INTERPRETATION OF ABNORMAL AUDIT DELAYS: IMPLICATIONS FOR EARNINGS QUALITY AND FIRM VALUE

1. Introduction.

The purpose of this paper is to examine the association between abnormal audit delays and earnings quality and its effect on the earnings valuation coefficient.[1] Prior research (discussed in the next section) has examined the determinants of audit delays. Audit delays can cause delay in annual accounting disclosures. Delayed earnings announcements generally cause less market reaction than early announcements due to lack of timeliness or even negative reactions as they are likely to contain bad news. However, the research question that abnormal audit delay, that may be caused by material disagreement between the auditor and client regarding accounting practices and/or calculation of accounting numbers, may contain information about quality of earnings beyond that conveyed by earnings report delay has not been investigated by extant research. Moreover, the market may use this incremental information about earnings quality in the firm's valuation process.

The current paper contributes to existing research in several ways. First, it establishes a comprehensive model to explain audit delays and provides a tool to measure abnormal audit delays. Second, it provides evidence of inverse association between abnormal audit delay and seven proxies of earnings quality. Third, the abnormal audit delay is shown to provide incremental information about earnings quality beyond that contained in the earnings report delay. Finally, the paper shows that abnormal audit delay creates skepticism among investors about earnings quality and they value the disclosed earnings after discounting for such delay.

[1] Audit delay is defined as the length of time from the firm's fiscal year-end to the date of the auditor's report. Abnormal audit delay is the portion of the audit delay that cannot be explained by factors identified in prior research that determine audit delay. Earnings valuation coefficient is the pricing of $1 earnings per share in the determination of the firm value.

This result persists even after controlling for the previously documented valuation implications of delay in reporting earnings. Thus, the paper provides evidence to support the hypothesis that abnormal audit delays signal poor earnings quality and that investors discount the value relevance of such earnings when making resource allocation decisions. These findings have implications for the role of independent auditors in the attestation process and the informational efficiency of the equity markets.

The rest of the paper is organized as follows. The next section discusses the theory and hypotheses. Section 3 presents the research design and section 4 the sample selection procedure. Finally, section 5 discusses the empirical results and the last section concludes.

2. Theory and Hypotheses

Existing Research

Several researchers have examined the determinants of audit delays. Courtis (1976), Gilling (1977), Davies and Whittred (1980), and Garsombke (1981) find that audit delays are inversely related to total assets; Courtis (1976) also reports that financial firms have less delays than other firms. Davies and Whittred (1980) and Garsombke (1981) find longer delays for companies with fiscal year-ends during the busy season. Givoly and Palmon (1982) look at relationship between audit delays and firm size, operational complexity, and quality of internal controls. Ashton *et al*. (1987) examine 14 determinants of audit delays. In the multivariate analyses, five of these are significant. They find that audit delay is positively associated with natural logarithm of total revenue and operational complexity; and negatively associated with publicly traded companies, quality of internal controls, and relative mix of audit work performed at interim and final dates.

Newton and Ashton (1989) examine audit delays among Canadian Big-Eight firms. Contrary to their expectations, they find that structured audit approaches lead to more audit delays than firms using unstructured audit technology. Ashton *et al*. (1989) find that for a sample of Canadian firms, client size, auditor size, fiscal year ending in busy season, industry classification, existence of extraordinary items, and sign of net income have significant effect on audit delays. Carslaw and Kaplan (1991), in addition to variables from prior research, add two more variables for a sample of New Zealand firms- company control and debt proportion. Bamber *et al*. (1993) conclude that audit delays are an increasing function of extent of audit work, decreasing function of incentives to provide a timely report, and increasing function of the extent to which an auditor employs a structured audit approach. Kinney and McDaniel (1993) extend prior research by relating audit delays to correction of previous interim earnings. They show that audit delay is positive for firms with interim overstatements and declining earnings, and that the audit delay increases with the size of the overstatement of interim earnings.

Ng and Tai (1994) extend prior findings on audit delays to Hong Kong firms. Lawrence and Glover (1998) report that, contrary to expectations, mergers of audit firms did not lead to the expected improvements in operational efficiency due to synergy. Knechel and Payne (2001) use proprietary data to examine the effect of incremental audit effort, resource allocation of audit team effort, and the provision of non-audit services on audit delays. Payne and Jensen (2002) and Johnson *et al.* (2002) examine audit delays in specific settings, such as municipal corporations and local governments. More recently, Ettredge *et al.* (2006) examine the impact of section 404 of Sarbanes-Oxley Act requirements on audit delays and Tamara *et al.* (2007) examine the consequences of accelerated filings required by SEC rule 33-8644. The latter find reductions (increases) in audit delay are associated with lower (higher) earnings quality.

Prior research cited above has primarily focused on the factors that impact audit delays. Another stream of research has examined the effect of delay in disclosing accounting information on the information content of the accounting disclosure. Chambers and Penman (1984), Givoly and Palmon (1982), Kross (1982), and Kross and Schroeder (1984) find that late earnings announcements are associated with lower (even negative) abnormal returns than early announcements. There is also evidence that management may intentionally delay (speed up) the announcement of bad (good) news (Givoly and Palmon 1982; Pastena and Ronen 1979; Patell and Wolfson 1982; Penman 1984; Ronen 1977; Verrechia 1983, etc.). Givoly and Palmon (1982) and Chambers and Penman (1984) argue that the information content of annual reports would deteriorate with reporting delay as investors gain information from alternative sources of information, prevalence of leaks, exploitation of inside information, voluntary disclosures by firms, or through information transfers from earnings reports released by other firms (Foster 1981). This stream of literature deals with intentional delay of bad news by managers or diminished informativeness due to lack of timeliness of earnings disclosure.

Limitations of Existing Research and Incremental Contribution of Current Paper

A recent paper, Tamara *et al*. (2007) that looks at a similar research question, uses the total audit delay level and change in their estimation. They are, however, not controlling for any factors that determine audit delay documented in prior research. Deviation of actual audit delay from a normal audit delay (expectation based on firm and auditor characteristics), as defined in the current paper, will yield more robust conclusions about the relationship between audit delay and earnings quality. Tamara *et al*. (2007) also do not examine the incremental information contained in audit delays over financial statement reporting delays. The current paper

distinguishes between delay in reporting annual financial statements versus audit delay; and between diminished information content due to lack of timeliness versus value relevance of earnings information. Even though audit delay is the" single most important determinant of the timeliness of the earnings announcement" (Givoly and Palmon 1982), audit delays explain less than 45% of the variability in earnings announcement delays; and on average, audit reports are signed more than seven days after the earnings disclosure (see table 4). Thus, audit delays could provide incremental information about earnings quality beyond that conveyed by earnings report delays.

Moreover, event-study methodology that looks at returns/price volatility around earning disclosure date will not capture the influence of subsequent disclosures (such as 10-K reports) on earnings quality. Finally, prior studies, such as, Chambers and Penman (1984) and Givoly and Palmon (1982) mainly focus on the timeliness aspect of the earnings disclosure. However, Statement of Financial Accounting Concepts No. 2: *Qualitative Characteristics of Accounting Information,* issued by the Financial Accounting Standards Board in May 1980, lists several attributes of earnings quality, such as, accuracy, completeness, verifiability, neutrality, comparability, consistency, and predictive value, in addition to timeliness. This paper uses a more comprehensive definition of earnings quality than in prior research. By looking at the valuation of earnings subsequent to the release of all relevant pieces of information (such as 10-K and proxy statement), the findings shed light on a broader concept of earnings quality. The findings of this paper extend extant literature by examining the association between audit delays and earnings quality and then by looking at the effect of abnormal audit delays on the valuation of earnings.

Hypotheses

To the extent that "abnormal" audit delays may be caused by disagreements between auditor and client on issues of accounting practices, methodology of computation, and accuracy of reported accounting numbers, such delays could reflect adversely on earnings quality. Thus, the hypothesis tested in the paper can be written in alternative form as:

> *Hypothesis 1: Ceteris paribus, abnormal audit delays are inversely associated with the quality of reported earnings.*

Chambers and Penman (1984), Givoly and Palmon (1982), Kross (1982), and Kross and Schroeder (1984) find that delayed earnings announcements are associated with lower (even negative) abnormal returns than early announcements. Since audit delay is hypothesized to be associated inversely with earnings quality, any additional delay before earnings report is released is likely to be due to administrative reasons. If the earnings report is released prior to the audit report date, the additional delay after the earnings report release is expected to provide incremental information about earnings quality. Thus, overall, audit delays are expected to be a stronger predictor of earnings quality than earnings report delay itself. This leads to the second hypothesis.

> *Hypothesis 2: Ceteris paribus, abnormal audit delays provide incremental information about earnings quality over earnings report delay.*

Since audit delays are easily observable in comparison to the quality of earnings, a semi-efficient form of equity market may use any delay that is not explained by previously identified factors as a proxy for poor earnings quality and price the reported earnings number accordingly. The last hypothesis can now be written in alternative form as:

Hypothesis 3: Ceteris paribus, abnormal audit delays reflect adversely on the value-relevance of reported earnings.

3. Research Design

The paper uses a two-stage model to conduct the analyses. In the first stage, a detailed model using determinants from extant research (discussed in section 2) tries to explain the audit delay. In the second stage, the unexplained delay from stage one is used in the association tests with earnings quality. The following model is first run:

$$\begin{aligned} LADELAY &= \beta_0 + \Sigma_{i=1\text{-}6}\, \beta_{i=1\text{-}6}\, DYR_{i=1\text{-}6} + \beta_7\, DMANUF + \beta_8\, DUTILITY \\ &+ \beta_9\, DFINANCIAL + \beta_{10}\, ILADELAY + \beta_{11}\, LSIZE + \beta_{12}\, POWER + \beta_{13}\, CURR2TA \\ &+ \beta_{14}\, LEVERAGE + \beta_{15}\, LOSS + \beta_{16}\, DISTRESS + \beta_{17}\, CURRATIO + \beta_{18}\, ROA \\ &+ \beta_{19}\, LOWNCONC + \beta_{20}\, RETURN + \beta_{21}\, EGROWTH + \beta_{22}\, INVRATIO + \beta_{23}\, SEGMENTS \\ &+ \beta_{24}\, SUBSIDIARIES + \beta_{25}\, FOREIGNOPS + \beta_{26}\, CONTINGENCY + \beta_{27}\, BIG4/5 \\ &+ \beta_{28}\, EXPERT + \beta_{29}\, TENURE + \beta_{30}\, SWITCH + \beta_{31}\, LNAFEE + \beta_{32} OPINION + \beta_{33}\, CITYDUM \\ &+ \beta_{34}\, BUSYSEASON + \epsilon \end{aligned} \quad (1)$$

The variable definitions and reasons for inclusion in the equation are as follows. Consistent with prior research (Johnson *et al.* 2002), LADELAY is defined as the natural logarithm of audit delay, measured as the number of calendar days from fiscal year-end to date of auditors' report.[2] $DYR_{i=1\ldots6}$ are dummy variables for years 2001-06 to control for year specific commonalities. DMANUF, DUTILITY, and DFINANCIAL are dichotomous variables that represent clients operating in the manufacturing industry (SIC codes 20-39), utility industry (SIC codes 40-49), or financial industry (SIC codes 60-69), and are included to represent the

[2] This variable is obtained from Audit Analytics database and tabulated as SIG_DATE_OF_OP_S minus FISCAL_YEAR_END_OP.

level of audit difficulty in these industries. There is empirical evidence that some industries are more difficult to audit than others (Simunic 1980; Turpen 1990; Pearson and Trompeter 1994). Financial and utility firms have relatively large assets but have less inventory, receivables, or knowledge based assets and are easier to audit. On the other hand, manufacturing firms do not have this advantage and are considered more difficult to audit. Courtis (1976), Ashton *et al.* (1987) and Newton and Ashton (1989) find that financial companies have shorter audit delays than other companies. ILADELAY is the mean LADELAY for the two-digit SIC industry in that year and is expected to pickup up any common industry-year effects not captured by the previous variables. All the variables used in the paper are summarized in table 1.

(insert table 1 about here)

LSIZE is the natural logarithm of firm's total assets (Compustat data #6). Client size has been shown to be negatively associated with audit delay (Ashton *et al.* 1989). Ng and Tai (1994) argue that larger companies have better internal controls, allowing auditors to carry out more interim compliance and substantive tests, thereby reducing year-end audit work. Additionally, larger firms are under more pressure to release accounting information on a timely basis. POWER measures the client's bargaining power and is calculated as the natural logarithm of the audit fee paid by client divided by the sum of the natural logarithm of audit fee paid by all clients of the auditor in that industry in that year. Higher values of POWER imply greater bargaining power for the client (Castrella *et al.* 2004). Powerful clients may be able to influence the auditor to expedite their audits.

The next four variables are included to control for the effects of higher litigation risk (Bamber *et al.* 1993; Francis and Wang 2005) and the auditor may invest more time auditing such firms to reduce the likelihood of litigation. CURR2TA is the ratio of current assets

(Compustat data #4) to total assets (Compustat data #6). LEVERAGE is the ratio of total debt (Compustat data #9 + data #34) to total assets (Compustat data #6). LOSS is a dichotomous variable with value of one if client has a negative net income before extraordinary items, and zero otherwise. DISTRESS is the probability of client's bankruptcy based on Zmijewski's (1984) measure.

The following five variables represent lower litigation risk and therefore, reduced work for auditors (Bamber *et al.* 1993; Francis and Wang 2005). CURRATIO is the ratio of current assets (Compustat data #4) to current liabilities (Compustat data #5). ROA is the ratio of net income before extraordinary items and cumulative effect of accounting changes (Compustat data #18) to total assets (Compustat data #6). LOWNCONC is the natural logarithm of owner concentration. Owner concentration is defined as the number of shares outstanding divided by the number of shareholders (obtained from Compact-Disclosure database). The more concentrated the ownership of client's shares (i.e., the less widely held the shares), the lesser the number of number of individual investors relying on the client's financial statements. The lesser the reliance on client's financial statements, the lower the exposure to litigation risk. RETURN is the annual return of the client. EGROWTH is the percentage increase in the client's earning from last year. Kinney and McDaniel (1993) argue that declining earnings and declining stock prices may lead to the client's failure, leading to questions about the adequacy of the audit and the reliability of the financial statements. This may increase the risk of the auditor being sued. The auditor would, therefore, spend extra time on such firms in search of possible overstatements. On the contrary, higher RETURN and EGROWTH would amount to less time being spent on the audit.

Clients with more complex audits would require extra efforts on the part of the auditors (Ashton *et al.* 1987; Ashton *et al.* 1989; Cushing 1989; Ng and Tai 1994). The following variables proxy for audit complexity. INVRATIO is the ratio of inventory (Compustat data #3) to total assets (Compustat data #6). SEGMENTS is the number of business segments reported in COMPUSTAT segment file. SUBSIDIARIES is the number of principal subsidiary companies held by the client. FOREIGNOPS is a 0/1 dummy to capture the client's operations outside the United States. CONTINGENCY is a dichotomous variable for the presence of contingent liability (Compustat data#327).

The next set of variables controls for the effect of auditor characteristics on audit delays. BIG4/5 is a dichotomous variable with value of one if the auditor (Compustat data #149) is one of the Big 4 (or Big 5); and zero otherwise. Large auditors have been shown to complete their audits faster due to more staff resources, better experience, economies of scale (Ashton *et al.* 1989; Ng and Tai 1994). However, since large audit firms may have more structured audits, they may be slower (Newton and Ashton 1989). Also post Enron and Andersen, such firms may be under more scrutiny and may therefore be more thorough, resulting in delays. Following Craswell and Taylor (1991), Craswell *et al.* (1995), and Castrella *et al.* (2004), EXPERT is coded as one if the auditor has 20% or more market share (ratio of sum of natural logarithm of assets of auditor's clients in the industry divided by the sum of natural logarithm of assets of all firms in the industry) in the client's industry (two-digit SIC classification). Industry experts may audit faster due to greater experience and economies of scale. Similarly, auditors with greater TENURE (coded one if auditor has been with client for five years or more, zero otherwise) may complete their audit sooner due to familiarity with the client's internal controls, accounting

standards, ethical standards, etc.[3] On the other hand, as the tenure increases, partner rotation required under the Sarbanes Oxley Act may slow down the audit process.

SWITCH is coded as one if the client switches to a new auditor in the current year and zero otherwise. A new auditor would need extra time to familiarize itself with the client's operation, accounting procedures, and internal control system (Ng and Tai 1994). Provision of non-audit services (measured as LNAFEE, the natural logarithm of non-audit fee) may speed-up/delay the audit process (Knechel and Payne 2001). OPINION is a dichotomous variable with value of one if the audit opinion (Compustat data #149) is a qualified opinion; and zero otherwise. Clients with qualified opinions are likely to encounter audit delays (Ashton *et al.* 1989). Since a qualified audit report conveys negative information, clients may try to negotiate and/or delay its release by not cooperating with the audit process. Moreover, auditors may also spend extra time on the audit procedures in order to reduce any uncertainties or disagreements. CITYDUM is a dummy variable coded as one if the audit office is situated in one of the following costliest cities (based on consumer price index numbers available from the Bureau of Labor Statistics): New York, Los Angeles, Chicago, San Diego, Boston, San Francisco, Philadelphia, Honolulu, and Tacoma. This variable controls for any city-specific effects on the audit process. December year-end is a busy season for auditors in USA. The audits of clients with fiscal year-ends during the busy season (proxied by variable BUSYSEASON that is coded as a one/zero dummy) are likely to be delayed (Carslaw and Kaplan 1991).

The error term in equation 1 is designated as the abnormal audit delay, ABNDELAY. To test hypothesis 1 that abnormal audit delay is associated with poor quality earnings, seven measures of earnings quality are estimated. These are discussed below.

[3] The results are not sensitive to the cutoff of 5 years. Using 3 or 10 years, yields similar results.

DACC is the discretionary accruals to total assets at the end of the fiscal year, where discretionary accruals are calculated using the cross-sectional version of the Jones (1991) model as in DeFond and Jiambalvo (1994) and the difference between net income and cash from operations is the measure of total accruals (Hribar and Collins 2002).[4] MISSED is a dichotomous variable equal to one if the reported EPS on I/B/E/S database falls short of the mean analyst forecast made during thirty calendar days preceding the fiscal year-end. TRANSITORY is a dichotomous variable equal to one if the sum of extraordinary items (Compustat data #66) plus discontinued operations (data #192) is different from zero, and zero otherwise. VOLATILE is a proxy for the volatility (lack of smoothness) of earnings and is the ratio of standard deviation of earnings to standard deviation of cash flow from operations for the period t-6 to t. TIMELY is a measure of the timeliness of the earnings announcement. This is estimated as the industry mean (two-digit SIC classification) of earnings report delay minus the firm-specific earnings report delay. Earnings report delay is defined as the number of calendar days delay in disclosing the earnings (obtained from the Quarterly Compustat) after the end of the fiscal year-end. PERSIST is a measure of earnings persistence. This is the AR1 parameter from a firm-specific regression of current earnings per share on lagged earnings per share for the period t-6 to t. PREDICT is the adjusted r-square from the AR1 regression above. Then DACC, MISSED, TRANSITORY, and VOLATILE are expected to be negatively associated with earnings quality and TIMELY, PERSIST, and PREDICT are expected to be positively associated with earnings quality. Since abnormal audit delay is hypothesized to be negatively associated with earnings quality (hypothesis 1), the following relationships are expected.

- ABNDELAY is positively associated with DACC, MISSED, TRANSITORY and VOLATILE; and

[4] Using Absolute DACC does not change the conclusions.

- ABNDELAY is negatively associated with TIMELY, PERSIST, and PREDICT.

In the univariate tests of hypothesis 1, Pearson correlations coefficients are reported between ABNDELAY and the seven measures of earnings quality discussed above. Multivariate analysis is also conducted with the following regression.

$$ABNDELAY = \beta_0 + \beta_1 DACC + \beta_2 MISSED + \beta_3 TRANSITORY + \beta_4 VOLATILE + \beta_5 TIMELY + \beta_6 PERSIST + \beta_7 PREDICT + \epsilon \quad (2)$$

Hypothesis 1 predicts that coefficients β_1, β_2, β_3 and β_4, > 0; and β_5, β_6, and $\beta_7 < 0$. To test hypothesis 2, LERDELAY (natural logarithm of number of calendar days between earnings report date and fiscal year-end date) is included as an explanatory variable in equation 2. If hypothesis 2 is true, then β_1, β_2, β_3 and β_4, > 0; and β_5, β_6, and $\beta_7 < 0$ will continue to hold even in the presence of LERDELAY. The paper also combines the seven measures of earnings quality, DACC, MISSED, TRANSITORY, VOLATILE, TIMELY, PERSIST, and PREDICT into a single composite measure, E-QUALITY. All measures (except MISSED, which is already a dichotomous variable) are converted into dichotomous variables depending on whether they are above or below the median value in that year. The 0/1 values are assigned such that value of one signifies higher earnings quality. The seven variable are then added to form E-QUALITY with values between 0 (low earnings quality) to 7 (high earnings quality)[5]. Then, hypothesis 1 predicts that E-QUALITY is negatively associated with ABNDELAY.

The paper uses a model based on Ohlson's valuation model to test hypothesis 3. Assuming clean surplus accounting and autoregressive time series structure of abnormal

[5] The results are not sensitive to the method of estimation of E-QUALITY. Two other methods yield similar results. Method One: All the variables are arranged in increasing or decreasing order, and assigned ranks from 1 to N (sample size), such that higher ranks imply better earnings quality. These ranks are then added (or log transformed and added). Method Two: Each variable X is transformed as follows-[(X-minimum value)/(maximum value-minimum value)]. The transformation is done so that 0 (1) suggests low (high) earnings quality. These transformed variable are then added up.

earnings, Ohlson (1995) shows that market value is some linear combination of earnings and book value of equity:

$$MV_t = BV_t + \alpha_1 AE_t + \alpha_2 \theta_t \quad (3)$$

where MV_t is market value of equity at the end of period t, BV_t is book value of equity at the end of period t, AE_t is abnormal earnings during period t and θ_t is a vector of other information during period t.

Further, the abnormal earnings AE_t is defined as a function of observed earnings (E_t), the risk free rate (r_f), and book value,

$$AE_t = E_t - r_f BV_{t-1} \quad (4)$$

Substituting (4) into (3), market value of equity is equal to

$$MV_t = BV_t + \alpha_1 (E_t - r_f BV_{t-1}) + \alpha_2 \theta_t$$

Rearranging terms,

$$MV_t - BV_t = \alpha_1 (E_t - r_f BV_{t-1}) + \alpha_2 \theta_t \quad (5)$$

To reduce cross-sectional scale differences among the firms, all variables are scaled by BV_{t-1}, book value of equity at the beginning of period t (Christie 1987). Equation (5) can be rewritten as:

$$\frac{MV_t - BV_t}{BV_{t-1}} = \alpha_0 r_f + \alpha_1 \frac{E_t}{BV_{t-1}} + \alpha_2 \theta'_t \quad (6)$$

Define REV_t, a measure called relative excess value, where,

$$REV_t = \frac{MV_t - BV_t}{BV_{t-1}} \quad (7)$$

and ROE_t, return on equity, where

$$ROE_t = \frac{E_t}{BV_{t-1}} \quad (8)$$

and θ' is θ deflated by prior period BV. Using annual dummies DYR_t to proxy for risk free rate (r_f), equation 6 can be rewritten as

$$REV_t = \sum_t \alpha_t DYR_t + \alpha_1 ROE_t + \alpha_2 \theta'_t \quad (9)$$

To test the hypotheses 3, equation 9 can be rewritten as:[6]

$$REV = \alpha_0 + \Sigma_{i=1-6} \alpha_{i=1-6} DYR_{i=1-6} + \alpha_1 ROE + \alpha_2 ROE * ABNDELAY \quad (10)$$

where

REV = Relative excess value, defined as the market value of equity at the end of quarter 1 after the fiscal year-end minus the current book value of equity deflated by the book value of equity for the previous fiscal year.

ROE = current earnings (excluding extraordinary items) deflated by lagged book value of equity

If hypothesis 2 is true and abnormal delay in the audit process is a signal of poor earnings quality, the investors should value such earnings skeptically. In other words, $\alpha_1 > 0$ and $\alpha_2 < 0$. Prior research (Givoly and Palmon 1982; Chambers and Penman 1984) argues that the information content of earnings reports would deteriorate with reporting delay. To test if the delay in the auditing process is merely mimicking the reporting delay in earnings, or contains incremental information beyond delay in reporting earnings, equation 10 is modified as follows.

$$REV = \alpha_0 + \Sigma_{i=1-6} \alpha_{i=1-6} DYR_{i=1-6} + \alpha_1 ROE + \alpha_2 ROE * ABNDELAY + \alpha_3 ROE * LERDELAY \quad (11)$$

Where LERDELAY is as defined above. Then if ABNDELAY contains incremental information about earnings quality beyond LERDELAY, then $\alpha_2, \alpha_3 < 0$. Also, if ABNDELAY contains more useful information about earnings quality than LERDELAY then absolute (α_2) > absolute (α_3).

[6] Subscript "t" is dropped for the sake of brevity.

4. Sample

Sample selection procedure is described in table 2. The data used in the paper comes from four databases: Compustat, Audit Analytics, Compact-Disclosure, and I/B/E/S. Complete data is available for 5,298 firms for 22,492 firm-years. Table 3 presents the sample distribution across industries.[7] The largest number of firms belongs to the manufacturing industry (39.05%) and the smallest number of firms to Other industries (0.19%). The distribution of sample firms across the industries is generally similar to that of the Compustat population, with the manufacturing firm having the biggest difference (over 6%). Table 4 shows the variable characteristics. The average sample size is $6.87 billion (median = $0.4568 billion). The mean audit delay (approximately 54 days) is almost a week more the mean earnings report delay (approximately 47 days). Over 85% of the client firms are audited by big4/5 auditors with almost 73% clients having December 31 fiscal year-end. Almost 27% of the clients are located in large cities and over 10% clients switched auditors during the sample period.

(insert tables 2, 3, and 4 about here)

5. Results

Estimates of equation 1 are shown in table 5. The overall adjusted r-square is almost 27%. DMANUF, ILADELAY, LSIZE, CURR2TA, LEVERAGE, LOSS, CURRATIO, INVRATIO, SEGMENTS, SUBSIDIARIES, BIG4/5, EXPERT, TENURE, SWITCH, OPINION, CITYDUM, and BUSYSEASON are significant in the expected directions. DUTILITY, DFINANCIAL, POWER, DISTRESS, LOWNCONC, RETURN, EGROWTH, FOREIGNOPS, and CONTINGENCY are insignificant. ROA is significant but in a direction opposite to expected. One reason could be that mean ROA during the sample period is negative and therefore the prior findings may not apply. Moreover, since LOSS already captures the

[7] Based on industry classification of Dopuch *et al*. (1987).

impact of negative earnings, a predominantly negative ROA may not follow the prior expectations.[8]

(insert table 5 about here)

Panel A of table 6 presents correlation tests. Pearson Correlation coefficients of ABNDELAY with various proxies of earnings quality, along with the composite measure E-QUALITY are reported. Thus, E-QUALITY, TIMELY, PERSIST, and PREDICT are decreasing in abnormal audit delay; DACC, |DACC|, MISSED, VOLATILE, and TRANSITORY are increasing in abnormal audit delay. All coefficients are significant in the predicted directions, supporting hypothesis 1. Panel B reports additional portfolio tests. The sample is divided into five portfolios formed on ABNDELAY. Portfolio 1 (5) comprises the smallest (largest) values of ABNDELAY. Mean E-QUALITY is decreasing with portfolio number, implying that earnings quality is a declining function of abnormal audit delay, further supporting hypothesis 1. Tests of differences among means show that average earnings quality for portfolios, 1, 2, and 3 are significantly higher than those of portfolios 3,4, and 5, respectively. Figure 1 depicts the decline in earnings quality with abnormal audit delay.

(insert table 6 and figure 1 about here)

Results of equation 2 are reported in table 7. In panel A, ABNDELAY is regressed on various proxies of earnings quality. DACC, MISSED, TIMELY, PREDICT, and TRANSITORY are all significant in the predicted direction. PERSIST and VOLATILE are insignificant. Panel B presents the same test but with the seven explanatory variables replaced with the composite measure, E-QUALITY. Coefficient of E-QUALITY is significant and negative as expected. Overall, these results support hypothesis 1. These results contradict the findings of Tamara et al.

[8] For the purpose of estimating ABNDELAY, regression 1 is estimated separately for each year (not reported) to allow the slopes to vary with time.

(2007). However, given the limitations of Tamara et al. (2007) discussed earlier, the findings of the current paper are more reliable.

Panels C and D conduct the same test as in panels A and B, respectively, but in the presence of earnings report delay, LERDELAY. The overall conclusions are unchanged. Thus, abnormal audit delay conveys information about earnings quality that is incremental to the information conveyed by delay in reported earnings. Results of panel C and D support hypothesis 2.

(insert table 7 about here)

Estimates of equations 10 and 11 are presented in table 8. Version 1 contains only ROE as an explanatory variable. Version 2 adds ROE*ABNDELAY and version 3 adds ROE*LERDELAY to version 1. Finally, version 4 adds both ROE*LERDELAY and ROE*ABNDELAY to version 1. ROE is always significant and positive in all four versions, as expected. ROE*LERDELAY is significant and negative in versions 3 and 4; and ROE*ABNDELAY is significant and negative in version 2 and 4. Adding interaction of ROE with ABNDELAY to version 1increases the adjusted r-square from 0.0113 to 0.0123. The Vuong (1989) statistics (F=15.9341) is significant at less than 1% level suggesting a significant gain in explanatory power with the addition of ABNDELAY. Similarly, version 3 has significantly higher adjusted r-square than version 1 ($F=22.7699$; $p<0.0001$). Finally, version 4 has significantly higher r-square than version 3 ($F=32.2053$; $p<0.0001$). This implies that adding interaction term with ABNDELAY in the presence of LERDELAY adds significant explanatory power to the model. These results suggest that as the abnormal audit delay increases, the market gets more conservative / skeptical in valuing a dollar of earnings. Moreover, ABNDELAY has a more critical role than LERDELAY in the valuation process, since the coefficient of

ABNDELAY is more than 10 times larger in absolute value than that of LERDELAY ($F=29.69$; $p<0.0001$). Overall, this evidence supports hypothesis 3.

(insert table 8 about here)

Regression Diagnostics

Various diagnostic tests are conducted on the regressions. White's (1980) test for heteroskedasticity rejects the null of homoskedastic errors for all the regressions. Heteroskedasticity corrected t statistics are estimated (not reported) but none of the earlier conclusions are changed. Multicollinearity checks are also conducted on all the regressions using Belsley, Kuh, and Welsch's (1980) procedure. Variance inflation factors (not tabulated) are less than 5 and, thus, insignificant for all the regressions. Finally, tests for outliers are conducted on all the regressions using Belsley, Kuh, and Welsch's (1980) procedure. Studentized residuals are computed (without the current observation) and any observation deviating more than two standard deviations from the mean studentized residual is deleted. Results (not reported) do not change qualitatively when outliers are removed. Thus, the results appear to be robust with regards to heteroskedasticity, multicollinearity, and outliers.

6. Conclusion

This paper addresses the research questions: 1) Does the abnormal delay in the audit process signal poor earnings quality? 2) Is this information about earnings quality incremental to that contained in earnings report delay? and 3) Does the market use this information about earnings quality in valuing the firm? To the extent that unexpected delays in the audit process may be caused by serious differences between the independent auditor and the client over the

numbers to be reported, such delays may portend a lower earnings quality. Since audit delay is more readily observable than the elusive earnings quality, investors may use this delay to form an opinion about the quality of the reported earnings. In a perfect world, the independent auditor would continue to spend more time on the audit till the earnings quality was insured. However, auditors may have other concerns driving their decisions, such as lack of independence, fear of losing a major client, limitations of resources, such as, time, manpower, etc. The earnings reported after the extended audit process may still suffer from deficiencies.

Results reported in the paper are consistent with abnormal audit delays being significantly associated with poor earnings quality. The information about earnings quality contained in abnormal audit delays is incremental to the information conveyed by delays in releasing earnings reports. When the market values a dollar of reported earnings, it appears to discount the valuation by the extent of abnormal audit delay. This discounting is present even after controlling for the negative signaling about earnings quality conveyed by earnings report delays. These results are important for understanding the mechanism of the audit process. Apparently, the auditors are concerned about earnings quality as they appear to spend more time on clients that have poor earnings quality. However, due to constraints in the contracting and audit process and due to limitations of the accounting rules, a significant portion of the deficiencies in the earnings carries through to the reported earnings. The market appears to behave efficiently to the extent that it tries to adjust the valuation of reported earnings based on the delays in the audit process. Whether the adjustment is complete or partial is beyond the scope of this paper, but an interesting issue for future research.

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TABLE 1
VARIABLE DEFINITIONS
(in alphabetical order)

Variable	Definition
ABNDELAY	LADELAY not explained by equation 1 (that is, the error term)
BIG4/5	Dichotomous variable with value of one if the auditor (Compustat data #149) is one of the Big 4 (or Big 5); and zero otherwise
BUSYSEASON	Dichotomous variable coded as a one for December 31 fiscal year-ends, zero otherwise
CITYDUM	Dichotomous variable coded as one if the audit office is situated in one of the following costliest cities (based on consumer price index numbers available from the Bureau of Labor Statistics): New York, Los Angeles, Chicago, San Diego, Boston, San Francisco, Philadelphia, Honolulu, and Tacoma
CONTINGENCY	Dichotomous variable for the presence of contingent liability (Compustat data#327)
CURR2TA	Ratio of current assets (Compustat data #4) to total assets (Compustat data #6)
CURRATIO	Ratio of current assets (Compustat data #4) to current liabilities (Compustat data #5)
DACC	Ratio of discretionary accruals to total assets at the end of the fiscal year, where discretionary accruals are calculated using the cross-sectional version of the Jones (1991) model as in DeFond and Jiambalvo (1994) and the difference between net income and cash from operations is the measure of total accruals (Hribar and Collins 2002)
DFINANCIAL	Dichotomous variables that represent clients operating in the financial industry (SIC codes 60-69)
DISTRESS	Probability of client's bankruptcy based on Zmijewski's (1984) measure
DMANUF	Dichotomous variables that represent clients operating in the manufacturing industry (SIC codes 20-39)
DUTILITY	Dichotomous variables that represent clients operating in the utility industry (SIC codes 40-49)
DYR	Dummy variables for years 2001-06
EGROWTH	Percentage increase in the client's earning from last year
E-QUALITY	Composite index of earnings quality based on DACC, MISSED, PERSIST, PREDICT, TIMELY, TRANSITORY, and VOLATILE
EXPERT	Dichotomous variable coded as one if the auditor has 20% or more market share (ratio of sum of natural logarithm of assets of auditor's clients in the industry divided by the sum of natural logarithm of assets of all firms in the industry) in the client's industry (two-digit SIC classification)
FOREIGNOPS	Proportion of a client's operations outside the United States.
ILADELAY	Mean LADELAY for the two-digit SIC industry in that year
INVRATIO	Ratio of inventory (Compustat data #3) to total assets (Compustat data #6)
LADELAY	Natural logarithm of audit delay, measured as the number of calendar days from fiscal year-end to date of auditors' report (ADELAY)
LERDELAY	Natural logarithm of number of calendar days between earnings report date and fiscal year-end date (ERDELAY)

TABLE 1 (continued)

Variable	Definition
LEVERAGE	Ratio of total debt (Compustat data #9 + data #34) to total assets (Compustat data #6)
LNAFEE	Natural logarithm of non-audit fee
LOSS	Dichotomous variable with value of one if client has a negative net income before extraordinary items, and zero otherwise
LOWNCONC	Natural logarithm of owner concentration-defined as the number of shares outstanding divided by the number of shareholders (obtained from Compact-Disclosure database)
LSIZE	Natural logarithm of firm's total assets (Compustat data #6)
MISSED	Dichotomous variable equal to one if the reported EPS on I/B/E/S database falls short of the mean of analyst forecasts made during thirty calendar days preceding the fiscal year-end
OPINION	Dichotomous variable with value of one if the audit opinion (Compustat data #149) is a qualified opinion; and zero otherwise
PERSIST	AR1 parameter from a firm-specific regression of current earnings per share on lagged earnings per share for the period t-6 to t
POWER	Natural logarithm of the audit fee paid by client divided by the sum of the natural logarithm of audit fee paid by all clients of the auditor in that industry in that year
PREDICT	Adjusted r-square from the a firm-specific AR1 regression of current earnings per share on lagged earnings per share for the period t-6 to t
RETURN	Annual return of the client
REV	Relative excess value, defined as the market value of equity at the end of quarter 1 after the fiscal year-end minus the current book value of equity deflated by the book value of equity for the previous fiscal year
ROA	Ratio of net income before extraordinary items and cumulative effect of accounting changes (Compustat data #18) to total assets (Compustat data #6)
ROE	Return on equity, defined as current earnings (excluding extraordinary items) deflated by lagged book value of equity
SEGMENTS	Number of business segments reported in COMPUSTAT segment file
SUBSIDIARIES	Number of principal subsidiary companies held by the client
SWITCH	Dichotomous variable coded as one if the client switches to a new auditor in the current year and zero otherwise
TENURE	Dichotomous variable coded as one if auditor has been with client for five years or more, zero otherwise
TIMELY	Measure of the timeliness of the earnings announcement; estimated as the industry mean (two-digit SIC classification) of earnings report delay minus the firm-specific earnings report delay
TRANSITORY	Dichotomous variable equal to one if the sum of extraordinary items (Compustat data #66) plus discontinued operations (data #192) is different from zero, and zero otherwise.
VOLATILE	Proxy for the volatility (lack of smoothness) of earnings, measured as the ratio of standard deviation of earnings to standard deviation of cash flow from operations for the period t-6 to t

TABLE 2
SAMPLE SELECTION PROCEDURE

Data Step	Firm-Year Observations
Data available on Compustat (2000-06)	203,697
Data available on Audit Analytics	76,777
Data available on Compact-Disclosure	45,108
Data available on I/B/E/S	107,911
Complete data available on all Databases	22,492

Note: The final sample pertains to 5,298 unique firms.

TABLE 3
SAMPLE DISTRIBUTION ACROSS INDUSTRIES

Industry	Sample	Compustat Population
1. Agriculture, Forestry, and Fishing	0.28%	0.32%
2. Mining	3.99%	5.21%
3. Construction	1.02%	1.05%
4. Manufacturing	39.05%	32.84%
5. Transportation and Utilities	8.06%	9.04%
6. Wholesale	2.79%	3.45%
7. Retail	5.53%	5.39%
8. Financial Services	22.88%	23.66%
9. Services	16.20%	17.58%
10. Others	0.19%	1.45%
Total	100.00%	100.00%

The industry classification is based on Dopuch *et al*. (1987), and includes the following SIC codes:

Agriculture, Forestry, and Fishing	100-999
Mining	1000-1499
Construction	1500-1999
Manufacturing	2000-3999
Transportation and Utilities	4000-4999
Wholesale	5000-5199
Retail	5200-5999
Financial Services	6000-6999
Services	7000-8999
Others	< 100 and > 8999

TABLE 4
VARIABLE DISTRIBUTION

Variable	Mean	Stand-Devn	Quartile 1	Median	Quartile 3
Tot Assets ($bill)	6.8741	51.2570	0.1055	0.4568	1.8235
ADELAY	53.7750	20.1847	37	55	70
ERDELAY	46.6766	21.0151	30	43	60
BIG4/5	0.8546	0.3527	1	1	0
BUSYSEASON	0.7263	0.4459	1	1	0
CITYDUM	0.2694	0.4437	0	0	1
CONTINGENCY	0.0922	0.2894	0	0	0
CURR2TA	0.3973	0.3085	0.0835	0.4018	0.6538
CURRATIO	2.7388	17.5967	0.6351	1.6275	2.9986
DACC	0.2075	32.7295	-0.0915	0.0310	0.2248
DFINANCIAL	0.2288	0.4201	0	0	0
DISTRESS	0.0240	0.1268	0	0.0001	0.0003
DMANUF	0.3905	0.4879	1	0	0
DUTILITY	0.0806	0.2723	0	0	0
EGROWTH	0.0036	2.0839	-0.5257	0.0532	0.4370
EXPERT	0.5806	0.4935	1	1	0
FOREIGNOPS	0.2812	0.4496	0	0	1
INVRATIO	0.0896	0.1328	0.0001	0.0255	0.1356
LEVERAGE	0.2129	0.5634	0.0198	0.1536	0.3227
LNAFEE	12.1377	1.7962	10.9000	12.0901	13.3000
LOSS	0.2760	0.4471	0	0	1
LOWNCONC	7.9962	4.8530	7.7200	9.5862	11.3000
MISSED	0.2136	0.4099	0	0	0
OPINION	0.2938	0.4555	0	0	1
PERSIST	0.2334	0.5932	-0.0869	0.2030	0.5350
POWER	1.2957	3.1553	0.8928	1.0910	1.3900
PREDICT	0.0255	0.3586	-0.2290	0.1020	0.2020
RETURN	0.1093	0.4512	-0.1733	0.0465	0.3538
REV	1.2368	3.3443	0.1169	0.8126	2.1060
ROA	-0.0077	0.1568	-0.0094	0.0203	0.0638
ROE	0.0274	0.3443	-0.0023	0.0878	0.1623
SEGMENTS	1.8194	1.2313	1	1	2
SUBSIDIARIES	1.8805	3.4504	0	0	3
SWITCH	0.1083	0.3108	0	0	0
TENURE	0.4868	0.4998	0	0	1
TIMELY	8.3655	20.3539	-3.4740	11.4687	22.3300
TRANSITORY	0.2132	0.4096	0	0	1
VOLATILE	1.2798	1.3655	0.5873	0.9239	1.4072

See table 1 for variable definitions.

TABLE 5
REGRESSION OF AUDIT DELAY ON ITS DETERMINANTS
(Dependent Variable = LADELAY)

Variables	Expected Sign	Estimate	t Statistics	p Value	VIF
Intercept		***1.9805	29.74	<0.0001	0.0000
DMANUF	+	***0.0444	6.44	<0.0001	1.5976
DUTILITY	−	-0.0067	-0.58	0.5605	1.3859
DFINANCIAL	−	-0.0127	-1.23	0.2181	2.6571
ILADELAY	+	***0.4580	26.43	<0.0001	3.3900
LSIZE	−	***-0.0490	-20.81	<0.0001	3.5414
POWER	−	-0.0012	-1.45	0.1465	1.0275
CURR2TA	+	***0.0991	6.66	<0.0001	2.9241
LEVERAGE	+	***0.1462	11.35	<0.0001	4.7321
LOSS	+	***0.0844	12.14	<0.0001	1.3441
DISTRESS	+	-0.0190	-0.78	0.4349	1.2516
CURRATIO	−	**-0.0014	-2.16	0.0304	1.3292
ROA	−	***0.0134	11.29	<0.0001	4.2844
LOWNCONC	−	-0.0009	-1.55	0.1203	1.1221
RETURN	−	-0.0009	-0.14	0.8921	1.2363
EGROWTH	−	0.0003	0.22	0.8229	1.0247
INVRATIO	+	***0.1691	7.24	<0.0001	1.3384
SEGMENTS	+	**0.0062	2.25	0.0242	1.6588
SUBSIDIARIES	+	***0.0027	2.72	0.0065	1.6641
FOREIGNOPS	+	-0.0061	-0.88	0.3770	1.3855
CONTINGENCY	+	0.0116	1.24	0.2162	1.0658
BIG4/5	+/–	***0.0972	9.88	<0.0001	1.5169
EXPERT	−	***-0.0800	-12.91	<0.0001	1.3060
TENURE	+/–	**0.0143	2.34	0.0191	1.3078
SWITCH	+	***0.0364	3.62	0.0003	1.1718
LNAFEE	?	***0.0196	8.30	<0.0001	2.5375
OPINION	+	***0.0598	9.21	<0.0001	1.2449
CITYDUM	+	***0.0533	8.76	<0.0001	1.0311
BUSYSEASON	+	***0.0327	5.04	<0.0001	1.1840
Observations		22,492			
Adjusted R-Sqr		0.2662			
F Value		244.18			
Probability > F		<0.0001			
White's Chi-Sqr.		2884.77			
Prob > Chi-Sqr.		<0.0001			

See table 1 for variable definitions. Annual dummies (DYR) are not reported for the sake of brevity. *** implies two-sided significance at 1% and ** implies two-sided significance at 5%.

TABLE 6
ASSOCIATION OF ABNORMAL AUDIT DELAY WITH EARNINGS QUALITY

Panel A: Correlation of Abnormal Audit Delay (ABNDELAY) with Earnings Quality

Variable	Predicted Sign	Pearson Correlation Coefficient	p-Value
E-QUALITY	−	***-0.1214	<0.0001
DACC	+	**0.0179	0.0145
|DACC|	+	**0.0168	0.0219
MISSED	+	***0.0182	0.0061
TRANSITORY	+	***0.0434	<0.0001
VOLATILE	+	***0.0188	0.0083
TIMELY	−	***-0.2794	<0.0001
PERSIST	−	***-0.0342	<0.0001
PREDICT	−	***-0.0359	<0.0001

Panel B: Portfolio Tests on Abnormal Audit Delay (ABNDELAY) and Earnings Quality

Portfolio of ABNDELAY	Mean E-QUALITY	t Test Between Portfolios	t-Statistics
I (Lowest)	4.4259		
II	4.3593	I & III	***9.8992
III	4.1503	II & IV	***7.6918
IV	4.1225	III & V	***2.9815
V (Highest)	4.0633		

See table 1 for variable definitions.
*** implies two-sided significance at 1%
** implies two-sided significance at 5%

TABLE 7
REGRESSION OF ABNORMAL AUDIT DELAY ON COMPONENTS OF EARNINGS QUALITY

Panel A: Regression on Components of Earnings Quality

Variables	Expected Sign	Dependent Variable = ABNDELAY			
		Estimate	t Statistics	p Value	VIF
Intercept		***0.0527	11.25	<0.0001	0.0000
DACC	+	**0.0002	2.02	0.0433	1.0007
MISSED	+	***0.0272	4.18	<0.0001	1.0076
TRANSITORY	+	***0.0407	6.28	<0.0001	1.0043
VOLATILE	+	0.0005	0.23	0.8144	1.0184
TIMELY	−	***-0.0063	-45.72	<0.0001	1.0103
PERSIST	−	-0.0009	-0.18	0.8609	1.2772
PREDICT	−	*-0.0170	-1.92	0.0552	1.2809
Observations		22,492			
Adjusted R-Sqr		0.1044			
F Value		307.33			
Probability > F		<0.0001			
White's Chi-Sqr.		500			
Prob > Chi-Sqr.		<0.0001			

Panel B: Regression on Earnings Quality

Variables	Expected Sign	Dependent Variable = ABNDELAY			
		Estimate	t Statistics	p Value	VIF
Intercept		***0.1339	15.48	<0.0001	0.0000
E-QUALITY	−	***-0.0321	-15.81	<0.0001	1.0000
Observations		22,492			
Adjusted R-Sqr		0.0133			
F Value		249.83			
Probability > F		<0.0001			
White's Chi-Sqr.		12.10			
Prob > Chi-Sqr.		0.0024			

TABLE 7 (continued)

Panel C: Regression on Components of Earnings Quality in the Presence of Earnings Report Delay

Variables	Expected Sign	Dependent Variable = ABNDELAY			
		Estimate	t Statistics	p Value	VIF
Intercept		***-0.8649	-19.83	<0.0001	0.0000
LERDELAY	+	***0.2325	21.15	<0.0001	3.1306
DACC	+	**0.0002	2.00	0.0459	1.0007
MISSED	+	***0.0254	3.95	<0.0001	1.0078
VOLATILE	+	-0.0002	-0.08	0.9383	1.0184
TRANSITORY	+	***0.0383	5.98	<0.0001	1.0046
TIMELY	−	***-0.0021	-8.83	<0.0001	3.1391
PERSIST	−	0.0036	0.67	0.5012	1.2793
PREDICT	−	***-0.0248	-2.83	0.0047	1.2832
Observations		22,492			
Adjusted R-Sqr		0.1256			
F Value		331.37			
Probability > F		<0.0001			
White's Chi-Sqr.		916			
Prob > Chi-Sqr.		<0.0001			

Panel D: Regression on Earnings Quality in the Presence of Earnings Report Delay

Variables	Expected Sign	Dependent Variable = ABNDELAY			
		Estimate	t Statistics	p Value	VIF
Intercept		***-1.1181	-40.25	<0.0001	0.0000
LERDELAY	+	***0.3053	47.16	<0.0001	1.0785
E-QUALITY	−	***-0.0068	-3.39	0.0007	1.0785
Observations		22,492			
Adjusted R-Sqr		0.1197			
F Value		1252.04			
Probability > F		<0.0001			
White's Chi-Sqr.		185.43			
Prob > Chi-Sqr.		<0.0001			

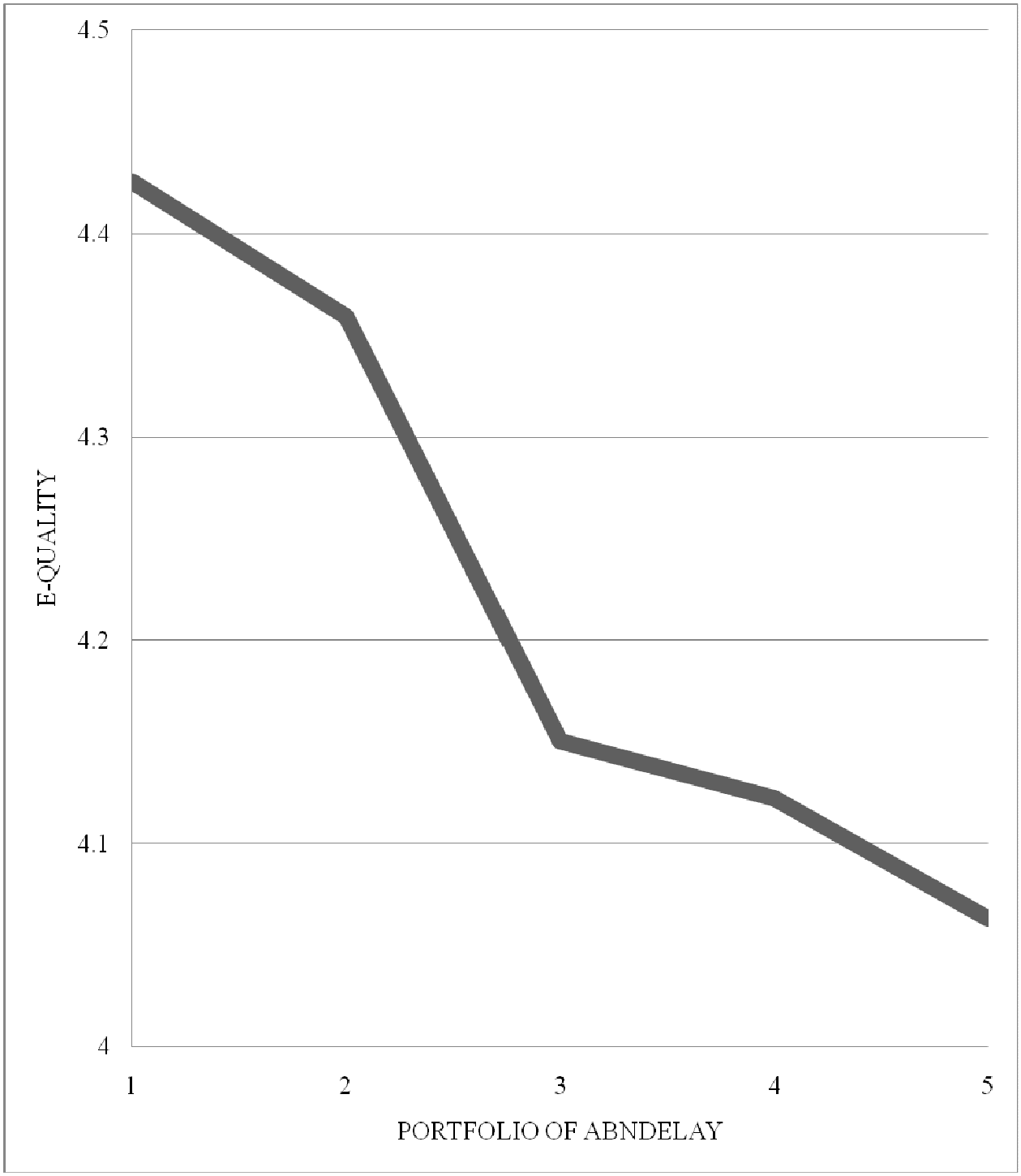
See table 1 for variable definitions.
*** implies two-sided significance at 1%
** implies two-sided significance at 5%
* implies two-sided significance at 10%

TABLE 8
REGRESSION OF RELATIVE EXCESS VALUE ON ROE AND DELAY VARIABLES

Variables	Expected Sign	Dependent Variable = REV			
		Version 1	Version 2	Version 3	Version 4
Intercept		***1.4878	***1.4835	***1.4857	***1.4800
		(24.93)	(24.87)	(24.91)	(24.83)
ROE	+	***0.2132	***0.2073	***0.2639	***0.2665
		(3.35)	(3.26)	(4.11)	(4.15)
ROE*LERDELAY	−			***-0.0027	***-0.0032
				(-5.50)	(-6.48)
ROE*ABNDELAY	−		***-0.0308		***-0.0385
			(-4.79)		(-5.88)
Observations		22,492	22,492	22,492	22,492
Adjusted R-Sqr		0.0113	0.0123	0.0126	0.0141
F Value		37.85	36.02	36.95	36.74
Probability > F		<0.0001	<0.0001	<0.0001	<0.0001
White's Chi-Sqr.		1059.58	1059.98	1064.81	1066.46
Prob > Chi-Sqr.		0.0001	0.0001	0.0001	0.0001
Voung's F Test			15.9341	22.7699	32.2053
Probability > F			<0.0001	<0.0001	<0.0001

See table 1 for variable definitions. Annual dummies (DYR) are not reported for the sake of brevity. *** implies two-sided significance at 1%

FIGURE 1
PLOT OF EARNINGS QUALITY VERSUS ABNORMAL AUDIT DELAY



See table 1 for variable definiations.