

Association Between Independent Auditor Fees and Firm Value: A Study of Brazilian Public Companies

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This article investigates the relationship between fees for audit and non-audit services with Tobin's Q. Using a sample of Brazilian public companies in the period from 2009 to 2011, we estimate the association between Tobin's Q and the auditors' remuneration scaled by total assets. Additionally, to strengthen the conclusions, we present a second model with the remuneration of the auditors in absolute terms. The results suggest a significant relationship between Tobin's Q and audit and non-audit fees, positive and negative, respectively. Specifically, increases in audit fees and non-audit fees respectively increase and decrease the Tobin's Q of the audited company. The results of this study have important implications for those interested in good corporate governance practices. Managers and board members concerned with value creation, when engaging independent auditors, should carefully evaluate the remuneration and nature of services provided.

Keywords: audit fees, non-audit fees, Tobin's Q

Introduction

This article investigates the relationship between audit and non-audit fees and the ratio between the audited company's market value and book value (Tobin's Q). In practical terms, we seek to identify the effect of the remuneration of the independent auditor, be it for audit or consulting services, on an important indicator of value creation. Tobin's Q has been used in various academic studies, notably in the field of finance, as a proxy to assess the capacity of firms to create value.

The main objectives of corporate governance are to improve the company's performance, increase its value, lower the cost of capital, and in the final analysis, assure survival. The mechanism to achieve these goals is by regulating the relationships among controlling and minority shareholders, the board of directors, executive board, and independent auditor.

Before making decisions, investors might consider all the relevant information available to the market, including the amount paid by companies for audit and consulting services rendered by independent auditors. How does the market react to the two expenses? What is the effect of these fees on the value-generation indicators of the client company? These questions are important to meet the main objectives of corporate governance, warranting their examination in detail.

The international literature has confirmed that the total amounts paid to independent auditors for audit and non-audit services are connected to the performance of companies (Hay, Knechel, & Wong, 2006; Stanley, 2011). However, there has been little investigation of this relationship in the Brazilian market. Therefore, to shed light on a topic not yet examined in the Brazilian setting, here we study the empirical relationship between audit and non-audit fees and the Tobin's Q of 300 largest firms listed on the São Paulo Stock, Commodities, and Futures Exchange (BM&F Bovespa) between 2009 and 2011. More specifically, we analyze whether high audit fees are taken by the market as an indicator of heightened risk, causing a fall in Tobin's Q, and whether the fees paid for consulting services aggregate value and thus raise Tobin's Q.

This study is in line with others that have investigated the determinants of firms' performance. The empirical model developed includes, as variables, the fees for audit and consulting services, total assets, capital intensity, and sales growth. Robust empirical tests provide evidence of a significant relationship between performance on the one hand and audit and non-audit fees on the other hand.

The results show that increases in the audit fees and non-audit fees raise and lower Tobin's Q, respectively. In other words, for the Brazilian firms studied, there is a positive impact of audit fees on Tobin's Q, while there is a negative impact of consulting fees on the Q metric.

This study was made possible by the issuance of Instruction 480 in 2009 by the Brazilian Securities Commission (CVM), making it mandatory for listed companies to publish the annual amounts paid to the independent auditor, separated into the fees for audit services and consulting services.

The rest of this article is organized as follows. In the next section, we summarize the relevant literature, while in the third section, we explain the methodology and describe the database, variables, and specification of the models. The fourth section presents and discusses the descriptive statistics, the correlations, and estimations of the model and the robustness tests. The fifth section presents our conclusions and final considerations.

Literature Review

This section starts with a review of the main determinants of the quality of audit in Brazil, which are later included as independent variables in the model. Then, we discuss some important contributions from the literature to pricing of auditing, to understand how audit fees and consulting fees are related to the companies' performance.

Determinants of Audit Quality in Brazil

The 1980s brought the first studies involving the role of auditing in Brazil (Hallak & Silva, 2012). With respect to the services provided, the financial independence of audit firms affects the final result, which can be more or less biased depending on how free the auditor is to scrutinize the company's accounting practices (Braunbeck, 2010). Audit firms that do not have dependence compete in offering differentiated services that aggregate value for the clients, and consequently they charge higher fees, for which they render better services (Francis, 1984). In general, the audit fees can be used to measure the quality of the service provided (Hallak & Silva, 2012). Therefore, it is not enough for the auditor just to have expertise; the auditor must also have independence (DeAngelo, 1981; Watts & Zimmerman, 1986).

Dependence of an auditor occurs when a single client provides a substantial portion of its revenues. In such a context, the evidence shows that there will be a greater chance that the auditor will overlook significant

errors or inconsistencies in the financial statements, out of fear of losing that client (Larcker & Richardson, 2004).

Studies show that one of the main elements of auditor independence is related to the receipt of consulting fees by audit firms (Frankel, Johnson, & Nelson, 2002). Therefore, the quality of auditing services in Brazil is lower when there are agency problems (Braunbeck, 2010).

The auditor's independence makes the external auditing service work as a corporate governance mechanism, with the aim of resolving agency problems and information asymmetry between stockholders and managers (Jensen & Meckling, 1976). Agency conflicts are mitigated when the external auditor has sufficient independence to produce information that closely reflects the true financial situation of the client company (Hallak & Silva, 2012).

According to Bortolon, Sarlo Neto, and Santos (2013), good corporate governance practices affect audit costs, because they require more complex and extensive analyses, but they can also mean a reduction of risk to the auditor, reducing the cost of the service. In turn, the contracting of non-audit services can lead to a loss of independence, because the auditor will be more hesitant to blow the whistle on dodgy accounting practices for fear of losing the consulting revenue.

Audit Fees and the Performance of Companies

Various articles have addressed the pricing of audit fees (Moutinho, Cerqueira, & Brandao, 2012). Since Simunic (1980) developed a model to determine the process by which audit fees are set, other empirical studies have been published with the aim of defining the pricing of audit fees. Here, our aim is to model audit and non-audit fees in function of other variables, as done by Francis (1984), specifically by using Tobin's Q, capital intensity, and sales growth.

The fees charged for auditing reflect the time spent to render the service (Moutinho et al., 2012), which is related with the size of the client company, because larger companies have more data to examine (Hallak & Silva, 2012). Therefore, the size of the client company impacts the price paid for audit services (Palmrose, 1986).

Furthermore, auditors will typically spend more time (all else being equal) providing auditing and consulting services to highly leveraged companies, due to the greater risk of insolvency. Therefore, both these fees will typically be higher in companies with large debt loads (Hallak & Silva, 2012; Zaman, Hudaib, & Haniffa, 2011).

In relation to consulting fees charged by independent audit firms, Ashbaugh, Lafond, and Mayhew (2003) showed that there is a positive relationship between financial leverage and consulting expenses.

There are many studies with different focuses, models, and variables relating to the determinants of companies' spending on audit and consulting fees, but the results have been widely disparate, as stated by Dickins, Higgs, and Skantz (2008). This variability can be explained to a certain extent by the differing characteristics of each country or region and the time period examined (Hay et al., 2006).

The objective is to investigate the relationship between auditors' remuneration for audit and non-audit services and the value of Tobin's Q.

Methodology

Database

This study can be characterized as descriptive, since we describe the data gathered from the website of the

CVM (<http://www.cvm.gov.br/>) and the Economatica database. According to Barros and Lehfeld (2000, p. 70), descriptive research “seeks to discover how often a phenomenon occurs, its nature, characteristics, causes, relations, and connections with other phenomena”.

The population consists of 300 largest companies listed on the BM&F Bovespa according to market value. Because data on the fees paid by listed companies for audit and consulting services only had to be disclosed starting in 2009, this study is limited to the period from 2009 to 2011. We obtained this information for each company from the corresponding Reference Form (RF), Section 2—“Independent Auditors”, posted at the CVM’s website. On the form, these fees are broken down into those for audit and non-audit services.

From the Economatica database, we obtained information on: (1) market value; (2) current assets; (3) long-term assets; (4) total assets; (5) current liabilities; (6) long-term liabilities; (7) stockholders’ equity; (8) liabilities + equity; (9) gross revenue; (10) net revenue; (11) net income; (12) earnings before income tax (EBIT); and (13) earnings before income tax, depreciation, and amortization (EBITDA). These data were then used to calculate the variables, which we organized into panels to accompany the variations for each company during the 3-year study period.

Variables

Table 1 presents the definitions of the variables and data sources. Most of these variables are based on the financial information obtained from the Economatica database. There is evidence that audit firms determine their fees according to the financial condition of the client (Choi, C. F. Kim, J. B. Kim, & Zang, 2010; Simunic, 1980).

To measure how audit and non-audit fees affect the performance of companies, we employed a set of value and performance measures that have been used by other authors: Tobin’s Q (Bebchuk, Cohen, & Ferrell, 2009; Bhagat & Bolton, 2008); total assets (Lee, 2009); capital intensity (Lee, 2009); sales growth (Lee, 2009); and leverage (Bebchuk et al., 2009).

Table 1

Definitions of the Dependent Variables

Dependent variable	Definition	Source
Tobin’s Q	The ratio between the firm’s market value and book value of equity. Tobin’s Q = Market value/book value	Economatica
Audit fees	The amount paid to the independent audit firm for auditing the financial statements.	CVM
Non-audit fees	The amount paid to the independent audit firm for additional consulting services.	CVM
Assets	The total assets of the audited company.	Economatica
Capital intensity	The ratio of fixed assets to net revenue. Capital intensity = Total assets/net revenue	Economatica
Sales growth	The ratio between net revenue in the current year and that in the previous year.	Economatica
Leverage	The ratio between long-term liabilities and total assets.	Economatica

Notes. This table presents the definitions of the variables and the sources of the data. The sample period is from 2009 to 2011.

Econometric Models

Model 1—Remuneration of the audit firm scaled by total assets of the client company. To test the association between Tobin’s Q and audit fees, we estimated the following equation, using panel data:

$$\begin{aligned} \text{Tobin's } Q = & \beta_0 + \beta_1(\text{Audit fees} / \text{Assets}) + \beta_2(\text{Non-audit fees} / \text{Assets}) + \\ & \beta_3 \ln(\text{Assets}) + \beta_4 \text{Capital intensity} + \beta_5 \text{Sales growth} + \beta_6 \text{Leverage} + \varepsilon \end{aligned} \quad (1)$$

where β_0 indicates the intercept, ε is the error term, and the other variables are defined in Table 1. We estimated the model by least squares (LS) and autoregression (AR).

In this model, both the audit and non-audit fees are scaled by total assets of the client company and the total assets are in natural logarithm.

The hypothesis is confirmed if there is a significant negative relationship between the audit fees and a positive relationship between non-audit fees and the performance metric Tobin's Q.

The theoretical basis is that the high audit fees scaled by client size can be due to the greater effort involved when risks are higher, consequently lowering Tobin's Q (negative sign). On the other hand, high consulting fees supposedly aggregate value to the company, thus having a positive effect on Tobin's Q (positive sign).

Model 2—Remuneration of the audit firm in absolute terms. We formulated a second model to test the robustness of the results. The hypotheses are the same as before, except that the audit and non-audit fees are not scaled by assets. The following equation was estimated, using panel data:

$$\begin{aligned} \text{Tobin's } Q = & \beta_0 + \beta_1 \ln(\text{Audit fees}) + \beta_2 \ln(\text{Non-audit fees}) + \beta_3 \ln(\text{Assets}) \\ & + \beta_4 \text{Capital intensity} + \beta_5 \text{Sales growth} + \beta_6 \text{Leverage} + \varepsilon \end{aligned} \quad (2)$$

where β_0 indicates the intercept, ε represents the error term, and the other variables are defined in Table 1. Again, we estimated the model by LS and AR.

In this model, we used the natural logarithm of audit fees and non-audit fees, and also of total assets, as in the previous model.

Analysis of the Results

In this section, we present the results. First, we analyze the data by descriptive statistics and correlation matrices of the variables. Then, we report and analyze the results, before drawing conclusions.

Descriptive Statistics

For a proper econometric analysis of the model described by Equation (1), we had to discard some observations, so that only 377 firm-years remained. The descriptive statistics of the variables included in the equation are shown in Table 2. In the descriptive statistics of Equation (1), the fees paid to audit firms for audit and non-audit services (both scaled by assets) are 0.305480 and 0.100170, respectively (see Table 2). This indicates that fees in average terms are high when compared to the client company's assets. Technology companies, in particular, usually pay heavy fees for both services in relation to their total asset value. In the sample studied, the overall Tobin's Q is 2.854028 for the 377 companies in the sample, and the natural logarithm of assets is 8.335226.

Correlation Matrix of the Variables

The results of examining the correlations of the variables are shown in Table 3. The correlation between Tobin's Q and the remuneration of the audit firms is weak. In fact, the correlations between Tobin's Q and all the variables are nearly zero. The correlation of Tobin's Q is negative both with audit fees and consulting fees.

Table 2

Descriptive Statistics of Equation (1)

Variable	Mean	Median	Std. dev.	Kurtosis	Jarque-Bera	Observation
Tobin's Q	2.854028	1.660211	6.414991	90.66550	124,626.9	377
Audit fees/assets	0.305480	0.195600	0.389475	34.99823	17,402.87	377
Non-audit fees/assets	0.100170	0.028155	0.257995	56.88646	48,176.12	377
Ln(Assets)	8.335226	8.254529	1.530620	3.923240	13.44466	377
Capital intensity	6.409815	1.462609	36.77749	147.4800	336,090.9	377
Sales growth	1.158290	1.111111	1.175610	96.61735	142,234.1	377
Leverage	0.275542	0.301378	0.172864	9.113123	633.4677	377

Notes. This table presents the descriptive statistics of the variables included in Equation (1). The variables are defined in Table 1, and the sample period is from 2009 to 2011.

Table 3

Correlation Matrix of Equation (1)

Variable	Tobin's Q	Audit fees/assets	Non-audit fees/assets	Ln(Assets)	Capital intensity	Sales growth	Leverage
Tobin's Q		-0.00532	-0.120307	0.051739	-0.006410	0.073400	-0.005530
Audit fees/assets	-0.00532		0.415815	-0.537323	-0.053316	0.094960	0.186816
Non-audit fees/assets	-0.120307	0.415815		-0.359224	-0.019240	-0.063557	0.183337
Ln(Assets)	0.051739	-0.537323	-0.359224		0.045488	0.000026	-0.12536
Capital intensity	-0.006410	-0.053316	-0.019240	0.045488		-0.007623	-0.002812
Sales growth	0.073400	0.094960	-0.063557	0.000026	-0.007623		-0.039660
Leverage	-0.005530	0.186816	0.183337	-0.122536	-0.002812	-0.039660	

Model 1—Remuneration of the Audit Firm Scaled by Total Assets of the Client Company

The results of the first model are presented in Table 4. The correlation matrix demonstrates that there is no strong correlation between Tobin's Q and the audit firm's remuneration. However, the regression performed with Model 1 indicates that companies that pay more to their auditors for audit services tend to have a higher Tobin's Q.

Table 4

Equation (1)—Results of the Estimation

Independent variable	Tobin's Q			
	Coefficient	Std. error	t-statistic	Prob.
Intercept	0.470555	2.229132	0.211093	0.83229
Audit fees/assets	8.884492	0.980346	9.062606	0.0000
Non-audit fees/assets	-8.424868	1.296851	-6.496402	0.0000
Ln(Assets)	0.058244	0.244573	0.238148	0.8119
Capital intensity	-0.000766	0.007879	-0.097194	0.9226
Sales growth	-0.021719	0.254995	-0.085173	0.9322
Leverage	0.210282	1.743157	0.120633	0.9040
R-squared	0.249015		Log likelihood	-1,181.165
Adj. R-squared	0.236836		F-statistic	20.44767
S.E. of regression	5.604086		Prob.(F-statistic)	0.000000
Sum squared resid.	11,620.14			

Note. Total panel (unbalanced) observations: 377.

The results of the estimation show that the remuneration of the audit firm influences Tobin's Q, i.e., the market value in relation to book value. The more companies pay their auditors for audit services, the greater is the impact on the ratio between the market value and book value, which is indirectly the stock value, bringing a positive relationship.

In other words, the market tends to look more kindly on companies that spend relatively more on audit services, pricing their shares higher. In contrast, high relative spending on non-audit services has a strongly negative effect on the stock price.

Model 2—Remuneration of the Audit Firm in Absolute Terms

To provide more robustness to the conclusions, we analyzed Model 2, considering now the audit and non-audit fees in absolute terms, according to Equation (2) (see Table 5). The results are consistent with those found for Equation (1).

Therefore, the most important result is that the more companies spend on audit services, the higher their Tobin's Q tends to be, meaning a higher market value in relation to book value. On the other hand, paying the auditor to perform consulting services has a significantly negative impact on Tobin's Q. In general, the purpose of Equation (2) was to test the robustness of each explanatory variable of the model.

Table 5

Equation (2)—Results of the Estimation

Independent variable	Tobin's Q			
	Coefficient	Std. error	<i>t</i> -statistic	Prob.
Intercept	6.102742	1.964000	3.107303	0.0020
Ln(Audit fees)	1.473669	0.423401	3.480550	0.0006
Ln(Non-audit fees)	0.526335	0.159050	-3.309251	0.0010
Ln(Assets)	-1.315308	0.328622	-4.002491	0.0001
Capital intensity	-0.001495	0.008692	-0.171949	0.8636
Sales growth	0.439124	0.275121	1.596110	0.1113
Leverage	-1.007220	1.874978	-0.537190	0.5915
<i>R</i> -squared	0.091333		Log likelihood	-1,211.581
Adj. <i>R</i> -squared	0.076518		<i>F</i> -statistic	6.164799
S.E. of regression	6.180288		Prob.(<i>F</i> -statistic)	0.000004
Sum squared resid.	14,056.11			

Note. Total panel (unbalanced) observations: 375.

Conclusions

A huge number of articles in the business literature have investigated the performance of companies, including those examining the relationship of the fees paid to the independent auditors for audit and non-audit services with financial characteristics of the client companies, such as business risk. Here, we sought to identify aspects that influence the market value and book value of companies, indirectly capturing factors that create value.

In particular, our aim was to verify whether high fees for audit services signal risk, thus lowering Tobin's Q, and whether high fees for non-audit services are viewed by the market as aggregating value, and hence have a positive effect on Tobin's Q. For this purpose, we used fixed-effect models with a sample of 300 companies listed on the BM&F Bovespa in the period from 2009 to 2011 (reduced by the restrictions imposed from

estimating the proposed models). The equations included the following explanatory variables: audit fees, non-audit fees, total assets, capital intensity, sales growth, and leverage.

The results provide evidence of a significant relationship between Tobin's Q and audit fees, but with the opposite sign expected in the first hypothesis. Specifically, when companies spend more on audit services, this has a positive effect on the ratio between market value and book value. In other words, the more the companies in our sample spent on audit services, the higher their Tobin's Q tended to be during the sample period. In contrast, there was a significantly negative effect of spending on non-audit services rendered by the independent auditor, producing a lower Tobin's Q, running counter to the second hypothesis.

The results of this study have important implications for those who are oriented to good corporate governance practices. To create value, managers and members of the board of directors, when deciding on the scope of the services rendered by the independent audit firm, should carefully consider the remuneration and nature of the services contracted. Apparently, the money spent on audit services is compensated with higher Tobin's Q values, probably due to the lower perceived risk that the numbers presented in the financial statements do not accurately reflect the companies' real situation. However, the situation is different regarding non-audit services, where we found a negative relationship with Tobin's Q, indicating that the market does not perceive these services as aggregating value.

The results here were of course limited by the restrictions in the database, and also to the Brazilian setting. The fact that information on payments to the independent auditor for audit and consulting services only covers three years, as well as the fact that the control variables required dropping many observations from the sample, naturally compromised the consistency of the coefficients estimated. Furthermore, the simplified approach used to calculate Tobin's Q brings the chances of measurement errors that could have biased the conclusions. Despite these methodological limitations, we believe that the results are informative and bring important implications for those involved with corporate governance of modern companies.

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