Assessing France's Joint Audit Requirement: Are Two Heads Better than One?

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SUMMARY: We examine auditor choice for listed companies in France where two (joint) auditors are required by law. This unique setting creates more complex auditor choice than the typical Big 4/non-Big 4 dichotomy in other countries, and we study if a firm's ownership structure affects its auditor-pair choice as well the consequences on earning quality. The findings are consistent with agency theory and indicate that a Big 4 auditor (paired with a non-Big 4 auditor) is more likely to be used when there is greater information asymmetry (less family control and more diversified ownership structures), and that these associations are even stronger for firms with two Big 4 auditors conducting the joint audit. We also test if a firm's auditor-pair choice affects earnings quality and find that firms using one Big 4 auditor (paired with a non-Big 4 auditor) have smaller income-increasing abnormal accruals compared to firms that use no Big 4 auditors and, once again, find that this effect is even stronger for firms that use two Big 4 auditors.

INTRODUCTION

A unique audit requirement in France is that all publicly listed companies that prepare consolidated (group) financial statements are required to be jointly audited by two independent auditors, with the audit effort shared and a single audit report issued by the two auditors of record.[1] Our purpose is not to evaluate the historical rationale or merit of the joint audit requirement, per se. Rather, we take the joint audit requirement as given and examine if a firm's ownership structure affects the choice of auditor pairs, and

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[1] Denmark also mandated joint audits for listed firms but dropped the requirement in 2005.

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the consequence of this choice on the firm's earnings quality with respect to abnormal accruals.

Prior research documents that multiple factors other than the firm's ownership structure (agency costs) can affect the use of a Big 4 auditor including firm size, complexity and growth, foreign operations, cross-listing in the U.S., leverage, profitability, governance structure (audit committees), and the firm's inherent information uncertainty due to accruals (Francis and Wilson 1988; DeFond 1992; Anderson et al. 1993; Francis et al. 1999; Chaney et al. 2004; Khurana and Raman 2004). Our research design controls for these multiple factors in order to determine if ownership structure is incrementally significant over and above these other drivers of the firm's decision to use a Big 4 auditor. Importantly, given that two auditors are jointly appointed in France, the auditor choice decision is more complex than in other countries with more possible gradations of audit quality depending on the nature of the pairing.[2]

The Big 4 are the dominant accounting firms in the audits of French-listed companies in France and earn 87 percent of total audit fees (Broye 2007). However, even though the Big 4 are the largest individual accounting firms in France, many French accounting firms, both small and large, are involved in the audits of public companies (Parthenay 2004). While a majority of French companies in our sample have at least one Big 4 auditor (63 percent), only 11.5 percent use two Big 4 auditors; thus, the majority of French companies are audited by at least one non-Big 4 auditor. Given the Big 4/non-Big 4 framework of audit quality, the joint audit requirement leads to a more complex ordering of audit quality with the highest quality audits putatively being those conducted by two Big 4 auditors, followed by audits performed by one Big 4 auditor paired with a non-Big 4 auditor, and the lowest quality being audits by two non-Big 4 auditors. We also evaluate large versus small French accounting firms. As in Anglo-American studies of differential audit quality, all auditors in France are assumed to meet minimum legal and professional standards (Francis 2004; Watkins et al. 2004).

The second unique feature of our study is that the French data allows us to test ownership structure characteristics in greater detail than has been possible with U.S. data. In particular, ownership percentages are reported for eight separate categories of investors in France as well as information on the largest individual shareholder. Ownership tests have produced mixed and inconclusive results in U.S. studies, despite strong theoretical predictions from agency theory (Francis and Wilson 1988; DeFond 1992), and these weak results may be due in part to limitations in the U.S. ownership data. We believe the detailed French ownership data allows us to better calibrate the tests of ownership structure, and the results of the study support that this is the case.

The first research question in our study is whether higher quality "auditor pairs" are demanded *ceteris paribus* by companies in France when there is greater information asymmetry arising from the separation of ownership and control (e.g., Jensen and Meckling 1976; Watts and Zimmerman 1983). The second research question is whether higher quality auditor pairs affect the quality of reported earnings. It is not self-evident what the answers are to either of these research questions. Companies in France have more concentrated

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[2]   The Big 4/non-Big 4 dichotomy of audit quality has been investigated around the world and French research literature provides support for its general applicability to the French setting. For example, Big 4 auditors in France have a fee premium as in many other countries (Noël 2005; Hay et al. 2006). The most compelling evidence that Big 4 firms are viewed as higher reputation auditors in France is the finding in Broye (2001) that French IPOs have less underpricing when audited by Big 4 firms, after controlling for the effect of underwriter reputation. This result is consistent with U.S. evidence in Beatty (1989) that high-reputation Big 4 auditors reduce information uncertainty and lead to higher IPO pricing.

ownership by the largest shareholder compared to the U.S., and this may reduce information asymmetry between the firm and the dominant shareholder, which in turn could lower the demand for high-quality external monitoring (La Porta et al. 1998).[3] In addition, bank financing plays a relatively more important role in civil law countries like France, resulting in more of an ''insider'' ownership/financing structure compared to common law countries (Leuz et al. 2003). Thus, it is unclear if there is a strong agency demand in France for differential audit quality. In addition, prior French research is inconclusive about the demand for Big 4 audits and its effect on earnings quality. For example, Piot (2001) reports no association between ownership structure and the use of a Big 4 auditor.[4] However, Piot (2001, 2005) does find that high debt firms are more likely to have Big 4 audits, suggesting a debt monitoring role for high-quality audits. In terms of earnings quality, Piot and Janin (2007) find no evidence that the earnings of Big 4 clients in France differ from those of non-Big 4 clients with respect to conservatism and earnings management. More generally, several other European studies have also failed to find evidence of differential Big 4 audit quality (e.g., Vanstraelen 2002; Vander Bauwhede et al. 2003; Vander Bauwhede and Willekens 2004; Maijoor and Vanstraelen 2006).[5]

What do we find? As predicted by agency theory, cross-sectional differences in ownership structure in France do affect ''auditor-pair'' choices even though ownership structures are on average somewhat more concentrated than in Anglo-American countries. Specifically, firms with diversified (less concentrated) ownership structures and with greater ownership by investors other than family owners are more likely to have a Big 4 auditor as one or both auditors. In addition, two Big 4 auditors are more likely to be used when there are greater shareholdings by the general public and by international and institutional investors, and when the firm's ownership structure is less dominated by family holdings. There is also some evidence of differentiation between large and small French firms.

Regarding the study's second research question, we find that auditor-pair choices affect the quality of reported earnings, and that companies with one or two Big 4 auditors are less likely to have income-increasing abnormal accruals than other firms. This is consistent with U.S. findings that Big 4 auditors constrain aggressive earnings management (Becker et al. 1998; Francis et al. 1999). Importantly, firms audited by two Big 4 accounting firms are even *less* likely to have income-increasing accruals compared to firms audited by just one Big 4 auditor (paired with a non-Big 4 auditor).

In terms of the question posed by the paper's title, it would seem that having two Big 4 auditors is better than one, and having one Big 4 auditor is better than none in terms of earnings quality in France. The remainder of the paper is organized as follows. The next section provides some institutional detail on the French audit market. The sample and

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[3] Civil law countries are generally thought to have weaker investor protection than in common law countries, which in turn affects the financing and ownership structure of firms. As a result, there is more concentrated ownership relative to U.S. companies, and larger ''inside'' ownership by families that manage and effectively control many listed companies (Grier and Zychowicz 1994; La Porta et al. 1998; Morck 2005; Maury 2006; Roosenboom and Schramade 2006; Thomsen et al. 2006).

[4] The research design in our study differs from Piot (2001) who finds no evidence that auditor choice in France is related to the level of ''inside ownership'' held by directors, managers, and employees. We use a broader set of detailed ownership data and investigate the auditor-pair choices, whereas Piot (2001) made an assumption about which of the auditor pair was the ''lead'' auditor and thus did not formally investigate auditor pair choices.

[5] An explanation for the weaker results in European countries is the finding in Khurana and Raman (2004) that legal liability exposure drives higher quality Big 4 audits more than general reputation effects. The auditor's legal liability to shareholders and/or creditors is more limited in France (Piot and Janin 2007) and other European countries (Eilifsen and Willekens 2008) relative to the United States. However, if legal liability drives Big 4 auditor behavior more than reputation protection, this would work against the finding in our study that earnings are of higher quality for firms with Big 4 auditors.

descriptive statistics are reported in the third section. The auditor choice tests are presented in the fourth section, and the earnings quality tests in the fifth section. The last section summarizes and concludes the study.

AUDITING IN FRANCE

The audit market in France is serviced by the international Big 4 accounting firms, two other large international firms (BDO and Grant Thornton), a handful of relatively large French firms and numerous small French accounting firms. Parthenay (2004) reports that the 10 largest firms in France based on 2003–2004 revenues in descending order are: KPMG, Ernst & Young, PricewaterhouseCoopers, Deloitte, Mazars, Salustro Reydel (acquired in 2004 by KPMG), BDO (Marque et Gendrot), Grant Thornton, Secafi Alpha, and Scacchi & Associés. Thus the international Big 4 are also the French Big 4. Large French accounting firms are defined in our study as the four French firms that are in the above group of the ten largest firms (i.e., Mazars, Salustro Reydel, Secafi Alpha, and Scacchi & Associés) plus the 11th largest firm in France, Constantin.[6] After the large international accounting firms, these five large French firms are the most dominant in France, and are considerably larger than the remaining French firms. Despite the dominance by Big 4 firms in terms of overall revenues, only 11.5 percent of companies in our sample (n = 54) are audited by two Big 4 auditors, which means most listed companies in France have either one or two French accounting firms as their auditors (see also Broye 2007).

The regulation of auditing in France is summarized in the Appendix, including a brief history of the joint audit requirement. The joint audit requirement in France means that two auditors are appointed to jointly conduct the firm's audit with a single audit report that is signed by two audit firms, which are jointly responsible for the opinion. Article 105 of the French Financial Security Law (2003) states that the two audit firms must divide their work following the requirements of the professional standards. In practice, it can be argued that the effectiveness of a joint audit depends to a large extent on the comparable allocation of effort between the two auditors (Piot and Janin 2007). A study by Le Maux (2004) finds that audit fees paid to joint auditors are not equal in magnitude, which suggests that audits may be largely done by one of the auditors rather than being a true joint audit. However, Noël (2005) shows that the differences in audit fees can be attributed largely to differences in auditor reputation. In particular, the differences in audit fees average only 25 percent when joint auditors are of the same general reputation type (i.e., two Big 4 auditors or two non-Big 4 auditors), but increases to 57 percent when joint auditors are different types of firms (e.g., a Big 4 auditor paired with a small French firm). Noël (2005) concludes that in the majority of the cases, based on relative fees, the second auditor does not appear to act as a ''subordinate'' auditor, but rather as a legitimate counterweight that offers a concomitant view on the fairness of the financial statements. This matter may be largely of historical interest because the French Financial Security Law (2003) strengthened the joint audit requirement and formally requires each auditor to independently cross-review the other auditor's work on the joint engagement.

SAMPLE AND DESCRIPTIVE STATISTICS

The sample consists of all French-listed companies registered in 2003 on the French Market Authority's website (http://www.amf-france.org), which contains the annual reports

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[6] Constantin is included in the group of large French auditors because they are also a major player in the French audit market. They were ranked 11th in revenues in 2003–2004 (after Scacchi & Associés), and were ranked 9th in the prior year.

of these firms including information on a company's joint auditors. In 2003 a total of 604 companies were registered, of which 136 companies did not file an annual report, resulting in a possible sample of 468 companies.[7] We deleted one observation because of an extreme negative return on assets, which gives a final sample of 467 companies. The DIANE database (the June 2005 version that reports 2003 fiscal year data) was used to determine ownership data for the study.[8] An important feature of the database is the detailed classification of shareholdings by eight different investor groups, and this data allows us to investigate the effect of cross-sectional differences in ownership structure on auditor choice in far greater detail than has been possible with U.S. ownership data (e.g., Francis and Wilson 1988; DeFond 1992).

The auditor-pair choices are summarized in Table 1.[9] A total of 54 companies (11.6 percent of sample) use two Big 4 auditors and the remaining 413 companies have at least one French auditor.[10] Of these 413 companies, 241 (51.6 percent of the sample) use one

TABLE 1
Number of Observations Per Audit-Pair Combinations

Auditor Pairs	Number of Observations	Frequency
Two Big 4 auditors	54	11.6%
Big 4 auditor paired with a Non-Big 4 auditor	241	51.6%
Two large French auditors, or one large French auditor paired with a small French auditor[a]	62	13.3%
BDO or Grant Thornton, paired with a small French auditor	7	1.5%
Two small French auditors	103	22.0%
Total	467	100.0%

[a] Only four observations use two large French accounting firms, which is why we combine the two groups. The firms classified as large French firms are those ranked in the top ten plus the 11th largest firm in France based on fees (Parthenay 2004): Mazars, Salustro Reydel, Secafi Alpha, Scacchi & Associés, and Constantin.

[7] A company receives a small fine for not filing the annual report with the French Market Authority, and it appears that some companies prefer the fine rather than filing their annual report.

[8] The DIANE database is a product of Bureau Van Dijk Electronic Publishing, which also distributes international databases like OSIRIS and AMADEUS, as well as national databases like DIANE. DIANE is issued annually and contains current and prior year financial data, but ownership data is only reported for the most current year. Given that we do not have prior versions of the database, we can only examine one year in the study.

[9] Joint auditors need not be simultaneously appointed, and it is possible to replace each individual auditor when its six-year appointment expires. We hand-collected auditor tenure data for a subset of 203 observations in the sample. There is no evidence of systematic tenure patterns as a function of auditor type (Big 4/non-Big 4). Mean (median) tenure for Big 4 auditors is 8.2 (6) years compared to 7.1 (5.5) years for non-Big 4 auditors, and these differences are not significant at the 0.10 level. We also examined the average tenure of auditor pairs, the lowest of which is 6.16 years for two non-Big 4 auditors, increasing to 7.97 years for one Big 4 auditor paired with a non-Big 4 firm, and is the highest for two Big 4 auditors at 8.87 years. This pattern of increasing tenure when going from two non-Big 4 auditors to two Big 4 auditors is consistent with ordering of audit quality implied by the tests in Table 4, but we are hesitant to attribute the results to auditor tenure given that the magnitudes of the differences are fairly small.

[10] Our focus is not on identifying systematic auditor-pair combinations. In general there appears to be no pattern with one exception: Deloitte and Ernst & Young are the joint auditors for 16 of the 54 companies audited by two Big 4 firms, which suggests the two firms may have some kind of alliance. Otherwise, no particular auditor pair has more than five common joint appointments. As a robustness test we re-estimate the models in Table 3 and Table 4 excluding the 16 observations with Deloitte/Ernst & Young as joint auditors, and these results are consistent with those reported in Tables 3 and 4.

Big 4 auditor paired with a non-Big 4 auditor. Thus 295 companies (63 percent) in the total sample use at least one Big 4 auditor, while the remaining 172 observations (37 percent) use no Big 4 auditors. Of the 172 observations with no Big 4 auditor, 103 companies use two small French auditors (22 percent of total sample), and 62 observations (13.3 percent of total sample) are audited by either two large French auditors or a large French auditor coupled with another non-Big 4 auditor (note that only four companies use two large French auditors). Finally, seven observations are audited by the international firms BDO or Grant Thornton coupled with a small French accounting firm.

In sum, while the Big 4 are dominant in France in terms of overall revenues, other accounting firms are well represented in the audit market, more so than is the case in the United States where the Big 4 firms now audit approximately 80 percent of publicly listed companies. If one objective of the joint audit requirement was to protect the French audit market from domination by non-French firms when the consolidated reporting requirement was introduced in 1984 (see the Appendix), then one could argue that the policy has been effective in creating a less concentrated audit market relative to the United States.[11]

Descriptive statistics on ownership variables and control variables are reported in Table 2 for the 467 observations in the study.[12] Ownership structure is measured in three different ways: a dichotomous variable if the largest single shareholder owns 25 percent or more of shares; the specific ownership percentages held by each of eight different investor groups; and an indicator variable denoting which of the eight investor groups has the largest share ownership in a company. The three ownership variables are now explained in greater detail.

The dichotomous variable Concentration is coded 0 if a single shareholder owns 25 percent or more (high concentration), and is coded 1 otherwise (low concentration). A data limitation is that DIANE only reports this dichotomous variable rather than the actual percentage owned by the single largest investor. A higher quality auditor pair is expected when there is low-ownership concentration (i.e., more diverse investors with smaller holdings) because information asymmetry is greater in this setting. In contrast, when there is high-ownership concentration stockholders can engage in more direct monitoring/control of the firm and therefore have less need for external monitoring by high-quality auditors. French firms appear to have more concentrated ownership structures relative to U.S. firms. The single largest investor owns 25 percent or more of shares for 73 percent of firms in the study. In contrast, in the U.S. the sum of shareholdings for *all* individuals holding 5 percent or more averages only 35 percent in total.[13] Despite a higher average concentration level in France, there is also considerable cross-sectional variation across the eight investor groups as discussed below, and this kind of detailed cross-sectional ownership data is not available in the U.S.

The second ownership variable is the ownership percentage held by each of eight ownership categories in the DIANE database. The largest ownership percentage is direct

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[11] Consistent with this notion, it has recently been suggested that the U.K. would have less market concentration by the Big 4 firms and broader market participation by other auditors if the French joint audit system were adopted. See David Herbinet (2007), Head of Public Interest Markets, of the large French accounting firm Mazars LLP.

[12] The sample is distributed across one-digit SIC industry codes as follows: 1.2 percent in SIC 1; 10.7 percent in SIC 2; 14.6 percent in SIC 3; 4.0 percent in SIC 4; 10.0 percent in SIC 5; 37.7 percent in SIC 6; 18.2 percent in SIC 7; and 3.4 percent in SIC 8. While the financial services sector (SIC 6) does have a large number of observations (37.7 percent), these observations are dropped for the accruals/earnings quality tests. As a sensitivity analysis the auditor choice and accruals models are also estimated as industry fixed-effects models using one-digit SIC codes, and these results are qualitatively the same as those reported in Tables 3 and 4.

[13] These percentages are based on averages in fiscal 2003 for n = 7,366 U.S. firms with 5 percent ownership data from Compact Disclosure, and n = 6,693 U.S. firms with institutional ownership data from Thomson Financial.

TABLE 2
Descriptive Statistics
(n = 467)

	Mean	Median	Std. Dev.
Concentration (0–1)	0.27	0	0.44
Intl_own%	8.52%	0	16.81
Pub_own%	20.82%	15.0%	21.44
State_own%	0.48%	0	4.05
Bank_own%	4.76%	0	11.30
Empl_own%	0.81%	0	3.55
Industry_own%	33.52%	28%	30.33
Pensfund_own%	2.96%	0	10.57
Family_own%	25.14%	8.0%	32.32
Pub_maj	27.6%	0	0.44
Industry_maj	42.8%	0	0.49
Pensfund_maj	1.9%	0	0.14
Bank_maj	3.0%	0	0.17
State_maj	0.9%	0	0.09
Empl_maj	0.2%	0	0.05
Family_maj	23.6%	0	0.42
Complex	0.546	0.229	0.75
Ln(Assets)	11.390	10.983	2.28
Leverage	0.285	0.235	0.26
ROA	1.5%	2.7%	15%
Growth Assets	8.38%	1.70%	53.50
AWCACC (n = 261)	−0.015	−0.006	0.18
Audit Committee	0.276	0	0.44
US Cross-Listing	0.051	0	0.22
Foreign Sales/Sales	24.54%	8.64%	30.10
Total Accruals	0.166	0.068	0.232
Loss	0.293	0	0.45

Variable Definitions:

Concentration = dummy variable equal to 1 if no single shareholder owns more than 24.9 percent, and 0 otherwise;

Intl_own% = percentage of shares owned by international investors;

Pub_own% = percentage of shares owned by general public;

State_own% = percentage of shares owned by the state;

Bank_own% = percentage of shares owned by banks;

Empl_own% = percentage of shares owned by employees;

Industry_own% = percentage of shares owned by the industry (other businesses);

Pensfund_own% = percentage of shares owned by pension funds;

Family_own% = percentage of shares owned by families;

Pub_maj = portion of sample firms with the general public as the major investor group;

Industry_maj = portion of sample firms with other companies as the major investor group;

Pensfund_maj = portion of sample firms with pension funds as the major investor group;

Bank_maj = portion of sample firms with banks as the major investor group;

State_maj = portion of sample firms with the state as the major investor group;

Empl_maj = portion of sample firms with employees as the major investor group;

Family_maj = portion of sample firms with families as the major investor group;

Complex = sales/lagged total assets;

TABLE 2 (continued)

Ln(Assets) = natural log of total assets;
Leverage = total debt/total assets;
ROA = return on assets in percentage, measured as net income/total assets $\times$ 100;
Growth Assets = percentage change in assets from prior year, computed as $((\text{assets}_t - \text{assets}_{t-1})/\text{assets}_{t-1})$ $\times$ 100;
AWCACC = abnormal working capital accruals, scaled by total assets, where working capital accruals = non-cash working capital$_t$ − ((non-cash working capital$_{t-1}$/sales$_{t-1}$) $\times$ sales$_t$), where non-cash working capital = (current assets − cash and short term investments) − (current liabilities − short-term debt). Note that we excluded observations in the financial sector and extreme values (absolute value of scaled abnormal working capital accruals above 0.90). This results in a sample of 261 observations. The accruals expectation model is based on DeFond and Park (2001) and is discussed in the ''Earnings Quality Tests'' section;
Audit Committee = dummy variable equal to 1 in case the firm has an audit committee;
US Cross-Listing = dummy variable equal to 1 in case the firm has a cross-listing on a U.S. stock exchange market;
Foreign Sales/Sales = foreign sales as a proportion of total sales;
Total Accruals = absolute value of total accruals scaled by total assets; and
Loss = dummy variable equal to 1 in case the firm has a bottom-line loss.

investment by other companies (denoted Industry_own%), which averages 33.52 percent of shares. The second largest category is family ownership (Family_own%) with 25.14 percent of shares. Family ownership and control of firms is more common in France than the U.S. where family blockholdings average only 7.4 percent for S&P 500 firms for the same period (Wang 2006). The third largest group is general public ownership (Pub_own%) with 20.82 percent of shares. International investors (Intl_own%) hold 8.52 percent of shares, and institutional holdings by banks and pension funds average 4.76 percent and 2.96 percent, respectively. The remaining ownership groups (state and employees) average 1.29 percent of shares. We initially thought that state and employee ownership might be an important feature of ownership structure in French companies; however, it is clear that the state has largely divested its ownership of French-listed companies, and employee share-holdings are quite small as well. While French ownership is more concentrated on average than for U.S. companies, there is also quite large cross-sectional variation in shareholdings across French firms. For example, the holdings by the general public (Pub_own%) range from 0 to 95.2 percent; holdings by other companies (Industry_own%) range from 0 to 100 percent; the range of holdings by international investors (Intl_own%) is from 0 to 98 percent; and family holdings (Family_own%) range from 0 to 100 percent.

The third ownership variable is based on which ownership group has the *largest* share-holding in a company, and the appropriate indicator variable is coded 1. The largest share ownership is held by other companies (Industry_maj) for 42.8 percent of the sample; public investors (Public_maj) for 27.6 percent of the sample; and families (Family_maj) are the major shareholder group for 23.6 percent of the sample. Banks are the majority investor (Bank_maj) for 3 percent of the sample, and pension funds (Pensfund_maj) for 1.9 percent of the sample. Only 1.1 percent of the sample has the largest ownership block held by the state or by employees, and none of the companies in the sample has international investors as the largest ownership group. Overall these ownership percentages are consistent with French companies having the kind of structures that are typical outside Anglo-American countries: greater concentration, more intercompany investments, and larger levels of family ownership (Morck 2005). At the same time there is considerable cross-sectional variation both within and across the eight investor groups.

The control variables are also reported in Table 2. These variables control for other factors (besides ownership structure) that can affect the firm's choice of auditor, and are explained in more detail in the next section. Company size (Ln(Assets)) has a median value of 10.983 that equates to 58 million Euros; median company profitability (ROA) is 2.7 percent; 29.3 percent of the companies in our sample have a bottom-line loss (Loss); median leverage (Leverage) is 23.5 percent; growth (Growth Assets) is measured as the one-year percentage increase in total assets and has a median value of 1.70 percent; complexity (Complex) is measured by the asset turnover ratio (sales divided by assets) and has a median value of 22.9 percent of total assets; median foreign sales scaled by assets (Foreign Sales) is 8.64 percent; the median absolute value of total accruals scaled by total assets (Total Accruals) is 0.068; 5.1 percent of the companies in our sample are cross-listed on a U.S. stock market (US Cross-Listing); and 27.6 percent of the sample companies have an audit committee (Audit Committee).[14] None of the control variables is highly correlated with the ownership variables or the abnormal accruals variable: the highest pair-wise correlation is only 0.215, which indicates that multicollinearity is unlikely to be a concern. Among the set of control variables, we observe higher correlations between ROA and Loss (-0.65); Ln(Assets) and Audit Committee (0.59); Leverage and Complexity (0.45); and Foreign Sales/Sales and Ln(Assets) (0.44). These correlations do not directly affect the ownership structure test variables and therefore are of less concern, although multicollinearity within the set of control variables may affect their signs and/or significance levels.

AUDITOR CHOICE TESTS

The auditor choice tests are reported in Table 3 based on the logistic (logit) regression model in Equation (1):

$$\text{Auditor-Pair Choice} = f \text{ (ownership structure, control variables)}. \tag{1}$$

As stated earlier in the paper, the Big 4 are viewed as the highest reputation auditors in France, and based on the Big 4/non-Big 4 dichotomy of audit, the auditor choice dependent variable is tested as a series of dichotomous partitions of auditor-pairs defined as follows: the choice of two international Big 4 auditors denotes the highest level of audit quality; the second highest quality is the use of one Big 4 auditor paired with a non-Big 4 auditor. Among the non-Big 4 French firms we assume the large French accounting firms are of higher quality than smaller French firms (following the logic of DeAngelo [1981]), and that the use of large French auditors represents the choice of higher quality auditing relative to those companies choosing small French accounting firms.

As discussed in the "Sample and Descriptive Statistics" section, ownership structure is measured in three different ways: (1) a single dichotomous variable (Concentration) coded 1 for low concentration by the single largest shareholder (< 25 percent) and coded 0 for high concentration (25 percent or more); (2) a set of variables specifying the ownership percentages held by each of eight classes of investors (international, general public, the state, banks, employees, industry [other companies], pension funds, and families); and (3)

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[14] Note that in 2005 French-listed companies were required to have an audit committee, but this occurred after our test period of 2003.

TABLE 3
Logistic Regression Model of Auditor-Pair Choices

Panel A: Two Big 4 Auditors (n = 54) versus All Other Auditor Pairs (n = 413)

	Predicted Sign	Column (1) Coefficient (z-value)	Column (2) Coefficient (z-value)	Column (3) Coefficient (z-value)
Constant		−5.584 (−4.54)***	−5.538 (−4.39)***	−6.092 (−4.73)***
Complex	+	−0.036 (−0.16)	−0.065 (−0.27)	−0.080 (−0.35)
Ln(Assets)	+	0.273 (2.73)***	0.266 (2.60)***	0.238 (2.37)***
Leverage	+	0.785 (1.22)	0.876 (1.38)*	0.989 (1.52)*
Growth Assets	+	−0.074 (−0.27)	−0.074 (−0.28)	−0.029 (−0.11)
ROA	+	1.802 (0.98)	1.650 (0.83)	1.413 (0.77)
Audit Committee	+	0.251 (0.60)	0.281 (0.66)	0.280 (0.69)
US Cross-Listing	+	−0.026 (−0.04)	0.004 (0.07)	−0.0006 (−0.00)
Foreign Sales	+	−0.009 (−1.80)**	−0.008 (−1.57)*	−0.008 (−1.47)*
Total Accruals	−	−0.286 (−0.38)	−0.219 (−0.30)	−0.374 (−0.48)
Loss	−	0.087 (0.17)	0.085 (0.16)	0.082 (0.16)
Concentration	+	0.688 (2.13)**		
Intl_own%	+		0.017 (2.62)***	
Pub_own%	+		0.018 (3.12)***	
State_own%	?		0.027 (1.05)	
Bank_own%	+		0.023 (2.59)***	
Empl_own%	?		0.014 (0.52)	
Industry_own%	?		−0.004 (−0.76)	
Pensfund_own%	+		0.018 (1.56)*	
Family_own%	−		−0.027 (−2.88)***	
Pub_maj	+			1.229 (2.16)**
Industry_maj	?			1.153 (2.09)**

(*continued on next page*)

TABLE 3 (continued)

	Predicted Sign	Column (1) Coefficient (z-value)	Column (2) Coefficient (z-value)	Column (3) Coefficient (z-value)
Pensfund_maj	+			1.988 (1.91)**
Bank_maj	+			1.940 (2.43)***
State_maj	?			2.122 (1.65)**
Empl_maj	?			NA (no observations)
Family_maj	−			Default comparison group
Pseudo R^2		8.80%	9.10%	10.33%
χ^2		36.02***	33.38***	34.32***

Panel B: Two Big 4 Auditors (n = 54) versus One Big 4 and a Non-Big 4 Auditor (n = 241)

	Predicted Sign	Column (1) Coefficient (z-value)	Column (2) Coefficient (z-value)	Column (3) Coefficient (z-value)
Constant		−4.669 (−3.49)***	−4.683 (−3.46)***	−5.817 (−3.92)***
Complex	+	−0.098 (−0.33)	−0.146 (−0.46)	−0.100 (−0.34)
Ln(Assets)	+	0.250 (2.29)**	0.246 (2.24)**	0.264 (2.34)**
Leverage	+	1.092 (1.61)*	1.059 (1.56)*	1.384 (1.97)**
Growth Assets	+	0.104 (0.32)	0.106 (0.35)	0.149 (0.45)
ROA	+	2.260 (1.49)*	2.243 (1.39)*	2.456 (1.55)*
Audit Committee	+	0.240 (0.53)	0.275 (0.61)	0.200 (0.46)
US Cross-Listing	+	−0.162 (−0.25)	−0.080 (−0.12)	−0.064 (−0.10)
Foreign Sales	+	−0.014 (−2.46)***	−0.013 (−2.30)**	−0.014 (−2.30)**
Total Accruals	−	−0.635 (−0.83)	−0.511 (−0.68)	−0.864 (−1.08)
Loss	−	0.266 (0.54)	0.268 (0.54)	0.503 (0.99)
Concentration	+	0.502 (1.46)*		
Intl_own%	+		0.016 (2.30)**	
Pub_own%	+		0.010 (1.62)*	
State_own%	?		0.016 (0.67)	
Bank_own%	+		0.026 (2.48)***	

(*continued on next page*)

TABLE 3 (continued)

	Predicted Sign	Column (1) Coefficient (z-value)	Column (2) Coefficient (z-value)	Column (3) Coefficient (z-value)
Empl_own%	?		0.002 (0.10)	
Industry_own%	?		−0.002 (−0.38)	
Pensfund_own%	+		0.050 (2.94)***	
Family_own%	−		−0.027 (−2.69)***	
Pub_maj	+			0.908 (1.49)*
Industry_maj	?			1.246 (2.13)**
Pensfund_maj	+			4.197 (3.51)***
Bank_maj	+			1.726 (1.96)**
State_maj	?			1.530 (1.20)
Empl_maj	?			NA (no observations)
Family_maj	−			Default comparison group
Pseudo R^2		8.33%	9.10%	12.07%
χ^2		25.35***	26.37***	31.04***

Panel C: One Big 4 Auditor Paired with a Non-Big 4 Auditor (n = 241) versus All Others Using Two Non-Big 4 Auditors (n = 172)

	Predicted Sign	Column (1) Coefficient (z-value)	Column (2) Coefficient (z-value)	Column (3) Coefficient (z-value)
Constant		−1.158 (−1.41)*	−0.947 (−1.18)	−0.913 (−1.11)
Complex	+	0.240 (1.45)*	0.216 (1.33)*	0.226 (1.39)*
Ln(Assets)	+	0.112 (1.57)*	0.101 (1.44)*	0.085 (1.19)
Leverage	+	−0.812 (−1.68)**	−0.720 (−1.53)*	−0.898 (−1.86)**
Growth Assets	+	−0.255 (−1.20)	−0.246 (−1.16)	−0.292 (−1.41)*
ROA	+	−1.048 (−1.13)	−1.159 (−1.21)	−0.871 (−0.91)
Audit Committee	+	−0.105 (−0.35)	−0.103 (−0.35)	−0.055 (−0.18)
US Cross-Listing	+	0.846 (1.09)	1.03 (1.27)	0.779 (1.00)
Foreign Sales	+	0.009 (2.38)***	0.010 (2.43)***	0.010 (2.46)***

(*continued on next page*)

TABLE 3 (continued)

	Predicted Sign	Column (1) Coefficient (z-value)	Column (2) Coefficient (z-value)	Column (3) Coefficient (z-value)
Total Accruals	−	0.594 (1.24)	0.554 (1.15)	0.614 (1.28)
Loss	−	−0.452 (−1.46)*	−0.451 (−1.46)*	−0.387 (−1.21)
Concentration	+	0.778 (3.11)***		
Intl_own%	+		0.010 (1.41)*	
Pub_own%	+		0.021 (3.57)***	
State_own%	?		NA	
Bank_own%	+		−0.000 (−0.08)	
Empl_own%	?		0.044 (1.34)*	
Industry_own%	?		−0.004 (−1.30)*	
Pensfund_own%	+		−0.009 (−1.07)	
Family_own%	−		−0.002 (−0.85)	
Pub_maj	+			0.863 (2.82)***
Industry_maj	?			0.022 (0.09)
Pensfund_maj	+			−1.787 (−1.58)*
Bank_maj	+			0.262 (0.40)
State_maj	?			NA (no observations)
Empl_maj	?			NA (no observations)
Family_maj	−			Default comparison group
Pseudo R^2		6.51%	5.24%	7.61%
χ^2		38.28***	25.08***	40.45***

Panel D: One or Two Large French Auditors (n = 62) versus Two Small French Auditors (n = 103)

	Predicted Sign	Column (1) Coefficient (z-value)	Column (2) Coefficient (z-value)	Column (3) Coefficient(z-value)
Constant		−3.685 (−2.89)***	−3.704 (−2.90)***	−4.247 (−3.18)***
Complex	+	0.469 (1.75)**	0.475 (1.76)**	0.437 (1.65)*
Ln(Assets)	+	0.228 (2.03)**	0.218 (1.93)**	0.201 (1.85)**
Leverage	+	−0.267 (−0.34)	−0.330 (−0.41)	−0.348 (−0.42)

(*continued on next page*)

TABLE 3 (continued)

	Predicted Sign	Column (1) Coefficient (z-value)	Column (2) Coefficient (z-value)	Column (3) Coefficient(z-value)
Growth Assets	+	0.205 (0.73)	0.119 (0.43)	0.195 (0.61)
ROA	+	2.081 (1.39)*	2.156 (1.38)*	1.599 (0.91)
Audit Committee	+	0.215 (0.42)	0.221 (0.43)	0.146 (0.30)
US Cross-Listing	+	NA (no observations)	NA	NA
Foreign Sales	+	0.0007 (0.10)	0.002 (0.32)	0.002 (0.36)
Total Accruals	−	−0.154 (−0.22)	−0.010 (−0.01)	−0.0001 (−0.00)
Loss	−	1.378 (2.78)***	1.320 (2.70)***	1.172 (2.32)**
Concentration	+	−0.523 (−1.12)		
Intl_own%	+		0.004 (0.36)	
Pub_own%	+		−0.006 (−0.66)	
State_own%	?		NA	
Bank_own%	+		0.020 (1.40)*	
Empl_own%	?		0.087 (1.09)	
Industry_own%	?		0.011 (1.97)**	
Pensfund_own%	+		0.028 (1.35)*	
Family_own%	−		−0.014 (−2.62)***	
Pub_maj	+			0.751 (1.36)*
Industry_maj	?			1.140 (2.47)***
Pensfund_maj	+			2.609 (2.04)**
Bank_maj	+			1.736 (1.77)**
State_maj	?			NA (no observations)
Empl_maj	?			NA (no observations)
Family_maj	−			Default comparison group
Pseudo R^2		8.06%	7.57%	12.77%
χ^2		15.76*	14.48*	17.32*

(*continued on next page*)

TABLE 3 (continued)

*, **, *** $p < .10$ percent, $< .05$ percent, and $< .01$ percent levels, respectively (one-tailed).

Note that column (2) ownership percentages are based on models estimated with each ownership variable one at a time along with control variables, rather than a joint estimation.

Variable Definitions:

Complex	= sales/lagged total assets;
Ln(Assets)	= natural log of total assets;
Leverage	= total debt/total assets;
ROA	= return on assets in percentage, measured as net income/total assets $\times$ 100;
Growth Assets	= percentage change in total assets from prior year, computed as $((\text{assets}_t - \text{assets}_{t-1})/\text{assets}_{t-1}) \times 100$;
Concentration	= dummy variable equal to 1 if no shareholder owns more than 24.9 percent, and 0 otherwise;
Intl_own%	= percentage of shares owned by international investors;
Pub_own%	= percentage of shares owned by the general public;
State_own%	= percentage of shares owned by the state;
Bank_own%	= percentage of shares owned by banks;
Empl_own%	= percentage of shares owned by employees;
Industry_own%	= percentage of shares owned by the industry;
Pensfund_own%	= percentage of shares owned by pension funds;
Family_own%	= percentage of shares owned by families;
Pub_maj	= dummy variable equal to 1 if largest ownership group is public, and 0 otherwise;
Industry_maj	= dummy variable equal to 1 if largest ownership group is industry, and 0 otherwise;
Pensfund_maj	= dummy variable equal to 1 if largest ownership group is a pension fund, and 0 otherwise;
Bank_maj	= dummy variable equal to 1 if largest ownership group is bank, and 0 otherwise;
State_maj	= dummy variable equal to 1 if largest ownership group is state, and 0 otherwise;
Empl_maj	= dummy variable equal to 1 if largest ownership group is employees, and 0 otherwise;
Family_maj	= dummy variable equal to 1 if largest ownership group is family, and 0 otherwise;
Audit Committee	= dummy variable equal to 1 in case the firm has an audit committee;
US Cross-Listing	= dummy variable equal to 1 in case the firm has a cross-listing on a U.S. stock exchange market;
Foreign Sales/Sales	= foreign sales as a proportion of total sales;
Total Accruals	= absolute value of total accruals scaled by total assets; and
Loss	= dummy variable equal to 1 in case the firm has a bottom-line loss.

a set of indicator variables indicating the specific ownership class with the largest shareholding in a company.[15] The three specifications of ownership structure are reported in Table 3 in column (1), column (2), and column (3), respectively.

With respect to the ownership structure variables, we expect companies to choose a higher quality auditor pair when there is less concentrated ownership by the largest single shareholder (Concentration = 1), which means that the ownership structure is more diverse, resulting in greater information asymmetry between the firm and owners. Companies with significant family ownership are least likely to have information asymmetry problems because there is less separation of ownership and control and, therefore, such firms have less need for high-quality external auditors. In contrast, a higher quality auditor pair is expected when there are increasing levels of public and international ownership because these investors face the greatest information asymmetry relative to other investor groups that may, to some degree, have a closer relationship with the company. Institutional investors (pension funds and banks) are expected to demand higher quality monitoring. For example, Blackwell et al. (1998) argue that the demand for auditor assurance stems from the need to mitigate information asymmetry with institutional investors, and find that assurance is

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[15] International investors are not the largest shareholder group for any observations in the sample; hence, this variable is not included in this analysis, which results in seven ownership classes rather than eight.

perceived by institutional creditors as an effective means of control. Finally, we make no specific predictions on how ownership levels by other companies (industry), the state, or employees will affect auditor choice. Each of these investor groups has potentially closer knowledge of the company relative to other non-family investor groups, in which case there may be less need for a higher quality external audit; alternatively, if these groups have a large ownership block, then they may demand higher quality external monitoring in order to protect their investment. One-tailed p-values are reported for all ownership variables, though no directional prediction is made for ownership levels by other companies (industry), the state, or employees.

The set of control variables draws on prior auditor choice literature and controls for reasons that companies may use a Big 4 auditor in addition to ownership structure (Francis and Wilson 1988; DeFond 1992; Anderson et al. 1993; Chaney et al. 2004; Khurana and Raman 2004). Prior research shows that the Big 4 accounting firms are more likely to be used by large and growing companies, complex companies, and companies with more international operations, all of which may require the scale and expertise of a Big 4 auditor. In addition, Big 4 firms are likely be hired by profitable companies (which are better able to pay higher fees), companies with higher debt levels (external monitoring for debtholders), companies with larger total accruals having more information uncertainty and therefore a greater demand for credible audits by Big 4 firms as do firms that cross-list in the U.S., and better governed companies with audit committees that are also more likely to demand high-quality audits. The corresponding control variables to capture these effects are auditee size (Ln(Assets)), profitability (ROA), a bottom-line loss (Loss), growth (Growth Assets), debt (Leverage), organizational complexity (Complex) measured as asset turnover ratio (sales divided by assets), foreign sales scaled by total sales (Foreign Sales), the absolute value of total accruals scaled by total assets (Total Accruals), cross-listing on a U.S. stock market (US Cross-Listing), and the presence of an audit committee (Audit Committee).

The logit models of auditor choice are reported in Table 3. Four auditor partitions are reported in Panels A through D, with three models reported in each panel based on the three specifications of ownership structure. Panel A compares firms using two Big 4 auditors with firms using all other auditor pairs in order to determine if ownership structure is associated with the putatively highest quality auditor pair (two Big 4 firms). The next two panels decompose the primary analysis in Panel A as follows. In Panel B, a comparison is made of firms using two Big 4 auditors versus firms using just one Big 4 auditor (paired with a non-Big 4 auditor) to test if there is differential demand for two versus one Big 4 auditor as a function of ownership structure. Panel C then compares firms using just one Big 4 auditor (paired with a non-Big 4 auditor) with firms using two non-Big 4 auditors and tests if there is differential demand for one Big 4 auditor versus ''none'' as a function of ownership structure. Finally, Panel D examines those firms using only non-Big 4 auditors and compares large versus small French accounting firms.

All models in Table 3 are significant at $p < .01$, except Panel D where all models are only weakly significant at $p < .10$. Individual coefficients are tested using asymptotic t-statistics, and the corresponding z-values are one-tailed probabilities based on robust standard errors that correct for heteroscedasticity.

Results on the ownership variables in Panels A through D in Table 3 are now discussed, and a statistical significance level of $p < 0.05$ (one-tailed) is assumed in the discussion unless stated otherwise. Panel A compares companies choosing two Big 4 auditors ($n = 54$) versus all other companies ($n = 413$) in the sample. The results provide strong support for agency theory. In column (1), the use of two Big 4 auditors is more likely when there is

less concentration by the largest shareholder. Column (2) reports tests of ownership percentages for each of the eight ownership groups and two Big 4 auditors are less likely as family ownership increases (p < .01), more likely with higher levels of public and international ownership (p < .01), and more likely with increasing institutional ownership by banks (p < .01) and pension funds (p < .10).[16] There is no statistical association for increasing levels of ownership by industry (other companies), the state, or employees. Column (3) reports tests of the indicator variable for the ownership group with the largest ownership percentage, and the use of two Big 4 auditors is significantly higher for all ownership groups relative to the default group in which families are the largest ownership group. Again this makes sense because information asymmetry is lowest for companies in which there is majority family ownership and, by implication, agency costs are greater for all of the other ownership structures. These results are consistent with our expectations based on information asymmetry and agency costs. In sum, for all three measures of ownership structure, Panel A is supportive that the use of two Big 4 auditors as joint auditors in France is positively related to information asymmetry and agency costs arising from ownership structure.[17]

Panel B of Table 3 compares 54 companies using two Big 4 firms with 241 companies using one Big 4 firm paired with a non-Big 4 auditor. The purpose of this test is to determine if ownership structure leads to the use of two Big 4 auditors rather than just one Big 4 auditor (paired with a non-Big 4 firm). In column (1), two Big 4 auditors are more likely when there is less concentration by the largest shareholder (p < .10). The evidence from column (2) is that two Big 4 auditors are less likely as family ownership increases (p < .01), more likely as international and public ownership increases (p < .10), and more likely as institutional ownership increases by banks and pension funds (p < .01). The results in column (3) indicate that two Big 4 auditors are more likely to be used when all ownership groups (except for the state that is not significant) are dominant relative to family ownership. In sum, Panel B mirrors the full sample results in Panel A and together the two results

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[16] The model in column (2) is estimated as follows for all of the panels in Table 3. Reported results for the control variables are based on a single model estimation in which all eight of the ownership variables are jointly included in the model. However, there is structural correlation among the eight ownership variables since by definition they sum to 100 percent of a firm's ownership. Therefore, to avoid structural correlation and serious multicollinearity problems, the model in column (2) is estimated using each ownership variable one at a time (along with the set of control variables), and the reported statistical results for each of the ownership variables are based on this approach.

[17] While we find that the demand for high-quality (Big 4) auditing decreases in France for firms with more concentrated ownership by the largest shareholder, Fan and Wong (2005) find the opposite in eight East Asian countries. Specifically, the use of a Big 4 auditor is positively associated with the level of voting rights held by the largest single stockholder (which averages 28 percent in their sample). That is, as voting rights increase, a Big 4 auditor is more likely to be used. Their argument is that firms with greater control by a single owner have the ability to behave opportunistically relative to other shareholders and, therefore, such firms have incentives to signal their credibility by using a higher quality auditor as external monitor. Consistent with this argument, their results hold only for a subset of firms that are frequent issuers of equity and, therefore, have a greater need to signal credibility. One possible explanation for these seemingly contradictory results is that alternative governance mechanisms are not well developed in the East Asian countries, which results in external auditing playing a relatively more important role in corporate governance (Fan and Wong 2005, 42). In contrast, alternative governance mechanisms may be more credible in France. This conjecture is supported by considering the six governance indices developed by the World Bank (Kaufmann et al. 2007). For 2003 France shows higher scores on each of the governance indices compared to the average score of the eight Asian countries (Hong Kong, Indonesia, South Korea, Malaysia, Singapore, Taiwan, Thailand, and Philippines) in Fan and Wong (2005): voice and accountability (France 1.09 versus East Asia 0.21); political stability (France 0.51 versus East Asia −0.02); government effectiveness (France 1.57 versus East Asia 0.74); regulatory quality (France 1.20 versus East Asia 0.66); rule of law (France 1.36 versus East Asia 0.42); and control of corruption (France 1.47 versus East Asia 0.44).

provide strong evidence that two Big 4 auditors (the highest auditor-pair quality) are used rather one Big 4 auditor (paired with a non-Big 4 firm) when there is greater information asymmetry in the ownership structure.

Panel C of Table 3 drops those observations audited by two Big 4 auditors, and tests if ownership structure affects the use of one Big 4 auditor paired with a non-Big 4 auditor (n = 241) relative to companies choosing *no* Big 4 auditor (n = 172). In column (1), the use of one Big 4 auditor is more likely when there is low-ownership concentration (p < .01). In column (2) the use of one Big 4 auditor is significantly associated with increasing levels of international ownership (p < .10), public ownership (p < .01), and employee ownership (p < .10). These results are consistent with our expectations based on information asymmetry. General public investors and international investors are more distanced from the company in which case there would be a greater need for a credible audit when these investor groups hold larger ownership percentages. No directional prediction was made for employees, but they may demand higher quality audits when their stake in a company is higher. We note a negative coefficient for industry ownership (p < .10) and it is possible that there is less information asymmetry when other companies have the largest ownership percentage. In column (3), when the general public is the largest ownership group, such firms are more likely to have a Big 4 auditor relative to the default family dominated firms (p < .01). Otherwise no other ownership variables are significant except for pension funds that have an unexpected negative association with the use of a Big 4 auditor (p < .10). We have no explanation for this result although it should be interpreted with care since the number of firms with pension funds as majority owner is very small (n = 7). Overall Panel C provides evidence that one Big 4 auditor is preferred to ''none'' as an external monitor when there is more information asymmetry arising from less concentrated ownership structure and larger ownership by non-family groups such as the general public, international investors, and employees.

Panel D of Table 3 analyzes companies using two non-Big 4 accounting firms. We compare 62 companies using the five large French accounting firms or one large French firm paired with another non-Big 4 auditor (recall only four companies in the sample use two large French firms) with the 103 companies using two small French accounting firms as their auditors. In column (1), the concentration variable is insignificant. In column (2) there is less use of large French auditors as family ownership increases (p < .01), and greater use of large French auditors when ownership increases by banks (p < .10), industry (other companies), and pension funds (p < .10). In column (3), use of a large French accounting firm is significantly more likely to occur relative to family-dominated firms when public investors, industry (other companies), and institutional investors (banks and pension funds) are the major ownership groups. Among non-Big 4 auditor pairs, the results in Panel D indicate that ownership structure also affects the use of larger rather than smaller French accounting firms, so even when two non-Big 4 auditors are used there is evidence that auditor pairs are systematically associated with increasing levels of information asymmetry in the ownership structure.

In sum, the auditor choice tests in Table 3 are unique in terms of a more complex ordering of audit quality in France than in other countries due to the joint audit requirement. Overall, the evidence is consistent with predictions from agency theory: higher quality auditing is associated with ownership structures in which there is increasing separation of ownership and control resulting in information asymmetry between investors and the firm. Broadly, we find that Big 4 audits are demanded when ownership concentration is low (more diversity), when family ownership is low, and when ownership by non-family groups is high. As information asymmetry increases in the ownership structure, two Big 4 auditors

are preferred to one Big 4 auditor (paired with a non-Big 4 firm), one Big 4 auditor is preferred to none, and large French auditors are preferred to small French auditors. Thus cross-sectional differences in agency costs and information asymmetry explain auditor-pair choices even though France has higher ownership concentration (on average) than the U.S., although as noted before there is enormous cross-sectional variation both within and across the eight investor groups.

While the remaining model variables in Table 3 serve primarily as controls for other factors that may affect auditor choice, they are also of interest in their own right. The most consistent evidence across all panels in Table 3 is that larger companies use higher quality auditor pairs. There is also some evidence that companies with high debt levels are also more likely to use higher quality auditors (Panels A and B), which is consistent with Piot (2001). There is an unexpected opposite result in Panel C on leverage but this may be due to a high correlation between leverage and complexity (0.45). Indeed, we find that more complex companies use higher quality auditors in Panels C and D. Unexpectedly, growth companies are less likely to use higher quality auditors (Panel C), but this result is driven by small companies with very high growth rates and that use mainly small French auditors. Specifically, companies with two small French auditors are more likely to be in the top quartile of asset growth and in the bottom quartile of size (assets). Further, we observe an unexpected negative relationship between degree of international operations and higher quality auditors in Panel A and B, but we do observe the expected positive relationship in Panel C. We attribute this to the high correlation between the measure for internationalization (Foreign Sales) and client size (Ln(Assets)). Finally, there is some evidence that more profitable firms engage higher quality auditors (Panels B and D), and that loss-making firms are less likely to engage larger auditors (Panel C). In sum, the most consistent results in Table 3 are that higher quality auditor pairs are used for larger firms with higher debt levels, but the other relations are less consistent and appear to be somewhat confounded by correlations within the set of control variables.

EARNINGS QUALITY TESTS

Despite criticisms[18] abnormal accounting accruals continue to be widely used to measure earnings quality, and to infer differences in audit quality by examining the accruals properties of audit firm clienteles (e.g., Becker et al. 1998; Francis et al. 1999; Frankel et al. 2002; Francis and Wang 2008).[19] The OLS regression model in Equation (2) tests if abnormal working capital (current) accruals are systematically different for companies with different auditor-pair combinations:

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[18] Prior studies have established that, on average, accruals models have limited predictive accuracy and power to detect earnings management, although this should work against finding a predicted association between auditor-pair choice and abnormal accruals (e.g., Dechow et al. 1995; Kang and Sivaramakrishnan 1995; Peasnell et al. 2000; Thomas and Zhang 2000).

[19] Accruals map to earnings quality in the following manner. Accrual-based earnings are more value-relevant and informative to investors than operating cash flows (Dechow 1994). However, there is evidence that a dollar of the accrual component of earnings has a lower association with the market valuation of firms than a dollar of operating cash flows (Subramanyam 1996). This finding is consistent with the fact that accruals are the product of estimations and judgments by managers about future events (Dechow and Dichev 2002), as well as opportunistic discretion by managers to distort accruals in order to meet earnings targets. All things being equal, earnings with relatively larger amounts of accruals are presumed to be inherently less reliable and more likely to be the result of opportunistic discretion by managers in applying accrual-based accounting. Therefore larger accruals imply lower earnings quality, *ceteris paribus*. With respect to auditing, the question is whether some auditors are more effective at constraining opportunistic reporting by managers resulting in smaller levels of abnormal accruals.

$$\text{Abnormal accruals} = f \text{ (auditor-pair choice, control variables).} \qquad (2)$$

The same partitions of auditor pairs are used as in Table 3. Control variables are based on prior studies and include size (Ln(Assets)), debt levels (Leverage), and profitability (ROA). Accruals are greater for large firms (even after scaling accruals for firm size), and firms with high debt levels or low profitability have been argued to have greater incentives to aggressively manage accruals in order to avoid debt default and to avoid reporting losses (Becker et al. 1998).

Abnormal accruals are defined as abnormal working capital accruals (AWCACC) scaled by lagged assets. Working capital or current accruals are defined as the change in current assets (less the change in cash and cash equivalents) from the prior year, minus the change in current liabilities (less the change in short-term debt and current portion of long-term debt). Abnormal working capital accruals are then specified as ''expected'' accruals minus actual accruals. Expected accruals are based on a linear model in DeFond and Park (2001) in which the prior year's ratio of working capital (current) accruals to sales is applied to next-period actual sales to predict next-period expected working capital accruals.[20] Abnormal accruals are calculated as the difference between expected accruals and actual accruals, scaled by lagged assets. As reported in Table 2, the abnormal accruals variable AWCACC has a mean (median) of -0.015 (-0.006) for a sample size of n = 261. The sample of 261 has 123 observations with income-increasing abnormal accruals and 138 with income-decreasing abnormal accruals. Note the sample size is reduced relative to Table 3 as firms in the financial services sector are dropped because their accrual structure is qualitatively different from other firms. In addition, observations with extreme values for accruals are also dropped (if the absolute value of abnormal working capital accruals scaled by lagged assets is above 0.90, which is equivalent to deleting the top and bottom 2.5 percent of the distribution).

Since earnings quality is impaired if earnings are either overstated *or* understated, the absolute value of abnormal accruals is initially used to assess earnings quality (Warfield et al. 1995). The absolute value of abnormal accruals (untabulated) has a mean (median) of 0.116 (0.056). In addition, abnormal accruals are analyzed separately for observations with income-increasing (positive) accruals and income-decreasing (negative) accruals. The reason for this additional analysis is the widely held view that the use of aggressive accounting practices to increase reported earnings is more problematic for earnings quality than the discretionary use of accruals to reduce current period earnings.

Results of the earnings quality tests are reported in Table 4. Individual coefficients are tested using t-statistics, and one-tailed p-values are reported for all variables based on robust standard errors corrected for heteroscedasticity. It turns out the absolute value of abnormal working capital accruals is not significant in any of the tests, and these results are not discussed any further. However, there is evidence of a systematic association between accruals and auditor-pair choices when abnormal accruals are partitioned into firms with income-increasing (positive) versus income-decreasing (negative) abnormal accruals.

The first auditor partition in Panel A of Table 4 compares companies with two Big 4 auditors with all other companies in the sample. The results show that the use of two Big

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[20] A cross-sectional Jones (1991) model is not used to estimate abnormal accruals because it requires more data than the approach in DeFond and Park (2001) and would cause a large reduction in the number of observations. In our sample, if two-digit SIC codes are used to define industry categories, as is typically the case, then only 11 of 37 industries have the rule-of-thumb of 10 minimum observations required to estimate the Jones model. In addition, a recent study suggests that the Jones model does not perform well on non-U.S. data, and this may in part be caused by small industry samples in international settings (Meuwissen et al. 2007).

4 auditors is associated with smaller income-increasing abnormal accruals. The t-statistic is −2.73 and is significant at $p < 0.01$. Note that the auditor test variable is not significant in the sample of income-decreasing abnormal accruals.

The partition reported in Panel B of Table 4 compares firms using two Big 4 auditors with firms using only one Big 4 auditor, and the results are similar to Panel A. Again the use of higher quality auditing (two Big 4 firms) is associated with smaller income-increasing

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TABLE 4
OLS Regression Models of Abnormal Working Capital Accruals

Panel A: Two Big 4 Auditors versus All Other Auditor Pairs

	Predicted Sign	$|AWCACC|$ (n = 261) Coefficient (t-value)	Income-Increasing $|AWCACC|$ (n = 123) Coefficient (t-value)	Income-Decreasing $|AWCACC|$ (n = 138) Coefficient (t-value)
Constant		0.271 (4.74)***	0.254 (3.15)***	0.277 (3.77)**
Ln(Assets)	−	−0.013 (−2.72)***	−0.011 (−1.79)**	−0.014 (−2.05)**
Leverage	+	0.003 (0.08)	−0.031 (−0.55)	0.015 (0.25)
ROA	−	−0.057 (−0.74)	0.181 (1.30)*	−0.147 (−1.81)
B4_B4	−	−0.023 (−1.07)	−0.057 (−2.73)***	0.014 (0.41)
R^2		4.98%	7.22%	7.58%
F-value		3.88***	3.18**	2.51**

Panel B: Two Big 4 Auditors versus One Big 4 Auditor Paired with a Non-Big 4 Auditor

	Predicted Sign	$|AWCACC|$ (n = 163) Coefficient (t-value)	Income-Increasing $|AWCACC|$ (n = 81) Coefficient (t-value)	Income-Decreasing $|AWCACC|$ (n = 82) Coefficient (t-value)
Constant		0.223 (3.59)***	0.112 (1.88)**	0.351 (3.34)***
Ln(Assets)	−	−0.008 (−1.51)*	0.000 (0.11)	−0.018 (−1.98)**
Leverage	+	−0.036 (−0.74)	−0.081 (−1.49)*	−0.023 (−0.30)
ROA	−	−0.065 (−0.69)	0.054 (0.48)	−0.095 (−0.80)
B4_B4	−	−0.021 (−0.93)	−0.038 (−1.87)**	0.004 (0.12)
R^2		3.50%	6.25%	7.55%
F-value		2.24**	1.63*	1.72*

TABLE 4 (continued)

Panel C: Big 4 and Non-Big 4 Auditor Pair versus Firms with Two Non-Big 4 Auditors

	Predicted Sign	|AWCACC| (n = 230) Coefficient (t-value)	Income-Increasing |AWCACC| (n = 108) Coefficient (t-value)	Income-Decreasing |AWCACC| (n = 122) Coefficient (t-value)
Constant		0.283 (4.07)***	0.301 (2.93)***	0.277 (3.02)***
Ln(Assets)	−	−0.014 (−2.35)***	−0.012 (−1.69)*	−0.016 (−1.74)**
Leverage	+	0.000 (0.02)	−0.052 (−0.80)	0.008 (0.14)
ROA	−	−0.053 (−0.67)	0.157 (1.10)	−0.146 (−1.79)**
B4_NB4	−	−0.006 (−0.36)	−0.044 (−1.45)*	0.032 (1.09)
R^2		4.10%	7.44%	7.80%
F-value		1.97**	1.39	1.89*

Panel D: One or Two Large French Auditors versus Two Small French Auditors

	Predicted Sign	|AWCACC| (n = 94) Coefficient (t-value)	Income-Increasing |AWCACC| (n = 40) Coefficient (t-value)	Income-Decreasing |AWCACC| (n = 54) Coefficient (t-value)
Constant		0.400 (3.00)***	0.607 (2.42)**	0.212 (1.44)*
Ln(Assets)	−	−0.025 (−2.10)**	−0.042 (−2.16)**	−0.009 (−0.57)
Leverage	+	0.015 (0.21)	−0.065 (−0.67)	0.054 (0.64)
ROA	−	−0.094 (−0.61)	0.105 (0.20)	−0.287 (−2.82)***
LF_NB4	−	−0.010 (−0.28)	0.067 (1.02)	−0.064 (−1.62)**
R^2		10%	19.5%	18.7%
F-value		2.10**	2.05**	3.27***

*, **, *** $p < .10$ percent, $< .05$ percent, and $< .01$ percent levels, respectively (one-tailed).

Variable Definitions:

\|AWCACC\| = absolute value of abnormal working capital accruals, scaled by lagged assets;

 Ln(Assets) = natural log of total assets;

   Leverage = total debt/total assets;

     ROA = return on assets in percentage, measured as net income/total assets $\times$ 100;

   B4_B4 = two Big 4 accounting firms;

   B4_NB4 = Big 4 accounting firm and non-Big 4 accounting firm; and

   LF_NB4 = two large French audit firms and/or one large French firm paired with another non-Big 4 firm.

abnormal accruals relative to firms using just one Big 4 auditor paired with a non-Big auditor. The t-statistic is −1.87 and is significant with a one-tailed p-value of 0.03. As in Panel A, the auditor test variable is not significant in the sample of income-decreasing abnormal accruals. Together the analysis in Panels A and B provide evidence that two Big 4 auditors are a more effective external monitor in constraining income-increasing abnormal accruals than one Big 4 auditor (paired with a non-Big 4 firm).

Panel C of Table 4 drops observations with two Big 4 auditors, and reports the results of companies using one Big 4 auditor (paired with a non-Big 4 auditor) versus companies using non-Big 4 audit pairs. These results are comparable to Panels A and B and show that the use of higher quality auditing (in this case one Big 4 auditor versus no Big 4 auditors) is associated with smaller income-increasing abnormal working capital accruals. The t-statistic is −1.45 and is significant with a one-tailed p-value of 0.07. As in Panels A and B, the auditor test variable is not significant in the sample of income-decreasing abnormal accruals.

Finally, Panel D of Table 4 reports that the auditor test variable is not significant for the sample of income-increasing abnormal accruals: however, companies using large French accounting firms have smaller *income-decreasing* abnormal accruals than companies using small French accounting firms. The t-statistic is −1.62 and is significant at $p < 0.05$. A possible explanation for the negative coefficient is that small French accounting firms may allow their clients greater discretion to reduce reported earnings in order to minimize taxation. Prior research shows that earnings are managed downward for tax-related incentives (Shackelford and Shevlin, 2001). The tax-minimization incentives would be strongest for smaller family-owned companies. Consistent with this conjecture, we find that companies audited by two small French auditors are smaller (ln(Assets) of 10.56 versus 11.33 for companies with larger French auditors), and are more likely to be family owned. Specifically, families are the dominant investor group for 40 percent of companies with two small French auditors, compared to only 16 percent of companies audited by large French auditors.

We also consider the possibility that auditor self-selection may confound the results. If companies with higher quality earnings are more likely to select higher quality auditor pairs, or if higher quality auditors screen out more risky clients, then the observed results in Table 4 might not be the consequence of audit quality per se. To address this possibility, we conduct a Hausman (1978) specification test in which we estimate a probit model for each of the auditor choice models (Table 3, Panels A to D) and predict residuals that are then included in the abnormal accruals regression models (Table 4, Panels A to D). In none of the panels is the coefficient of the residual statistically significant, which gives us some assurance that we do not have endogeneity with respect to auditor selection.

In sum, the evidence in Table 4 in Panels A, B, and C consistently indicates that clients of Big 4 auditors have smaller income-increasing abnormal working capital accruals, and that the earnings of these companies are therefore less likely to be affected by opportunistic managerial discretion that overstates earnings. The evidence also indicates that earnings quality is highest when two Big 4 auditors are used, and next highest when one Big 4 auditor is used. The results in Panel D for French accounting firms provide evidence of a greater constraint on income-decreasing earnings management by companies with large French auditors relative to companies with small French auditors.

Taken together the results in Tables 3 and 4 are compelling. Companies with greater information asymmetry due to increasing separation of ownership and control are more likely to be audited by higher quality "auditor pairs" and the earnings of these companies appear to be of higher quality based on the analysis of income-increasing abnormal working

capital accruals. The pecking order of audit quality is two Big 4 auditors, one Big 4 auditor (paired with a non-Big 4 auditor), large French auditors, and small French auditors.[21]

DISCUSSION AND CONCLUSION

This study investigates a unique corporate governance requirement in France in which two auditors jointly undertake audits and issue a single, jointly signed audit report. This makes a firm's choice of auditors more complex than the usual Big 4/non-Big dichotomy around the world in which a single auditor is engaged. Specifically, our study examines if a firm's ownership structure (along with variables to control for other factors that affect auditor choice) is associated with its choice of Big 4/non-Big 4 auditor pair combinations and the following hierarchy of audit quality pairs: (1) the use of two Big 4 auditors; (2) the use of one Big 4 auditor paired with a non-Big 4 auditor; (3) the use of large French accounting firms; and (4) the use of small French accounting firms. The tests support this four-level ordering of audit quality, although such an outcome was not obvious at the outset. France has more concentrated stock ownership than in Anglo-American countries, and given this institutional structure, there may be less serious information asymmetry problems, in which case there is not necessarily a demand for high-quality audits. Nevertheless, it turns out that agency theory is strongly supported in our study of French-listed companies. Higher quality auditor pairs are more likely to be used when there is less concentrated ownership, less ownership by families, and greater levels of public and international ownership. These results are robust and stand in sharp contrast to the mixed evidence in prior U.S. studies, which may be hindered by the more limited reporting of ownership data than is the case in France.

We also examine the consequence of auditor choice on earnings quality. Some prior European studies have been unable to replicate U.S. research findings on differential earnings quality for clients of Big 4 auditors, including the analysis of 102 French companies by Piot and Janin (2007) who use a different research design. However, we find that French companies audited by a Big 4 auditor are less likely to have income-increasing abnormal accruals, and that companies with two Big 4 auditors are even less likely to have such accruals.

In sum, the evidence indicates that the complexity of auditor choice in France created by the joint audit requirement plays out in a way consistent with underlying economic incentives from agency costs driving the use of Big 4 auditors and resulting in higher quality financial reporting. An important caveat is that we do not know if the joint audit requirement

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[21] In contrast to our study, Piot and Janin (2007) find no evidence that abnormal accruals are affected by Big 4 auditors. However, there are three important differences between the two studies. First, we have a larger sample of 261 firms for the accruals tests compared to 102 firms in Piot and Janin (2007), and therefore potentially more statistical power (although they do have three years of data for the 102 firms). Second, Piot and Janin (2007) make a comparison of firms having a Big 4 auditor (either one or two) versus all other firms. In contrast we delineate more precisely the exact nature of a firm's auditor-pair choice and make multiple comparisons of auditor-pair choices. Third, we use a different expectation model to measure abnormal accruals. Piot and Janin (2007) use the well-known Jones (1991) model. However, their measure of abnormal accruals is likely to be noisier than in the U.S. context because the industry is specified at the equivalent of one-digit SIC codes due to the limited number of French firms in specific industries. More generally there is evidence that the Jones model does not perform well on non-U.S. data, which could also explain the insignificant results (Meuwissen et al. 2007). In contrast, we use a model derived from DeFond and Park (2001) in which expected accruals are based on each firm's prior-year linear relation between sales and working capital accruals. This model has been used by Maijoor and Vanstraelen (2006) to study earning management in three European countries, Carey and Simnett (2006) to examine the effects of audit engagement partner tenure on earnings equality in Australia, and Francis and Wang (2008) who study earnings management in 42 countries.

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in France is more effective and produces better quality audits than the single auditor approach in other countries. However, in terms of earnings quality, the evidence does suggest that two Big 4 auditors are better than one Big 4 auditor (paired with a non-Big 4 auditor), and that one Big 4 auditor (paired with a non-Big 4 auditor) is better than none (two non-Big 4 auditors). Further, while this study provides evidence on choice of ''audit firm pairs'' we do not examine supply-side factors around why particular auditor pairings occur, or the consequences thereof; this is a potentially interesting question for future research. For example, as noted earlier, Deloitte and Ernst & Young are the audit pair for 16 of the 54 observations with two Big 4 auditors. Finally, accrual-based earnings management is only one of many ways to assess earnings quality and future research could look into the consequences of auditor pairs using alternative measures of earnings quality such as earnings restatements, accounting conservatism, time-series properties of earnings, and real earnings management.

APPENDIX
AUDIT REGULATION IN FRANCE

The joint audit requirement for listed companies has been in force since 1966, although it was a common practice at the time it was formally adopted. Bennecib (2004) suggests the historical emergence of a joint audit is explained by two rationales. First, it can deal with the problem of default by one of the auditors. A defaulting auditor can only be replaced upon a decision of the Court of Commerce, which can result in a delay of the availability of the annual report. Second, a joint audit can safeguard auditor independence, which would give the French auditing profession greater credibility and prestige.

In 1984, the joint audit requirement was threatened by the introduction of consolidated financial reporting at the European level (7th EU Directive, 1983). Prior to 1984, group accounts were not required in France, and the policy debate in France centered on whether to make a joint audit mandatory for companies that must also consolidate under the new EU regulations. The final decision in 1984 extended the requirement of a mandatory joint audit to companies required to prepare consolidated financial statements. Bennecib (2004) believes this decision was influenced by the changing structure of the French audit market at that time. In particular, it appeared in the 1980s that the presence of Anglo-American audit firms was increasing precisely because of the newly introduced EU consolidation requirement. As a result of this increased competition, French audit firms put pressure on the French National Assembly both to keep and to extend the joint audit requirement because they feared that most, if not, all large French companies would ultimately be audited by large Anglo-American accounting firms. Regardless of the historical rationale for the legislation, Piot and Janin (2007) suggest that today the joint audit is widely viewed as enhancing auditor independence by providing a reciprocal check on the diligence of each auditor.

The statutory audit of companies in France is primarily governed by Company Law (Loi sur les Sociétés Commerciales of July 24, 1966). Following the 4th EU Directive, companies that meet specific legal form and/or size criteria are required to have their financial statements audited by a member of the regulatory body of the French auditing profession, which is the French National Institute of Auditors (Compagnie Nationale des Commissaires aux Comptes [CNCC]). The CNCC is under supervision of the Ministry of Justice. All public companies and incorporated partnerships (sociétés en commandite par actions) are required to be audited, irrespective of their size. In addition, private limited liability companies, limited partnerships (sociétés en commandite simple), and general partnerships (sociétés en nom collectif) are subject to the auditing requirement if they meet

two of the following criteria at balance sheet date: (1) total assets of 1,550,000 euros; (2) sales, excluding tax, of 3,100,000 euros; and/or (3) 50 or more employees.

Auditors in France are appointed for a period of six years. The auditor cannot be dismissed during this six-year period except under exceptional circumstances that require a court decision. Resignation of the auditor during this period is likewise restricted. The audit firm's appointment can be renewed without limitation for further six-year periods, although for listed firms a mandatory audit partner rotation was introduced in 2003 by the French Financial Security Law. The auditor certifies that the financial statements give ''a true and fair view of the company's result for the year and of the state of affairs at the year end'' (Article 228, Commercial Code). Besides reporting on ''truth and fairness'' the statutory auditor (Commissaire aux Comptes) must also report on compliance with company law, criminal acts, or fraud that have a material impact on the financial statements, and going concern. The audit has to be conducted in accordance with the generally accepted auditing standards and guidelines promulgated by the French National Institute of Auditors (CNCC). The CNCC issues standards and guidelines on auditing matters and is assisted in this respect by the Regional Institutes of Statutory Auditors (Compagnies Régionales des Commissaires aux Comptes) (Buijink et al. 1996). The statutory auditors are appointed at the annual general meeting of shareholders.

In response to financial scandals in the U.S. and Europe, the Code of Commerce was modified in 2003 by the French Financial Security Law. This law created a new High Council of Auditors to provide supervision of the profession with support of the CNCC and to ensure respect for professional ethics and the independence of auditors (Baker et al. 2008). Furthermore, the French Financial Security Law (2003) established the French Financial Market Authority (Autorité des Marchés Financiers [AMF]) to oversee the functioning of the securities market. The AMF must be informed of proposals to appoint or reappoint auditors of listed companies, can request information on listed client companies from auditors, and are entitled to inspect an auditor of a listed company and to request assistance of the CNCC (Baker et al. 2008). The French Financial Security Law (2003) also created a new internal control reporting requirement for the auditor. In particular, auditors need to give an opinion on the chairman of the Board of Directors' report describing the internal control procedures relating to the origination and processing of the accounting and financial information (Baker et al. 2008). Auditors also have new reporting obligations under the French Financial Security Law (2003), and are required to raise with the AMF audit client issues that are likely to impact financial reporting, under a waiver of client confidentiality. In particular, auditors must inform the AMF on matters whereupon the auditors refuse to certify the accounts, and auditors must immediately report information in cases of going-concern problems and discovered irregularities or inaccuracies.

The auditor's report and the financial statements have to be filed with the Companies Registry within one month following their approval at the annual general meeting, followed by an announcement of the filing of these documents in the legal gazette (BODACC), and are publicly available (Gélard 2001). The client company, its shareholders, or any interested third party can undertake legal action against an auditor. France has adopted a proportional liability system, placing liability upon the defendants according to their contribution to damages (Buijink et al. 1996). Legal liability cannot be capped by law or by contract, and auditors in France are required to maintain a minimum professional indemnity insurance of 75,000 euros. Legal action against a statutory auditor can only be undertaken within three years after the issue of the auditor's report, although litigation rates in France are quite low (Piot and Janin 2007).

Finally, France has a number of regulations to safeguard auditor independence, in addition to the appointment of joint auditors (Maijoor and Vanstraelen 2006). As mentioned, the minimum audit appointment is six years, and the appointment of the statutory auditor needs to be approved by the French Financial Market Authority (Autorité des Marchés Financiers [AMF]). Furthermore, independence regulations in France prohibit the provision of management advisory services and advertising, and there are restrictions on auditors moving to clients or client personnel moving to audit firms. Statutory auditors are subject to reviews by both peers and regulators. These regulations had been in place many years before the EU issued its recommendation on auditor independence regulations in May 2002. Finally, since the implementation of the EU independence regulations in 2005, listed companies in France are now required to have an audit committee.

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