Determinants of Audit Fees for French Quoted Firms

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Abstract.

This paper seeks to contribute to the international literature by researching the factors influencing audit fees in France. The French case is specific because the law requires a joint auditing process involving two separate auditors for firms that publish consolidated financial statements. Since 2003, the disclosure of audit fees has been compulsory in France, but numerous firms decided to voluntarily disclose their audit fees for the year 2002. We attempt here to elucidate the amount spent on audit fees in 2002 in a sample of 127 French (non-financial) firms. The main finding is that audit fees depend on firm size, firm risk, and the presence of two of the Big Four firms. When two Big Four firms audit company accounts, the fees charged (adjusted for company size) are significantly lower in comparison with those paid in the other cases. These results appear not to have been influenced by the share of fees paid by the companies to the main auditor.

Keywords. Audit fees – France – Joint auditors – Firm size – Firm risk – Big Four

Introduction

The beginning of this new millenium has seen the discovery of a variety of accounting frauds in the United States (Enron, Worldcom) and in Europe (Parmalat). Following these events, several steps were taken to reinforce the quality of corporate governance, including external audit practices and independence. In the United States, the *Sarbanes-Oxley* law (SOX) requires compliance with rules and operational procedures for audit firms through the implementation of the *Public Company Accounting Oversight Board*, which put an end to the 'self-regulation' of the profession. In addition, SOX imposes a rotation of the leading partners assigned to public companies every five years, and confirms the necessity of separating auditing activities from consulting services.

Following these scandals, various measures have also been undertaken in France since 2003, including mandatory publication of audit fees by public companies. This disclosure forces companies to distinguish, on the one hand, between fees paid for legally-required audits and those paid for other services (*non audit fees*), and on the other hand, the specific fees paid to each of the two independent auditors. In fact, French national law requires that companies appoint two separate auditors if they publish consolidated financial statements. Such a development in terms of state regulation provides a novel opportunity to analyze the fees paid to French auditors. Since data on this subject was previously unavailable, no prior study on this subject has been carried out in France[1], whereas in English-speaking countries research on the determinants of audit fees has been copious since Simunic's pioneering work published in 1980 (Hay et al., 2004; Cobbin, 2002).

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[1] Piot's (2004) study is an exception, in the sense that he was able to gain access to information on work hours and fees charged by one local auditor to 92 clients; specifically, small-to-medium-sized private French companies.

This empirical study, based on audit fees paid in 2002 (because several public firms anticipated the legal changes and published voluntary audit fees in 2002) by 127 non-financial public French firms, seeks to contribute to international literature on the subject. The two main objectives are as follows. First, we analyze whether specific 'traditional' determinants of audit fees, as previously identified in other countries, prove to be relevant in France. Second, we analyze whether the joint audit process, and especially the presence of one or two Big Four firms, has an influence on the amount and the division of audit fees.

This research project's main finding is that audit fees depend on firm size, firm risk, and the presence of two of the Big Four firms: when two Big Four firms audit company accounts, the fees charged (adjusted for company size) are significantly lower in comparison with those paid in the other cases. These results appear not to have been influenced by the share of fees paid by the companies to the main auditor. In other words, whether the distribution of fees is very uneven (e.g. a company pays 90% of the total amount billed to the main auditor) or not (e.g. fees are split evenly fifty-fifty between the two), the total audit fee is not affected

This article is organized as follows: the next section looks at the main institutional aspects of the audit process in France. The research methodology is presented in the third section, and in the fourth section the results are discussed. In the fifth and final section we provide a summary of our findings before concluding.

French Auditors: Institutional Aspects

In France, auditors (officially referred to as 'commissaires aux comptes') are often perceived as a branch of the central government, acting in favour of corporate regulation (Baker et al.

2001). This is because the auditor's status has historically been stipulated by law, even if professional rules are laid down in collaboration with players from outside the profession, such as the 'Autorité des Marchés Financiers' (AMF is equivalent to the SEC in the U.S.) for public firms. This form of state intervention explains, at least partially, certain auditing practices in France.

French Audit Practices

The three main topics in this section are the practice of the joint audit, the strict separation between legal audits and other services, and the means for determining the fees charged for the auditing services performed.

First of all, the notion of two compulsory auditing officers appears for the first time in 1966, when new legislation introduces such requirements for certain companies. A law passed on March 1, 1984 maintains this obligation only for companies required to publish consolidated financial statements. The law has evolved into a professional standard of practice requiring a balanced division of the work of both auditors in order to ensure an efficient dual control mechanism. The joint audit is intented to provide a twofold perspective on company accounts, and as a result, should reinforce auditor independence.

Second, there is a strict separation between the legal audit and consulting services. This principle of separation was underscored much earlier and much more strictly than in English-speaking countries (Mikol and Standish, 1998) or in the international laws in effect at that time. The new 2003 Financial Security Law has rigorously re-emphasized this principle of separation in France, which remains a standard reference in the world. SOX still allows

auditors to provide legal and financial services, and British business ethics law does not forbid auditors from providing management or taxation consulting services for their audit clients

A third factor to bear in mind in terms of French audit practices relates to the establishment of fees. In contrast with English-speaking countries, as well as with most other European countries, fees are not freely negotiated between a firm and its auditor, since the law itself provides a pay scale for the services provided. Up until 1985, the law in effect proposed a calculation based on the total sum of the company's audited assets. This method was replaced in 1985 by the validation of an hourly-based budget, based on a previously-negotiated hourly rate, and corresponding to a predetermined work program. This scale remains flexible in application and does not apply to all companies (particularly public ones and large companies). For such companies, the French legislation highlights the inherent risks of *underevaluating* the services provided - which could impact the quality of the audit - as well as the risk of *overevaluating* such services, which could put the auditor's actual independence at risk.

Publication of Audit Fees in France

In the past it was impossible to conduct an in-depth study on the determinants of audit fees in France, given the absence of available data. In fact, in their annual reports, French companies did not have to disclose the total amount of fees paid to auditors. The 2003 Law on Financial Security required the mandatory disclosure of the total spent on audit fees to shareholders, although this information was not necessarily published in the annual report.

In comparison, ruling number 2002-06 of the *Commission des Opérations de Bourse*[2] requires publicly-held companies, including their French and foreign branches, to list in their brochures the total amount of 'auditing' and 'non-auditing' fees paid to each auditor (or other professionals belonging to the same network) starting January 1, 2003. Within the audit fees, the COB differentiates between the services for 'auditing, certification, inspecting individual and consolidated accounts' and 'other related assignments' such as specific, non-recurring assignments (the auditing of forecasted accounts, specific certification procedures, etc.). The other non-auditing services[3] must distinguish between assignments on legal, financial, or social levels, those linked to information technology, to internal auditing procedures, or other areas.

Whereas the requirement for the disclosure of audit fees was not applicable until 2003, its practice had already been strongly encouraged by the European Commission in its May 2002 recommendations on the independence of auditors. A perusal of different annual reports from 2002 reveals that a number of firms had anticipated and integrated this legal development through the voluntary publication of audit fee information.

Methodology

Before presenting the results of this empirical study, the sample selection process is discussed as well as the main variables used to construct our model namely, the audit fees, the main

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[2] The *Commission des Opérations de Bourse* (COB) is the former name of the *AMF*.

[3] French law does not permit "other services", but in practice auditors created special entities to bypass this law. That is why the COB requires companies to list the total amount of 'non-auditing' fees paid to each "auditor network" (for example, the combination of the two following entities "XXX Audit" and "XXX Consulting" gives the "XXX network". Companies have to disclose the total amount of fees paid to this "XXX network").

determinants ('traditional' ones and others more specifically adapted to the joint audit practice in France) and the control variables.

The Sample

Sample selection occurred in two stages. First we collected all fiscal year 2002[4] annual reports for French companies listed on the SBF 250 index in 2002[5]. Almost all of the annual reports were available either on the AMF's website or on each company's website. In the second stage a number of firms were eliminated: (1) foreign firms that might be subject to other auditing regulations and practices; (2) companies which had not voluntarily communicated their audit fees in the annual report; (3) financial firms, particularly banks and insurance companies, due to the nature of their balance sheets and profit and loss accounts. There were 127 industrial and commercial firms that voluntarily disclosed their audit fees in 2002.

Audit Fees

The variable (FEES) is the amount of audit fees paid by French firms to their auditors. The auditors certify the firm's consolidated accounts. The authorities regulating stock-market activity require that "the fees paid to each auditor be presented separately in the recapitulative table" (AMF, Avis n°2002-06). The information provided pinpoints the fees paid during a given fiscal year on a company-by-company basis. The information related to the fees paid to auditors are provided in Table 1 which reveals the following four points.

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[4] When we began this study (in January 2004), there were a large number of annual reports of French firms for the accounting year 2002.
[5] This index consists of the 250 publicly-held companies with the highest stock market capitalization. However, some smaller firms belonging to the information technology sector (code 9 in the Euronext classification) were added later in order to build a sample large enough to allow us to control for the impact that the sector itself has on audit fees.

[INSERT TABLE 1]

- For the 127 French companies in our sample, audit fees averaged 4.45 million Euros. There is, however, a broad disparity in fees, since for half of these companies the total spent amounts to less than 1.38 million Euros.

- Of these 127 companies, 109 of them hired two auditors - thus meeting the French legal requirement in this realm - and 18 companies voluntarily hired a third auditor over the course of 2002. The total amount spent on fees does not differ between these two groups (4.47 against 4.37 million Euros), and yet the fees spent vary to a greater degree among the firms with two auditors.

- Among the 109 companies with two auditors, 29 of them worked with two 'Big Four' auditing firms, 70 opted for the presence of a 'local' firm alongside a Big Four, and 10 did not use a Big Four at all. The total paid in fees differs according to the configuration chosen. It is higher when two Big Four firms work jointly (7.69 million Euros on average) in comparison with the case where only one of the two is a Big Four firm (3.64 million Euros) and those having no Big Four firm (0.87 million Euros).

- The difference in fees paid among these three subgroups is closely linked to the size of the company audited, with the larger ones more often requesting audit work from a Big Four firm. If one therefore relates audit fees to the total company assets, the aforementioned disparities diminish accordingly. "Relative" fees paid by firms are higher on average in those firms hiring one Big Four auditor only (1.35 million Euros in Fees for 1 billion Euros in assets on average) in comparison with fees paid by companies hiring the services of two Big Four auditors (0.73 million Euros in fees for 1 billion Euros in assets on average) or those with no Big Four auditor (1.02 million Euros for 1 billion in assets).

As suggested in most studies in English speaking countries (Hay et al., 2004; Cobbin, 2002), the size of the auditing firm plays a significant role in the total amount of fees paid for the audits performed.

We now will attempt to better understand the determinants of French audit fees distinguishing between 'traditional' economic determinants as identified in the prior literature and the specific factors related to the French audit environment.

"Traditional" Determinants

"Traditional" determinants are the explanatory variables described in the prior international literature, summarized by Cobbin (2002) and Hay et. al. (2004). Given the extremely high number of determinants identified, we select the most common economic factors that significantly explain audit fees in the prior literature.

Size of Audited Company

Since the pioneering publication of Simunic (1980) on this subject as well as in other international studies, company size appears to be the central explanatory feature when studying audit fees. This result is rather intuitive, since auditors' fees are paid according to the amount of time spent completing a given job. By and large, the bigger companies are involved in a greater number of transactions that necessarily require longer hours for an auditor to inspect. Consequently, the positive correlation between the size of the audited company and the fees paid to the auditors can be explained by the higher number of hours billed. This finding is robust regardless of the explanatory variable used to measure company size (based on either the balance sheets or on the profit and loss accounts), even if authors

generally favour total assets, mainly because the auditing process itself may be influenced by inspection of the company's balance sheet (Simunic, 1980).

We have selected also total company assets for fiscal year 2002. Table 2 indicates an average amount of total assests of 10.25 billion Euros with, however, a high disparity between the 127 firms in our sample, since total assets of half of the companies were below 1.83 billion Euros.

[INSERT TABLE 2]

Risks Associated with the Audited Company

On the basis of prior international research on this topic, we anticipate a positive influence of the audited company's risk on the audit fees charged. While we are aware that there is no consensus on the classification of risks, we can nevertheless distinguish in this study between "exogenous dimensions " of risk (i.e. activity sector) and inherent ones or "risks linked to the audited firm itself " (nature of assets, company growth, financial situation).

Sector of Activity

Several sectors of activity have been the focus of past studies. For example, Anderson and Zeghal (1994) demonstrated that large transportation, communication, or utilities companies enjoy significantly lower audit rates than firms in other sectors. Other authors (for example, Simunic, 1980) contend that the service or financial sectors are less complex for the auditing process than the manufacturing sector.

For this study, we sought to isolate high-growth sectors in which the auditing procedures are assumed to evolve more steadily than in more mature sectors. Among the sectors examined,

the Information Technology sector (code 9 in Euronext nomenclature) emerges as one with the highest growth. Our sectorial measurement scale (INDUS) is a dichotomous variable equal to 1 if the company is part of the information technology sector and equal to 0 in the opposite case. Of the 127 sample companies, 28 belong to the IT sector.

The Nature of the Audited Assets

We expected to find a positive correlation between the nature of a company's assets, which present inherent risk factors, and the fees charged for the audit. In previous studies, this variable allowed researchers to measure companies' complexity, and turned out to be useful in illustrating how audit fees are determined (Cobbin, 2002; Hay et al., 2004). The retained measure (REC+INV/ASSETS) is " Receivables + Inventories / Total assets" ratio, since receivables and inventories constitute risk categories whose evaluation is complex and requires more in-depth inspection (physical observation, etc.) as well as relatively stronger involvement on the part of the most experienced and expensive auditors. For the 127 companies of our sample group, we observe that this ratio is near 50% (see Table 2)

Company Growth

Growth is an additional factor to be taken into account in order to understand the determinants of audit fees. We expected that high-growth firms would generate a greater degree of complexity and greater risks for the auditing firms. In fact, the auditing procedures must be significantly adjusted to reflect the amount of company transactions, which in turn increases the risk of not detecting potential anomalies in company accounts. The audited company's growth is also assessed to explain audit fees. We have selected one variable (GROWTH) which corresponds to the variation of company turnover during the past three years. For the

127 sample firms, the average growth is 61% over the three-year period, but great disparities

exist between companies with the median growth rate being only 38% (see Table 2).

Company's Financial Situation

The company's financial situation, namely the risk of failure, presents a potentially significant

element to be considered by auditors due to the legal proceedings that could eventually result

in the case of bankruptcy and the considerable losses that this could produce. Anderson and

Zeghal (1994) as well as Pong and Whittington (1994) argue that the risks associated with

determining legal liability are greater in the case of the audited company's failure. An

additional dimension of the risk of failure which is often cited in the literature is linked to the

audited company's ability to pay. The auditor is tempted to bill his or her services at a higher

rate when a company is experiencing difficulties due to the risk of non-payment of fees: this

amounts to a form of "coverage". This argument appears particularly appropriate in France,

where the existence of a 'super-privileged' system favouring the State and salaried

employees, as well as the presence of 'higher priority' debtors (such as banks which hold

various guarantees) make the case of non-payment of audit fees highly probable in the case of

a client's failure. Finally, the auditor in France is also required to give notification if he or she

observes factors which could compromise a company's going concern. This legally required

procedure also leads to an additional workload which, understandably, is included in the final

bill for the audit services provided to a potentially problematic company.

Consequently, the first variable is concerned with total company debt, thus enabling an

assessment of the audited company's insolvency risk (SOLV). This variable, which we

anticipate as one holding a positive relationship with the audit fees, is equal to total liabilities

divided by stockholders' equity[6]. For the companies in our sample, the average solvency ratio is nearly 328% (see Table 2).

The second financially-related variable that we consider is that of the return on equity (ROE), measured as the relationship between a company's net profits and its shareholders' equity (each company of our sample has positive equity). In France, the use of financial performance measures such as EVA and MVA, in the last decade, justifies the introduction of this ratio in our model[7]. In fact, research shows that certain managers tend to be more inclined to manipulate company accounts in order to avoid being made redundant. The revelation of such 'earnings management', and the fact that company auditors failed to sound a warning alarm, can lead to the downfall of the auditor's reputation (Chan et al., 1993; Firth, 1997). In such a case, the loss of auditor income is also foreseeable. We consider this risk to be higher when the company's financial performance is weak; in other words when there has been no (or little) value created for shareholders. We further anticipate a negative relationship between the return on equity variable (ROE) and audit fees, since a decrease in profitability is synonymous with an increase in the risk of account manipulation. For the companies in our sample, this return-on-equity variable is at 6% on average, but the median is close to 9%, which indicates the existence of some negative returns.

Determinants Arising from French Joint Audit Practice

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[6] The solvency ratio is favoured over that of liquidity because it more effectively interprets the probability of a company's continuation. In fact, a company will (always) have short-term refinancing possibilities if bankers judge it to be solvent, even if its liquidity ratio is weak. In addition, the solvency ratio is less sensitive to sector-oriented factors than is the liquidity ratio.
[7] It would be more interesting to use analysts forecasts, but such information does not exist for many companies in our sample.

In order to learn whether or not specific French factors influence audit fees, we have taken into account two different aspects linked to the distinctiveness of the joint audit practice, namely, the distribution of fees between auditors and the number of Big Four firms involved.

Distribution of Fees Between Auditors

The first dimension considered for our analysis of the joint audit in France is the distribution of fees between the two auditors. First, we anticipate a negative relationship between the audit fees and the fraction of fees paid to the main audit firm (in other words, the auditor who receives the highest total amount paid), since the acquisition of a larger share of the work could, all things considered, be connected to the fact that it charges lower fees for its auditing services. In other words, the lower the audit fees charged for services rendered, the more likely a client company is to give that firm a more significant share of its auditing activity. This implies a lowering of audit fees on the whole.

Second, it is equally possible to advance an alternative hypothesis, linked to the fact that companies may assign a more significant share of an audit to the firm that offers services of higher 'quality', and which, consequently, leads to the selection of the higher-priced auditor. This 'quality of signature' argument would lead us to postulate that the relation between audit fees and the fraction of audit fees received is thus positive.

Table 3 provides more precise information on the distribution of audit fees for the 109 companies which worked with two auditors. Table 3 reveals that:

[INSERT TABLE 3]

- The distribution of fees is more equitable when two "Big Four" firms audit one company jointly (29 cases), or when two 'local' firms audit one company together (10 cases). In the latter example, the main auditor receives approximately two-thirds of the audit fees.

- Whenever the company hires one auditor from a Big Four firm (70 cases) the distribution is uneven, to the benefit of the Big Four firm. Thus in 58 out of 70 cases, the Big Four firm is the main auditor and it receives around 80 % of the audit fees earned. In the 12 other cases, the Big Four firm was nevertheless able to negotiate around 40% of the total fees.

- This disparity between the Big Four firms and the local audit companies is more noticeable in certain Big Four examples. More particularly, in the eight cases where Deloitte Touche Tohmatsu audited a company alongside a local audit firm, it appears that this particular Big Four never received the minority share.

Representation of the 'Big Four' in the Joint Audit Team

International literature on the subject generally considers the fees paid to the Big Four (or Big Five, Big Six, etc., according to the study period) to be significantly higher ('Big Fee Premium'). On the one hand, the 'quality' of the audit carried out by the Big Four is considered to be superior due to the assumed higher competency levels and the presence of a greater pledge to preserve its reputation (De Angelo 1981). On the other hand, the financial resources of the Big Four are much greater than that of the other firms and, consequently, in the case of a client firm's bankruptcy, investors/shareholders would be more willing to sue a Big Four firm in order to recover a portion of their investment ("deep pocket policy"). In anticipation of an increase in such forms of litigation, the Big Four firms would bill higher fees and these additional costs correspond therefore to the sum of an 'insurance premium' against future legal proceedings. Basing our reasoning on this notion, we develop the hypothesis that the fees paid by French companies are higher in accordance with the number

of Big Four firms that compose their joint audit team (with significance decreasing correspondingly for companies using the services of either two, one, or none of the Big Four).

An alternative hypothesis can nevertheless be developed, namely the idea that the situation of one of these Big Four is more 'uncomfortable' in France whenever it audits alongside a 'local' auditing firm for two main reasons. Firstly, the total skills brought to the table are (presumably) lesser in this specific case than in that where two Big Four firms audit the same company. Therefore, the risk of non-detection of fraud or accounting errors is greater. Secondly, in the case of legal proceedings following a company's bankruptcy, even if such cases are less common in France than in the U.S., it is highly probable that investors would turn first to the Big Four firm in attempting to recover a part of their investment. This is simply due to the relatively weaker financial position of local firms.[8] If two Big Four firms audit the company, it is more likely that the investors will sue both auditors, hence favouring a more balanced allocation of the litigation risks. This argument has led us to suggest the following hypothesis: audit fees should be higher in companies where only one Big Four firm is involved in the joint audit, as well as in those where no Big Four firm is involved.

In order to test these two hypotheses, we define the two following variables, BIG2 and BIG1, which are dichotomous, each one being equal to 1 if the company is audited by 2 or 1 of the

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[8] In fact, when there are several auditing officers, the principle holds that the responsibility of each firm remains that of the individual. However, bringing only one of the auditors into question has remained a theoretical exercise, since they both establish one common report and are reputed to both have the same opinion, which means that they would have, in the end, both committed the same errors. In addition, subscription to professional insurance by each of the auditors in proportion to the risks run (3 different levels of insurance according to the size of the job/firm, with the highest costing up to an additional 15,500 Euros) limits the financial losses of audit firms in the case of litigation against them by the client firm's shareholders in the case of bankruptcy.

Big Four, respectively, and equal to 0 in the case to the contrary (i.e., if there is no Big Four firm auditing the company) [9].

Table 4 shows the distribution of fees by auditor type for the 218 audit assignments carried out by auditors in the 109 companies which had two auditors. Three central observations can be drawn from Table 4:

[INSERT TABLE 4]

- The Big Four hold 128 audit assignments out of 218 (58.7% of the cases) and local firms hold 41.3% of the total number of assignments. A lesser presence of the Big Four in France in comparison with other countries, particularly the U.S. and U.K., is noted. Nevertheless, the total audit fees billed by these firms amounts to over 412 million Euros of 487 million Euros charged overall—in other words, nearly 85% of the fees. There is hence a disparity between the number of assignments carried out by the Big Four and the percentage of fees paid.

- Of the 128 audit assignments awarded to the Big Four, Ernst & Young is the main player in France, with 45.3% of the audits of the largest publicly-held companies. The three other of the Big Four have acquired similar percentages of the auditing work available. This disparity can be explained by Ernst & Young's obtaining Arthur Andersen's existing French network of client firms in 2002. In terms of audit fees, it appears that those paid by companies to the Big Four are rather similar, with the exception of KPMG, which received significantly lower fees (on average 1.6 million Euros less than its competitors).

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[9] We have likewise selected the variable '3AUDIT' to characterize the three-auditor situation. Since this case remains more of an exception than the rule, and since we are primarily interested in the *two-auditor* joint audit, we do not give in any detail the set-up of the 'triple' auditor scenario.

- Of the 90 assignments held by local auditors, the two leading firms on the French market, RSM Salustro Reydel and Mazars & Guérard, have 12 audit assignments each; in other words more than one-fourth of all 'locally' assigned audits are held between the two of them[10]. We should note, however, that the fees paid to RSM Salustro Reydel are close to those paid to the Big Four (with the exception of KPMG), averaging 3.2 million Euros. This is not the case for Mazard & Guérard, earning 1.7 million Euros on average. Lastly, the fees paid to the other 'local' auditing firms are significantly lower, totalling an average of 0.2 million Euros.

Control Variables

In order to carry out this study and to refine our model's quality, we deemed it necessary to introduce two additional variables which have been developed in the literature: the billing for consulting services rendered by the auditing firm and the client's year end.

Non Audit Fees

Revenues earned from consulting activities (NA-FEES)[11] can be related to a firm's legal, taxation, or social sectors (for example during client firms' merger-acquisitions), as well as to consulting on information systems (for example adding an ERP unit).

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[10] These results are consistent with the figures given in the official publication « La Profession Comptable » for 2002 (number 242, March 2003) in reference to the Auditing and Consulting activities of the following : Ernst and Young (520 M€), PWC (340), KPMG (250), DTT (217), followed by Mazars & Guérard (120) and RSM (98), and finally the other firms, of which the most significant, Grant Thornton, does not exceed 38 M€ in turnover.

[11] In certain countries the total consulting fees can reach significant amounts, representing a large portion of such firms' revenues. For example in the U.K. Ezzamel et al. (1996) estimate that these fees matched nearly 90 % of the total amount charged for auditing fees among publicly-held companies in 1992-93. This tendency has indeed progressively diminished with the increased separation between auditing and consulting enacted through new legislation and regulation.

Beyond the fundamental question of auditors' jeopardizing their independence when paid for services not linked to a purely auditing activity, consulting activities may have implications in terms of billing for audit services as well. The relationship between audit fees (FEES) and non-audit fees (NA-FEES) can be assessed according to two different perspectives.

On the one hand, an increase in competition in the audit services market led to considerable reductions in the fees routinely charged for auditing (Maher et al., 1992). Diversification towards more 'lucrative' services provides one of the conditions for audit firms' survival, enabling them to at least maintain a generally comfortable level of profit margins (Read and Tomczyk, 1992; Barkess and Simnett, 1994). Firms billing their clients for other services can likewise offer less expensive auditing services, insofar as they recover profits lost in auditing through the other services provided. On the other hand, certain authors contend that the offering of parallel services enables "knowledge convergences" susceptible to helping auditors save time spent on the assignment[12]. The resulting cost savings can be used to reduce the audit fees where the competition is much tougher (Firth, 1997).

In the final analysis, both of these arguments indicate that consulting activities may reduce the fees charged for auditing activities. The results in Table 4 indicate that, in a number of French firms, 'non-audit' fees were billed to several companies. This is despite the fact that the *compatibility* between such competing interests in international audit firms' networks, and the professional rules of auditing has been at the heart of the debate in studies carried out by different French government-mandated working groups since 1992. Even if the notion of 'company internal service networks' did not come into legal effect until the enactment of the 2003 Law on Financial Security, the conclusions of those commissions have nevertheless

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[12] The SEC's opinion (ASR #264) acknowledges in fact that taxation consulting enables broad-scale savings in terms of audit fees paid (Chung et Kallapur, 2003).

supported the existence of such competing networks, but they have also underscored, among others, the necessity of transparency and an absolute respect of auditor independence.

From now on, services that can be provided by the audit firm's internal network are clearly covered by the law: other services can be rendered by this network to the entity audited only when they correspond to "tasks directly linked to the audit assignment". All other services are unauthorized for the network unless they are provided to a supervised entity, or one that supervises the entity audited, and to the extent that this does not affect auditor independence[13]. Likewise, the total amount of fees and charges for other services authorized by the network must not exceed the total amount of audit fees billed to the company.

Our research indicates that the total amount of non-audit fees billed exceeds 117 million Euros, representing over 20% of the audit fees. In almost 80% of the cases the Big Four billed 'non-audit' fees to the French companies they audited. Conversely, the billing of 'non-audit' fees by 'local' auditors is much less frequent (around 18% of the cases) and the amounts at stake are relatively low in relation to audit fees charged (around 2%).

Practices within the Big Four lead to significant differences - for example, for Price Waterhouse Coopers, the share of 'Non Audit Fees' appears extremely high, representing 70% of audit fees. Such differences may be due to the strategies aimed at separating the auditing and consulting branches, whose intensity and speed have differed among the Big Four's international service networks. For PWC this separation did not come into effect until 2002, with the creation of *PW Consulting* and the transfer of legal and fiscal activities to

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[13] This last, less stringent limitation must still be defined by professional standards but should exclude the following services : accounts maintenance, evaluations, managerial decisions, services paid by a commission, dispute settlements, financial engineering, certain corporate finance operations, legal, financial, fiscal, or legal services, and recruitment.

Landwell. Such factors are therefore not reflected in this study. For KPMG the separation of the consulting branch occurred in 2001, and the creation of a distinct legal and fiscal branch (*Fidal*) came into effect in early 2002. Deloitte long expressed its wish to not separate the different branches and yet finally consented to do so in 2004 with the creation of *INEUM* for consulting work and *TAT* for its legal services. Lastly, in the case of Ernst & Young things are different. Arthur Andersen's consulting branch, for example, had long been transferred to *Accenture*, whereas for Ernst & Young's own activities, the separation of activities does not rely on separate structures but rather on exercising client choice on an assignment-by-assignment basis.

Date for Entity's Year End

The year end date has also been selected as an explanatory variable in certain studies because it appears susceptible to influencing the levels of audit fees charged. It can be expected - to the extent that a majority of companies close their accounts on the same date (December 31 in France) - that an audit firm would bill *less* for an assignment with other year end dates. This is due to the fact that such a factor represents, for the auditor, better opportunities in terms of time and organization. The variable selected (YE31DEC) is dichotomous and equal to 1 if the company does not close its accounts on December 31 and equal to 0 if it does. We note that 107 companies in our sample have a year end of 31 December.

Table 5 summarizes the variables in our explanatory model, their potential effects on the audit fees and the measurements selected.

[INSERT TABLE 5]

Results

To check whether the previously defined central explanatory factors are relevant or not to the French case, we run regressions similar to Simunic (1980). First, we run a regression of firm size (expressed in billions of euros) on the audit fees (expressed in millions of Euros) and second, we run regressions of all explanatory variables on the audit fees.

Incidence of Size on Audit Fees

Simunic (1980) highlights the significant impact of company size on audit fees. This result has been corroborated time and again. We performed the same linear regression for our 127 sample firms using the log of the two variables from our model. We obtained the following results:

$$Ln(Fees) = 0.005 + 0.678 . \ln(Assets)$$

$$t = 0.088 \qquad t = 24.249 ***$$

$$R^2 = 0.82 \qquad N = 127 \text{ observations}$$

These results are similar to those obtained by Simunic (1980) in his study of U.S. publicly-held companies. In our case, the size of the company audited is a highly significant explanatory factor (with R^2 equal to 82 %) of the auditing fees in France. Likewise, a similar result is obtained if the regressions are performed on 'gross' data, in other words, if no logarithmic transformation is performed on two of the model's variables. For the other models tested, we shall therefore use the AUDIT FEES/ASSETS variable to carry out our various regressions[14].

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[14] Several other regressions performed, but not presented, show that the use of a size-related variable (Assets) in the models produces serious problems of multicolinearity.

Impact of other Explanatory Variables on Fees

Two different results, as highlighted in the correlation matrix (see Appendix) merit discussion before turning our attention to the regressions. First, audit fees increase with the level of company risk, since the three variables INDUS, (REC+INV)/ASSETS, and GROWTH are positively and significantly correlated with audit fees (adjusted for company size). Second, the presence of two of the "Big Four" for the joint audit has a negative impact on audit fees, *contrary* to our anticipation that fees should be higher when two Big Four firms audit the accounts (due to a 'premium' linked to the quality of a superior audit or of the greater financial resources of the Big Four).

[INSERT TABLE 6]

The results from the six linear regressions, presented in Table 6, enable us to examine further these determinants.

- The first model tested (I) is a 'traditional' one that does not take into account the specific French feature, namely the presence of two (or three) auditors.

- The two following models (II and III) aim to examine whether or not the inclusion of variables to capture the French feature of joint auditors leads to improvements in explanatory power. Model (II) is based on the 127 sample firms and seeks to underscore the existence of a difference in fees charged in the case of three auditors working on the joint audit. This model is introduced to provide information only, since we have focused here on the firms working with two auditors. We have thus introduced a specific, dichotomous variable (3AUDIT) which is equal to 1 if the firm hired the services of three auditors and equal to 0 if not. Model

(III) only examines the 109 firms which hired two auditors and seeks to confirm whether or not the presence of two of the Big Four influences the total audit fees charged.

- The fourth model (IV) is linked to only those 99 firms that hired either two or one of the Big Four audit firms in order to validate the results obtained in the third model (III).

- The fifth model (V) is concerned with the possibility of a different setting of fees for the 70 firms that hired one Big Four only, in comparison with the 10 companies that did not hire even one of the Big Four for their audit.

- Finally, the last model (VI) confirms whether or not the distribution of fees has an impact on the total amount of audit fees for the 70 firms that hired one Big Four firm.

Working with these six regressions, we are able to draw the following conclusions:

First, the models have satisfactory explanatory power with an R^2 between 36.3 % (model I) and 39.3 % (model V). However the slight difference between these two R^2 means that the introduction of variables related to the presence of two (or three) auditors in France (models II to VI) does not give a more satisfactory explanation for the fees charged than the 'traditional' model.

Second, the risk variables hold, across the board, a positive incidence on auditing fees. In fact, the nature of assets, the (REC+INV)/ASSETS variable, positively and significantly influences audit fees in the six models tested. The same goes for the activity sector (INDUS): audit fees are higher for companies in the reputedly riskier information technology sector. This variable was significant in 5 of the models (I to V). We are also able to assess risks particular to a given company by considering its growth (GROWTH). Growth proves to

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exercise a positive influence on fees, yet this variable is only significant in the three first models tested.

Third, variables specific to the French context do influence the total amount charged for auditing services, even if their across-the-board impact on the models' quality (R²) remains low. If the presence of three auditors is not synonymous with a variation in fees (model II), it appears, nevertheless, that the presence of a Big Four firm does influence the total charged for auditing services in those firms employing two auditors. When two Big Four firms audit company accounts, the fees charged (adjusted for company size) are significantly lower in comparison with those paid in the two other cases (model III), where there is only one Big Four firm or none at all. This result remains consistent in the case where only the fees paid by the companies using two Big Four firms are compared to those using only one (model IV). In the companies employing only one Big Four firm, the fees are significantly higher than in those not using any of the Big Four (model V). These results usupport the hypothesis that the additional fees billed by one Big Four firm performing a joint audit are linked to an uneven distribution of expertise levels (as well as levels of reputation, when compared to a situation where two Big Four firms audit the same company jointly. This also points to the existence of a higher risk in the non-detection of fraudulent bookkeeping or accounting mistakes.

Fourth, the preceding results appear in no way to have been influenced by the share of fees paid by the companies to the main auditor (models II to VI). In other words, whether the distribution of fees is highly uneven (e.g. a company pays 90% of the total amount billed to the main auditor) or not (e.g. fees are split fifty-fifty between the two audit firms), the total amount disbursed is not affected. This result does not support the hypothesis that a price 'war' exists between audit firms.

Fifth, the total sum of audit fees charged appears to be only peripherally linked to the total amounts charged for non-audit services (models II and III). Surprisingly, the relationship here is *positive*, meaning that, contrary to our assumption, auditors do not reduce the fees for auditing services in order to gain a greater competitive edge on consulting work charged at higher rates. Nevertheless, our results do corroborate those obtained in previous English and American studies (Simunic, 1984; Palmrose, 1986; Firth, 1997; Ezzamel et al., 1996) which found in effect that a positive relationship exists between audit and non-audit fees. The main explanation that we offer for this phenomenon is related to the existence of structural contingencies. The idea is that it is particularly the 'big' audit firms which offer additional services to what are generally larger-sized firms (see Table 4). In this case, a positive relationship exists *de facto* between consulting activity and payment received for the legally-required audit, simply due to the fact that large-scale firms face more complex situations potentially requiring consulting assistance (for example, major re-structuring) [15]. Notwithstanding the above, the theoretical relationship between the two does not necessarily come into question[16].

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[15] Ezzamel et al. (1996) demonstrated that non-audit fees interact with: the level of company complexity, the size of the audit firm, and the regulatory nature of the activity sector in order to favor a decrease in audit fees. The authors are equally able to link this to a coherent economic reality. In fact, as the authors suggest, in the framework of 'major' consulting assignments in complex corporate organizations where the investment of the consulting firm is significant, it is likely that work teams will attempt to optimize the transfer of know-how from the consulting work to the audit. Likewise, to the extent that the Big Four are apt to offer larger-scale consulting services, they should also be more able than other firms to reduce the audit fees charged, with the awareness that they can recover the profit margins lost in the audit through consulting work performed.

[16] In English and American studies, another explanation has been put forth, in relation to the *quality* of the data used. In the U.S. no strict normative obligation has prevailed over the long term in terms of the disclosure of audit and non-audit fees paid by firms, and the existing studies are based on data collected via questionnaires. Mandatory disclosure has existed in the U.K. as well as in Australia since 1991, but it provides for exceptions (mainly the fees paid by foreign-based branches or divisions) which makes comparison between disclosure statements more difficult. Likewise, the *reliability* of the information disclosed by firms is somewhat dubious, with certain studies calling into question the validity of the distinction made by firm directors between audit and non-audit expenses (Barkess and Simnett, 1994).

As for the other variables, none are significant, however two of them have the corresponding coefficient sign as we expected (ROE, YE31DEC) whereas the last of the variables did not have the expected coefficient sign (SOLV).

Summary and conclusions

In reaching our conclusion we would like to summarize what has been gathered from this study as well as outline some of its limitations.

Methodologically, we adapted the 'traditional' model of audit fees' determinants, which has today become the standard, introduced by Simunic (1980) and frequently adjusted since then to specific contexts. We do the same to fit the French specific feature of the joint audit as carried out in large French companies.

Our results emphasize the fact that risk, and above all the *size* of the firm audited, constitute two significant factors in determining audit fees in France. These fees are higher in larger firms where conditions for risk are higher, namely in terms of inventory and receivables. We have found this to be especially true for those firms belonging to the Information Technology sector. This result is similar to that for other audit markets outside France

The second result emerging from this study is that audit fees (adjusted for company size) become higher when a firm decides to employ the services of only one Big Four firm. Moreover, it appears that a certain advantage, in terms of audit fees, exists for the French companies employing two of the Big Four firms for their joint audit. This decrease in fees billed by two Big Four firms working together may be the result of a more balanced sharing

of qualifications and skills, as well as of potential risks, between the two. This suggests economies of scale and scope on audit services for larger firms.

One of this study's main limitations, in addition to the choice of 'traditional' variables, is that it does not take into consideration the contracts negotiated by auditors at the beginning of their contract period, which is a minimum of six years in France. In other words, the duration of the legally-required audit is not annual, as in the case of most English-speaking countries, but is based on a six-year period which can be renewed[17]. This specific feature is meant to reinforce the independent nature of the auditor's work in denying the customer firm the possibility of putting pressure on the auditor in the case of a disagreement over the audit's results or the fees charged.

There are many possibilities for further study in France on this topic. A potential study could relate audit fees with governance-based variables. Following Abbott and al. (2003), the impact of audit committees - formed in a majority of French firms over the past few years – on audit fees could be investigated. Another potential area of research, followng Frankel and al. (2002), would seek to confirm whether or not profits are managed more 'aggressively' in French firms which have paid higher fees to their auditor for consulting services, while keeping in mind that French law has forbidden the practice for several years.

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Table 1.
Audit Fees Description

The sample contains 127 stock market-listed industrial and commercial French firms for the year 2002, of which 18 have three auditors and 109 have joint auditors. Among the latter, 29 were audited by 2 Big Four, 70 were audited by 1 Big Four, and 10 were audited by non-Big Four auditors.
Audit fees are given in millions of euros and Total Assets are expressed in billions of euros.

	Average	**Median**	**Standard Deviation**
127 French Firms			
Audit fees	4.45	1.38	7.82
Audit fees/Total assets	1.19	0.86	1.09
18 firms with 3 auditors			
Audit fees	4.37	2.49	4.61
Audit fees/Total assets	1.38	0.90	1.30
109 firms with 2 auditors			
Audit fees	4.47	1.38	8.25
Audit fees/Total assets	1.16	0.86	1.06
29 firms with 2 Big Four			
Audit fees	7.69	5.12	7.87
Audit fees/Total assets	0.73	0.59	0.69
70 firms with 1 Big Four			
Audit fees	3.64	0.96	8.6
Audit fees/Total assets	1.35	1.00	1.17
10 firms with no Big Four			
Audit fees	0.87	0.34	1.74
Audit fees/Total assets	1.02	0.96	0.72

Table 2.
Description of Firms' Characteristics

The sample contains 127 stock market-listed industrial and commercial French firms for the fiscal year 2002. The definitions of the variables are the following. ASSETS: Total Balance Sheet (in billions of Euros); (REV+INV)/ASSETS: Circulating Assets / Total Assets (%); GROWTH: Variation of Turnover over past 3 years (%); SOLV: Equity / Total Liabilities (%); ROE: Net Profits / Equity (%).

	Average	Median	Standard Deviation
ASSETS	10.25	1.83	21.79
(REV+INV)/ASSETS	0.52	0.51	0.20
GROWTH	0.61	0.38	0.89
SOLV	3.28	2.60	2.28
ROE	0.06	0.09	0.20

Table 3.
Distribution of Auditing Fees in 109 French Firms Conducting a Joint Audit

Main auditor's pay percentage (e.g. the auditor receiving the highest pay) in comparative terms.

	Average	*Median*	*N*
2 Big Four	**65.7 %**	**64.0 %**	**29**
1 Big Four with 1 " local "			**70**
Big Four = First	*79.2 %*	*82.1 %*	58
Big Four = Not First	*60.6 %*	*58.7 %*	12
including :			
E & Y = First	*75.5 %*	*77.1 %*	24
E & Y = Not First	*63.2 %*	*60.3 %*	8
Deloitte = First	*91.1 %*	*92.2 %*	8
Deloitte = Not First	*-*	*-*	*-*
KPMG = First	*73.5 %*	*71.5 %*	12
KPMG = Not First	*53.7 %*	*53.7 %*	2
PWC = First	*83.5 %*	*83.6 %*	14
PWC = Not First	*57.2 %*	*57.2 %*	2
2 " local"	**66.7 %**	**63.8 %**	**10**

Table 4.
Audit and Non-Audit Fees in 109 French Firms Conducting Joint Audit
By Auditor Type

In Thousands of Euros	AUDIT FEES			NON-AUDIT FEES			TOTAL FEES		
	N	Average	Median		Average	Median	N	Average	Median
TOTAL	218	2232.7	488.8	118	993.4	234.3	218	2770.4	515.0
Total Amount		486718.8			117224.7			603939.5	
BIG FOUR	128	3223.7	1050.5	101	1145.0	406.0	128	4127.1	1190.7
Amount		412629.9			115642.2			528269.1	
in the % of Total		84.8%			98.7%			87.5%	
including:									
Deloitte T.T.	23	3862.8	1600.0	22	1037.7	319.3	23	4853.5	2000.0
K.P.M.G	23	1602.1	483.0	16	248.3	163.3	23	1774.9	639.5
Price W.C.	24	3578.5	2121.0	20	2971.1	715.5	24	6054.4	3023.0
Ernst & Young	58	3466.4	1070.5	43	684.1	414.0	58	3974.3	1251.0
OTHER AUDITORS	90	823.2	145.3	17	93.1	75.0	90	840.8	158.5
Amount		74088.9			1582.5			75670.4	
in % of total		15.2%			1.3%			12.5%	
including:									
RSM Salutsro Reydel	12	3234.2	693.5	2	73.0	73.0	12	3246.3	693.5
Mazars & Guérard	12	1737.5	674.0	7	136.1	100.0	12	1816.9	771.0
Others	66	218.6	100.0	8	60.4	44.0	66	225.9	106.5

Table 5.
Different Variables' Expected Impact on Audit Fees

Variable Definition	Variable Name	Variable Measurement	Coefficient Sign Expected
Main Variable			
♦ Auditor Remuneration	*FEES/ASSETS*	*Total Audit Fees (in millions of.euros) / Total assets (in billions of euros)*	
Explanatory Variables			
♦ Size	*ASSETS*	*Total Balance Sheet (in billions of euros)*	+
External Risk Factors ♦ Activity Sector	*INDUS*	*Dichotomous variable equal to 0 unless in IT sector which is = 1 **	+
Company-Based Risks ♦ Nature of Assets	*(REC+INV)/ ASSETS*	*Circulating Assets / Total Assets (%)*	+
♦ Growth	*GROWTH*	*Variation of Turnover over past 3 years (%)*	+
♦ Financial Situation	*SOLV* *ROE*	*Equity / Total Liabilities (%)* *Net Profits / Equity (%)*	+ -
Joint Audit-Related Factors ♦ % Fees paid to Main Auditor	*%FIRST*	*Percentage of Total Fees received by the company's main auditor*	?
♦ Presence of Two Big Four	*BIG2*	*Dichotomous variable equal to 1 if the two auditors are Big Four; otherwise equal to 0*	?
♦ Presence of One Big Four	*BIG1*	*Dichotomous variable equal to 1 if at least one auditor is a Big Four; otherwise equal to 0*	?
Control Variables ♦ Consulting Fees	*NA-FEES/ ASSETS*	*Total Amount of 'Non-Audit' fees (in millions of euros)/ Total Assets (in billions of euros)*	-
♦ Accounts' Year End	*YE31DEC*	*Dichotomous variable equal to 1 if year end is not Dec. 31 and equal to 0 if year end is Dec. 31*	-

* Code 9 in Euronext Nomenclature

Tableau 6.
Regression of (Audit Fees/Assets) on Explanatory Variables

The sample contains 127 stock market-listed industrial and commercial French firms for the year 2002, of which 18 have three auditors and 109 have joint auditors . Among the latter, 29 were audited by 2 Big Four, 70 were audited by 1 Big Four, and 10 were audited by non-Big Four auditors.
All the variables are defined in Table 5.
***, **, * : tests respectively significant at the 1%, 5% and 10% levels.

	Expected coefficient sign	I	II	III	IV	V	VI
Intercept		0.252	-0.072	0.473	0.747	0.046	0.783
		1.000	-0.154	0.856	1.215	0.067	1.026
		0.319	0.878	0.394	0.228	0.947	0.309
INDUS	+	0.917	0.925	0.588	0.615	0.640	0.572
		3.906	3.927	2.314	2.109	2.069	1.545
		0.000***	0.000***	0.023**	0.038**	0.042**	0.128
(REC+INV)/ASSETS	+	1.254	1.212	1.489	1.562	1.871	1.933
		2.628	2.531	2.988	2.976	3.158	2.994
		0.010***	0.013**	0.004***	0.004***	0.002***	0.004***
GROWTH	+	0.192	0.200	0.176	0.149	0.134	0.132
		2.035	2.108	1.881	1.515	1.249	1.146
		0.044**	0.037**	0.063*	0.133	0.216	0.256
SOLV	+	-0.039	-0.036	-0.066	-0.073	-0.092	-0.099
		-1.004	-0.900	-1.551	-1.636	-1.813	-1.783
		0.317	0.370	0.124	0.105	0.074	0.079
ROE	-	-0.103	-0.096	-0.477	-0.424	-0.642	-0.687
		-0.241	-0.222	-1.067	-0.898	-1.214	-1.200
		0.810	0.825	0.289	0.372	0.229	0.235
NA-FEES/ASSETS	-	0.335	0.318	0.249	0.220	0.123	0.115
		2.167	2.033	1.599	1.357	0.712	0.619
		0.032**	0.044**	0.113	0.178	0.479	0.538
YE31DEC	+	0.105	0.109	0.160	0.088	0.048	0.052
		0.473	0.488	0.676	0.357	0.174	0.178
		0.637	0.627	0.501	0.722	0.863	0.859
%FIRST	+		0.412	-0.098	-0.353	-0.267	-0.437
			0.775	-0.165	-0.531	-0.374	-0.531
			0.440	0.869	0.597	0.710	0.597
3BIG	+		0.291				
			1.212				
			0.228				
2BIG	+			-0.381	-0.481		
				-1.870	-2.210		
				0.064*	0.030**		
1BIG	+					0.599	
						1.732	
						0.088*	
R²		0.363	0.372	0.374	0.378	0.393	0.371
F		9.683	7.698	6.566	6.009	5.030	4.500
p		0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
N		127	127	109	99	80	70

The sample contains 127 stock market-listed industrial and commercial firms for the year 2002. All the variables are defined in Table 5.

	Fees/ Asstes	Indus	(Rec+Inv) /Assets	Growth	SOLV	ROE	NA-Fees /Assets	YE31DEC	%First	3AUD	2BIG	1BIG
Fees/Assets	1.00											
Indus	**0.51****	1.00										
(Rec+Inv)/Assets	**0.41****	**0.46****	1.00									
Growth	**0.29****	**0.27****	0.14	1.00								
SOLV	-0.15	-0.19	0.10	-0.06	1.00							
ROE	-0.01	-0.06	0.12	-0.12	**-0.27****	1.00						
NA-Fees/Assets	0.18	0.00	0.01	0.02	-0.13	0.01	1.00					
YE31DEC	0.07	0.03	0.11	-0.08	0.06	-0.02	0.10	1.00				
%First	0.07	0.00	-0.02	-0.02	-0.15	-0.12	0.18	0.08	1.00			
3BIG	0.07	0.00	0.06	-0.04	0.03	0.11	-0.02	-0.05	**-0.29****	1.00		
2BIG	**-0.23 ****	-0.11	-0.15	-0.04	-0.05	-0.09	-0.08	-0.13	-0.16	**-0.22****	1.00	
1BIG	0.17	-0.02	0.02	0.10	0.06	-0.08	0.14	**0.22****	**0.37****	**-0.45****	**-0.60****	1.00

** indicates that the variables are significantly correlated (at the 5% threshold)