analysis: one where audit quality was proxied by a continuous size variable and one where three audit quality levels were used. The analysis shows that these models have also explanatory power in Belgium and that further improvement of audit quality measures could be an interesting topic for further research.

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Appendix: Results of the logit-analysis where change in explanatory variables is used to explain auditor choice

Explanatory variable	Estimated coefficient (p-value)
Constant	-0.40
	(0.60)
Dlnsize	$-6.2 \ 10^{-8}$
	(0.65)
Dliqui	0.12
	(0.84)
Dlever	1.37
	(0.41)
Dprof	-5.20
	(0.14)
Demploy	$0.5 \ 10^{-3}$
	(0.83)
Dshares	0.63
	(0.20)
GROUP	1.43*
	(0.07)
-2 log likelihood	131
Goodness-of-fit	116
Cox and Snell R²	0.08
Nagelkerke R²	0.11
Number of observations	114

Legend: * Coefficient differs significantly from 0 using the t-test with $\alpha=0.10$

Dlnsize: Difference between the natural logarithm of total assets 3 years before the auditor change and one year after the change.

Dliqui: Difference between the current ratio 3 years before the auditor change and one year after the change

Dproi: Difference between return on total assets 3 years before the auditor change and one year after the change

Dleverage: Difference between equity on total assets 3 years before the auditor change and one year after the change

Demploy: Difference between the number of employees 3 years before the auditor change and one year after the change

Dshares: Difference between the percentage bearer shares 3 years before the auditor change and one year after the change

GROUP: affiliation to a group of companies 3 years before the auditor change