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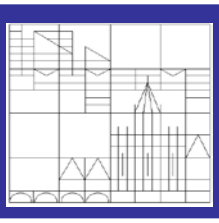

Are Extensive Audits "Good News"? Market Perceptions of Abnormal Audit Fees and Fair Value Disclosures

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Are Extensive Audits "Good News"?
Market Perceptions of Abnormal Audit Fees and Fair Value Disclosures

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Abstract

Although the role of auditing is to increase the reliability of financial statements, surprisingly little is known about addressees' perceptions of the auditor-client relationship. Using a sample of more than 1,000 U.S. bank-years from 2008 to 2011, we analyze the economic consequences of the joint announcement of audit fees and the level breakdown of fair value assets. We confirm prior findings that audit fees are higher for banks with larger proportions of Level 3 fair values. Moreover, we find that the market perception regarding fair value assets depends on the extent of managerial discretion in the estimation process. Most importantly, we find evidence consistent with the notion that addressees' interpret abnormal audit fees as an indication of additional risk. Thus, unexpected audit fees are not interpreted as a signal for a more reliable audit, but further increase the market discount on Level 3 fair values. Bank managers have to consider these negative consequences in their reporting strategy.

Keywords: Audit Fees, Fair Value Accounting, Fair Value Hierarchy, Banks, Valuation

JEL-Classification: M41, M42, G21

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1 Introduction

While fair value accounting was established to increase the relevance of financial statements, and, consequently, to reduce information asymmetries between firm managers and outsiders, it has been criticized for giving discretion to bank managers in times of financial turbulences (Bischof et al. (2011a); Huizinga and Laeven (2012)). Laux and Leuz (2010) and Badertscher et al. (2012) concluded that although fair value accounting per se was not at the heart of the financial crisis, it lost several of its favorable features in cases where no quoted market prices were available. Since managers possess substantial discretion in determining the fair values of assets if mark-to-model is used, the statutory auditor's role of guaranteeing that reported values reflect the true state of the firm and of increasing the reliability of financial statements is of particular importance.

In this paper, we further explore the link between the credibility of discretionary asset valuation and the audit function. In particular, we investigate investors' perceptions of audit fees conditional on accounting discretion in fair values of banks in the aftermath of the recent financial crisis.

This research relates to literature on the use of fair value accounting in general (Benston (2008); Landsman (2007); Laux and Leuz (2009), (2010); Penman (2007); Ryan (2008); Shaffer (2010)), the value relevance of fair values (Goh et al. (2009); Kolev (2008); Song et al. (2010)), and regulatory consequences of the use of fair value assets (Glaser et al. (2013)). Our paper is further related to the broad field of studies on audit fees, and in particular to the two concurring working papers by Ettredge et al. (2013) and Chen et al. (2010). Ettredge et al. (2013) show that auditors charge an audit fee premium if the proportion of Level 3 assets is high. Nevertheless, they take into account neither the market perceptions resulting from an increase in audit fees nor the consequences of abnormal audit fees on the reliability of discretionary balance sheet items. Chen et al. (2010) examine the relation between Level 3 fair values, audit fees, earnings management, and auditor conservatism. Although they document a strong link between fair value assets and audit fees as well as between fair value assets and abnormal loan loss provisions, the authors do not relate the two results in an empirical setting to extract the economic consequences of fair value disclosures. Our paper complements their research by investigating market perceptions of the joint announcement of audit fees and the level breakdown of fair value assets in financial statements. Thus, we

combine the literature on the market assessment of fair values and the audit fee literature. We present evidence that audit fee disclosures have capital market consequences in the presence of valuations involving managerial discretion like Level 3 assets.

The primary functions of an external audit are to confirm that financial statements comply with the underlying accounting standards and to increase the reliability of the financial statements (Christensen et al. (2012)). Thus, the perception of the audit is crucial to the market reaction on the disclosure of high uncertainty valuations (Bushman and Smith (2001)). Goh et al. (2009) present evidence that the market discount for Level 3 assets is reduced if the firm is audited by a Big-4 auditor. Moreover, Song et al. (2010) show that the discount is less pronounced in firms with a better corporate governance. In their corporate governance score, they explicitly include a proxy for audit quality. These results suggest that market participants consider perceived audit quality in their valuation. Apart from this research, however, little is known about the role of the statutory auditor in affecting the market perception regarding fair value disclosures. This is surprising, since the Basel Committee on Banking Supervision stresses the importance of high quality auditing in situations with high uncertainty, thereby explicitly naming the estimation of fair values (Basel Committee on Banking Supervision (2008)). Bell and Griffin (2012) and Martin et al. (2006), however, state that auditing fair values is difficult and contains high audit risk. Christensen et al. (2012) even claim that the complexity and uncertainty for Level 3 fair values is possibly too high to enable a high quality audit.

Our sample consists of 385 U.S. banks and 1,155 bank-year observations from 2008 to 2011. In addition to the size of the audit firm (Big-4 vs. non-Big-4), which is generally interpreted as a proxy for audit quality, the audit effort actually exerted should be essential for market participants. As the actual audit effort is unobservable, we use audit fees as an alternative measure that is descriptive of the auditor-client relationship. This variable captures audit effort and a risk premium (see Hay et al. (2006); Niemi (2002) and literature cited therein). If investors react positively to unexpected audit fees, they seem to interpret high audit fees as a signal for increased reliability. If, in contrast, investors react negatively to unexpected audit fees, they seem to interpret high fee levels as a signal for additional risk. We estimate abnormal audit fees with the fee model for financial institutions put forward by Fields et al. (2004). In doing so, we confirm the charging of a fee premium for high uncertainty assets first documented by Chen et al. (2010) and Ettredge et al. (2013). In the further course of the analysis, we use abnormal audit fees as an explanatory variable in the valuation model. Therein, differences in Tobin's Q are explained by the level breakdown of

fair value assets, abnormal audit fees, and several control variables. As Tobin's Q reflects the present value of future expected cash flows scaled by the current balance sheet value of these assets (see, e.g., Daske et al. (2008)), this measure is especially suited to study the market assessment of fair value assets. Furthermore, no risk adjustment, e.g., for leverage, has to be made (see, e.g., Lang and Stulz (1994)), which makes this measure preferable compared to the market value of equity.

We find that market participants discount Level 3 fair values, whereas Level 1 and Level 2 assets are positively associated with Tobin's Q. We interpret this finding as evidence that market participants, in general, prefer balance sheet items measured at fair value over positions valued at historical costs, but become alert if fair value estimates are subject to management discretion. Furthermore, we show that there is no significant relation between abnormal audit fees and market valuation. However, the interaction between abnormal audit fees and the proportion of Level 3 fair values is negatively associated with Tobin's Q, i.e., in the presence of Level 3 fair values, investors interpret higher than expected audit fees as bad news.

Our paper contributes to the literature in several ways. First, to the best of our knowledge, this is the first study on the connections between the pricing of audit services and external addressees' perceptions regarding fair value accounting. Second, using a large panel of commercial and savings banks, we are able to confirm prior findings that auditors charge a fee premium for auditing Level 3 fair values. Preceding studies, in contrast, are based on small and hand-collected samples for only short periods. Third, we extend the understanding of abnormal audit fees. While there are findings of abnormal audit fees on various topics like earnings management (Kanagaretnam et al. (2010)), cost of capital (Hope et al. (2009)), and restatements (Blankley et al. (2012)), we are the first to interact abnormal audit fees with high uncertainty assets and provide the link to market perceptions. Our study therefore is a direct test on the interpretation of audit fees as an indicator of risk versus reliability. Abnormal audit fees are negatively linked to Tobin's Q if they are interacted with the share of Level 3 fair values. This indicates estimation risk, audit risk, or additional risk of the underlying assets as the dominant interpretation of abnormal audit fees by market participants. Our results suggest that it is not possible to decrease the discount on Level 3 fair values documented by Song et al. (2010) by disclosing higher audit fees – to the contrary, abnormal audit fees even further increase the discount. As a consequence, additional voluntary disclosures are necessary to communicate a more reliable and intense audit.

The remainder of the paper is organized as follows. Section 2 describes the background and develops our hypotheses. Section 3 explains the research design and describes the sample. Section 4 reports our empirical findings and Section 5 presents various sensitivity analyses. Section 6 concludes.

2 Background and Hypotheses Development

2.1 Fair Value Hierarchy

In September 2006, the Financial Accounting Standards Board (FASB) released SFAS 157 "Fair Value Measurements". Although several standards, such as SFAS 107, 115, and 133, prescribe the use of fair value accounting for specific financial instruments, no single definition of the term 'fair value' or a guideline for fair value estimation had been issued prior to SFAS 157. The standard defines the fair value as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date" (SFAS 157.5). Furthermore, SFAS 157 introduces a strict hierarchy of inputs firms have to apply when estimating fair values, called valuation hierarchy ("Fair Value Hierarchy"). In that hierarchy, Level 1 inputs have the highest priority and Level 3 inputs the lowest (SFAS 157.22). "Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date" (SFAS 157.24). If there are no quoted prices available, firms have to rely on Level 2 inputs, which refer to all inputs "other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly" (SFAS 157.28). These observable inputs, for example, consist of quoted prices for similar assets or liabilities, interest rates and yield curves observable at commonly quoted intervals, volatilities, credit risk, and default rates. Finally, Level 3 inputs are unobservable inputs, which should only be used in situations with little regular market activity. The unobservable inputs shall reflect "the reporting entity's own assumptions about the assumptions that market participants would use in pricing the asset or liability" (SFAS 157.30).

While Level 1 inputs are known for their transparency, fair values based on Level 3 inputs are by definition opaque in nature and exposed to managers' discretion. The Basel Committee on Banking Supervision therefore calls for an especially high quality of auditing in order to add reliability to these estimates (Basel Committee on Banking Supervision (2008)). The opaque nature and complexity of Level 3 valuation models pose a challenge to auditors as well. As a sound auditing of complex financial valuations requires particular knowledge, which fundamentally differs from the skills usually needed in other auditing tasks, it becomes

difficult to build up and maintain experience in this field. This lack of practical knowledge complicates the understanding of the valuation models and the assessment of the reasonableness of its inputs (Martin et al. (2006)). Apart from the risk that auditors lack valuation expertise, Christensen et al. (2012) claim that auditors also lack the possibility to communicate the risks associated with estimation uncertainty in the current form of financial statements.[1] Thus, Level 3 disclosures are an important factor influencing audit risk. This might be one reason why auditors restricted the use of Level 3 valuations in the beginning of the global financial crisis starting in 2008 (Badertscher et al. (2012)). This practice was encouraged by a white paper of the Center for Audit Quality, which favors the use of Level 2 inputs even in dried-out markets: "If the volume of observable transactions is not sufficient to conclude that the market is active, such observable transactions would still constitute Level 2 inputs that must be considered in the measurement of fair value" (Center for Audit Quality (2007)).

By mid-2008, losses in fair value portfolios gave rise to the political demand for a change in the application of fair value practice. The FASB responded to increasing pressure from politics and bank lobbyists by issuing FASB Staff Positions SFAS 157-3 and 157-4, which clarify the use of Level 3 valuations (see Botosan et al. (2011) for an overview of the debate). Glaser et al. (2013) show that both Big-4 audit firms and audit firms that are not a member of an international audit network restrict the use of Level 3 valuations. While the Big-4 have high reputational risk, smaller audit firms lack technical knowledge to audit internal valuation models (Martin et al. (2006)).

2.2 Related Literature

Research on the value relevance of fair values started when disclosures on the fair values of financial instruments became mandatory under SFAS 107 in 1992. Several studies find evidence for the value relevance of securities' fair value disclosures (Ahmed and Takeda (1995); Barth (1994); Barth et al. (1996); Carroll et al. (2003); Eccher et al. (1996); Petroni and Wahlen (1995)). Results regarding the value relevance of fair value gains and losses, in contrast, are mixed. While Barth (1994) finds no evidence in favor of value relevance of fair value gains and losses, Ahmed and Takeda (1995) and Carroll et al. (2003) conclude that fair value gains and losses do influence share prices. Based on additional analyses, Barth (1994) explains the insignificance of fair value gains and losses by a lack of reliability. Moreover,

[1] IFRS 13 "Fair Value Measurement" prescribes quantitative disclosures on sensitivity analyses, whereas these disclosures are not mandatory under SFAS 157.

Eccher et al. (1996) and Petroni and Wahlen (1995) find that only fair values of investment securities (i.e., the asset class for which it is most likely that reliable estimates are available) are value relevant.

However, all empirical studies mentioned above share some common limitations. First, although the lacking value relevance of fair value gains and losses is explained by restricted reliability, the role of the auditor is neglected. If a sound auditing fosters reliability of reported information, there should be a link between audit quality and value relevance. Second, studies directly addressing the reliability of fair values only rely on asset classes (e.g., government bonds versus loans) as a measure of reliability. This is a very noisy approximation and limits potential conclusions. Third, there was no single guideline for estimating fair values under SFAS 107, which could bias the results relying on this early standard. Finally, fair values are only disclosed but not recognized, which might influence the market reaction (Aboody (1996); Ahmed et al. (2006)).[2]

SFAS 157 codified the estimation of fair value and mandated the disclosure of a breakdown by estimation level. This allows more direct tests on the reliability of fair values, as the major difference between the fair value levels is their reliability. Hence, SFAS 157 disclosures allow mitigating some of the shortcomings of prior research. Making use of this new information, Goh et al. (2009), Kolev (2008), and Song et al. (2010) confirm that fair values are value relevant, but show an increasing market discount for less transparent estimates. The relative discount for Level 3 assets lies in the range of 20% to 30%. The discount increases for firms with weaker corporate governance (Kolev (2008); Song et al. (2010)). Huizinga and Laeven (2012) show that managers use discretion and overvalue real estate assets to inflate their balance sheets. Evidence on the auditor's role in influencing the market perception of fair values is still limited, but suggests that the relative discount is lower when audits are conducted by the Big-4 (Goh et al. (2009)) and by audit firm offices of larger size (Song et al. (2010)). In these studies, the Big-4 dichotomy and audit firm office size are taken as measures for audit quality.

A more specific instrument to investigate the auditor-client relation are audit fees, which are a function of the client's financial reporting system (Simunic (1980)). From an extensive meta-analysis of audit fee studies conducted for non-financial companies, Hay et al. (2006) conclude that "audit fees are associated with measures of client size, client risk, and client complexity." Evidence on audit fee setting for financial institutions, in contrast, is scarce.

[2] Recognition of fair value gains became mandatory for selected financial assets under SFAS 115.

Empirical results of Stein et al. (1994), for example, indicate that other risk proxies are necessary for banks than for non-financial firms. Fields et al. (2004) present an audit fee model for financial institutions. They show that audit fees are influenced by credit risk, capital risk, and liquidity risk, and conclude that audit firms charge higher fees for riskier clients. Kanagaretnam et al. (2010) use this model to show that for small banks, abnormal audit fees are related to earnings management. Their results suggest a close relationship between abnormal audit fees and under-provisioning of loan loss provisions. They conclude that auditor independence is restricted if small banks pay higher than expected audit fees. Finally, two recent working papers show an audit fee premium for auditing fair values with high uncertainty (Chen et al. (2010); Ettredge et al. (2013)). Ettredge et al. (2013) further show that this audit fee premium is reduced if the auditor is an industry expert, whereas Chen et al. (2010) relate the audit fee premium to earnings management. None of the working papers investigates the relation between audit fees and a firm's market valuation. Our paper complements this research and presents evidence on the association between audit fees and capital market reactions in the presence of high uncertainty assets, and thus links audit fee studies with the literature on the market perception of fair value assets.

2.3 Hypotheses Development

The association between fair value assets and audit fees

Audit fees should be affected by the amount of fair values that has to be audited, especially if mark-to-model is used. Laux and Leuz (2010), among others, document that the proportion of model-based fair values is approximately two-thirds of total fair values. The high share of model-based fair value estimates increases audit complexity, as the auditor has to assess the appropriateness of the valuation model used. This complexity is exacerbated because auditors frequently do not have sufficient valuation training (Martin et al. (2006)). Moreover, when clients use multiple valuation models, the auditor not only has to understand the models applied, but also has to determine the weighting of the different models (Bratten et al. (2013)). Model inputs are crucial to the performance of the valuation model. The auditor has to scrutinize the assumptions of the model preparer. Martin et al. (2006) point towards the hindering effects of motivated reasoning and auditors' overconfidence. Moreover, the structure of the process to audit fair values is more complex than that for other assets. Earley (2002) even characterizes the task as unstructured, because there is no objectively correct solution to the valuation problem. To make matters worse, current auditing standards offer

only limited directional guidance for auditing Level 3 models and the way a sound model should look like.

Turning to client risk, due to measurement uncertainty and macroeconomic risk, the estimation of fair values adds a substantial amount of uncertainty to financial statements (see Bratten et al. (2013), and the literature cited therein). The balance sheet reports only point estimates, although modest changes of key assumptions can strongly influence the outcome. In 2008, Wells Fargo, for example, reports that a 200 bps increase in the interest rate would result in a decrease in the fair value of the mortgage-backed securities portfolio of USD 8.8 billion. To reach audit materiality, only an increase of less than 4 bps is required (Christensen et al. (2012)). The auditor can judge a wide range of point estimates as reasonable, resulting in the risk that, in retrospect, the true value differs substantially from the approved estimate (Bell and Griffin (2012)).

Thus, if financial statements are based more heavily on fair value accounting, client risk and the complexity of the financial statements should be higher. For these reasons, our first hypothesis, stated in alternative form, predicts:

H1: Audit fees are positively linked to the share of assets measured at fair value.

The extent of additional audit complexity and risk is dependent on the estimation technique. While it is easy to audit financial assets that are marked-to-market, risk and complexity increase when mark-to-model is required (Bratten et al. (2013)). For assets that are valued with mark-to-model, Level 3 estimates are more complex and riskier for two reasons: First, the inputs are by definition unobservable and, thus, more judgment is needed from the auditor. Second, Level 3 valuations are only applicable when market activity is low or market transactions are forced. This further increases estimation uncertainty (Humphrey et al. (2009)). Thus, audit complexity and audit risk increase in the levels of the fair value hierarchy. Therefore, we hypothesize, stated in alternative form:

H2: The positive link between audit fees and fair value assets is least pronounced for Level 1 fair values, and strongest for Level 3 fair values.

The link between fair value assets and banks' market valuation

The tradeoff between relevance and reliability is at the core of the fair value discussion (Laux and Leuz (2009)). Financial statement information should be associated to market prices if they are both relevant and reliable (Barth et al. (2001)). Christensen et al. (2012) state that investors are not interested in reliable but irrelevant financial statements. They claim that

"investors would rather have the company's best measure of a relevant estimate, even if it is associated with considerable measurement uncertainty." This suggests that investors prefer fair value information over historical costs, as these estimates have higher explanatory power for share prices (Ahmed and Takeda (1995); Barth (1994); Barth et al. (1996); Goh et al. (2009); Kolev (2008); Song et al. (2010)). Barth (1994) even shows that historical costs lose their marginal value relevance in the presence of fair value disclosures.

However, recent research concludes that investors are also sensitive to the reliability of financial data (Maines and Wahlen (2006)). This result is consistent with the findings of Goh et al. (2009), Kolev (2008), and Song et al. (2010), who show significant differences between the valuation of Level 1, Level 2, and Level 3 fair value assets. Furthermore, Riedl and Serafeim (2011) present evidence that the fair value levels differ in their association with a bank's equity beta. For Level 1 fair values, there are no reliability problems, as these are quoted market prices and, thus, the management possesses only little discretion in estimating these values. For the auditor, it is easy to verify Level 1 values. Therefore, we hypothesize:

H3.1 Compared to assets displayed at historical costs, the share of fair values measured using Level 1 inputs increases the bank's market value.

The perception of Level 2 fair values remains ambivalent. Level 2 inputs might consist of quoted prices for similar assets or observable inputs for valuation models. While the former inputs are easier to verify and discretion is restricted, the latter inputs are more opaque. In the empirical studies of Kolev (2008) and Song et al. (2010), Level 2 assets show patterns similar to Level 1 assets, whereas Goh et al. (2009) find that investors perceive Level 2 assets as similar to Level 3 assets. Therefore, we predict no direction of the link:

H3.2 Compared to assets displayed at historical costs, we do not postulate a direction of the link between the share of fair values estimated using Level 2 inputs and the bank's market value.

In estimating Level 3 fair values, management has the largest degree of discretion and the inputs are hard to verify by auditors (Christensen et al. (2012)). Moreover, there is evidence that management uses its discretion to overvalue financial assets (see Huizinga and Laeven (2012) and Laux and Leuz (2010), among others). Riedl and Serafeim (2011) document a positive association between Level 3 fair values and a bank's equity beta and, hence, the cost of capital. Therefore, we predict a negative link between the share of Level 3 fair values and the market value:

H3.3 Compared to assets displayed at historical costs, the share of fair values measured using Level 3 inputs decreases the bank's market value.

The interplay between audit fees, fair value assets, and market valuation

Auditing aims at increasing the reliability of financial statements, therefore the auditor-client relationship should affect the market perception of fair values. Evidence from Goh et al. (2009) and Song et al. (2010) points towards an influence of audit quality on the market valuation of fair value assets. In addition to the quality of the audit, the extent of audit effort exerted should influence addressees' perceptions regarding the audit as well. Unfortunately, direct measures on the extent of auditing, such as audit hours spent, are not disclosed. Previous empirical studies have used audit fees as an alternative measure capturing the extent of auditing, e.g., in the context of earnings quality (Ashbaugh et al. (2003); Larcker and Richardson (2004); Srinidhi and Gul (2007)). Besides audit effort, audit fees incorporate several other determinants of the auditor-client relationship, e.g. complexity, the risk of the underlying assets, and a risk premium for the auditor's reputation and litigation risks. However, audit fees depend on several firm-specific factors, which are probably correlated with the market valuation. Thus, it is possible that investors' reactions on audit fees are based on these underlying relations. By investigating abnormal audit fees, we can abandon the possible distorting effects of these factors.

However, it remains unclear how market participants will react on abnormal audit fees. Therefore, we formulate two competing hypotheses. On the one hand, it is possible that abnormal audit fees are interpreted as good news. Bushman and Smith (2001) claim that rigorous audits increase earnings quality. If higher audit fees indicate more thorough audits, abnormal audit fees can be interpreted as additional audit effort increasing reporting quality (Blankley et al. (2012); Simunic (1980); Whisenant et al. (2003)). This view is consistent with an increase in the reliability of the financial statements when audit fees are high. Blankley et al. (2012) provide empirical evidence for this view. In their study, higher abnormal audit fees reduce the likelihood of future earnings restatements. Therefore, our fourth hypothesis predicts in alternative form:

H4a: Abnormal audit fees are positively associated with a bank's market value.

On the other hand, market participants might interpret abnormal audit fees as bad news for various reasons. First, higher audit fees could indicate disagreements between the auditor and the client. Following this line of argumentation, higher audit fees represent more time-consuming audits, which are correlated with modified audit opinions (Carcello et al. (1995);

Geiger and Rama (2003)). Second, if auditors react to higher estimation uncertainty of financial statement items with higher fees (Ettredge et al. (2013)), positive abnormal audit fees indicate more risk in the underlying assets. This is consistent with empirical findings referring to audit fees as an early indicator of business risk (Stanley (2011)). Third, auditors could charge a risk premium for litigation and reputational risks. As these fees do not increase the quality of the audit, investors' might react negatively to them. Finally, abnormal audit fees could be an indicator of reduced auditor independence in fact due to a tightening economic bond between auditor and client and reduced auditor independence in appearance due to a lack of credibility of the auditor (Kanagaretnam et al. (2010); Kinney and Libby (2002)). For these reasons, we hypothesize:

H4b: Abnormal audit fees are negatively associated with a bank's market value.

3 Empirical Methodology

3.1 Research Design

We use a two-stage approach to investigate our hypotheses. In the first step, we estimate abnormal audit fees with a modified version of the audit fee model proposed by Fields et al. (2004). In doing so, we also analyze the effect of fair value assets on audit fees. In the second stage, we regress Tobin's Q as a proxy for investors' perceptions on the share of fair value assets, the bank's abnormal audit fees, an interaction term of abnormal audit fees and the share of Level 3 fair values, and several control variables.

Fields et al. (2004) develop an audit fee model-based on banks' risk categories. They model audit fees as a function of client's attributes as size, credit risk, market risk, liquidity risk, business risk, capital risk, and auditor-specific variables. We extend this model by adding the share of fair value assets of each level of the fair value hierarchy. We follow the extant literature and use the natural logarithm of audit fees as our dependent variable. We approximate clients' size by the natural logarithm of total assets. We include three major loan categories, non-performing loans, and net charge offs as measures for credit risk. We approximate market risk by the difference between rate-sensitive assets and rate-sensitive liabilities. Securities, defined as one minus total securities scaled by total assets at the beginning of the fiscal year, and the deposit ratio capture liquidity risk. Our proxies for business risk are the market return volatility of the previous 250 trading days, a loss dummy, and return on equity. Intangible assets and the Tier 1 capital ratio measure the exposure to capital risk. Finally, we include the auditor-specific variables Big-4, a dummy variable

indicating an auditor change, and the reporting lag. We estimate Equation (1) with an OLS model for the pooled sample with additional industry- and year-fixed-effects:

$$\begin{aligned} \ln FEE_{it} = {} & \beta_0 + \beta_1 SIZE_{it} + \beta_2 COMLOANS_{it} + \beta_3 CONSLOANS_{it} + \beta_4 RELOANS_{it} + \beta_5 NPL_{it} \\ & + \beta_6 NCHARGEOFF_{it} + \beta_7 SENSITIVE_{it} + \beta_8 SECURITIES_{it} \\ & + \beta_9 DEPOSITRATIO_{it} + \beta_{10} VOLA_{it} + \beta_{11} LOSS_{it} + \beta_{12} ROE_{it} \\ & + \beta_{13} INTANGIBLE_{it} + \beta_{14} T1RATIO_{it} + \beta_{15} BIG4_{it} + \beta_{16} AUDITORCHANGE_{it} \\ & + \beta_{17} REPLAG_{it} + \beta_{18} SHARE\_L1_{it} + \beta_{19} SHARE\_L2_{it} + \beta_{20} SHARE\_L3_{it} + \varepsilon_{it} \end{aligned} \quad (1)$$

where:

$\ln FEE_{it}$	=	natural logarithm of audit fees;
$SIZE_{it}$	=	natural logarithm of total assets;
$COMLOANS_{it}$	=	commercial and industrial loans scaled by beginning total assets;
$CONSLOANS_{it}$	=	consumer and installment loans scaled by beginning total assets;
$RELOANS_{it}$	=	real estate mortgage loans scaled by beginning total assets;
NPL_{it}	=	non-performing loans scaled by beginning total assets;
$NCHARGEOFF_{it}$	=	net charge offs scaled by beginning total assets;
$SENSITIVE_{it}$	=	rate-sensitive assets minus rate-sensitive liabilities scaled by beginning total assets;
$SECURITIES_{it}$	=	one minus total securities scaled by beginning total assets;
$DEPOSITRATIO_{it}$	=	total deposits scaled by beginning total assets;
$VOLA_{it}$	=	standard deviation of the previous 250 daily stock returns;
$LOSS_{it}$	=	indicator variable that takes on the value one if the firm reports a negative net income;
ROE_{it}	=	return on equity, defined as net income scaled by beginning equity;
$INTANGIBLE_{it}$	=	intangible assets scaled by beginning total assets;
$T1RATIO_{it}$	=	Tier 1 capital ratio;
$BIG4_{it}$	=	indicator variable that takes on the value one if the firm is audited by one of the Big-4 audit firms, i.e., Deloitte, Ernst&Young, KPMG, or PricewaterhouseCoopers;
$AUDITORCHANGE_{it}$	=	indicator variable that takes on the value one if the firm is audited by a new auditor;
$REPLAG_{it}$	=	reporting lag, defined as days between fiscal year end and the reporting day;

$SHARE\_L1_{it}$ = fair value assets measured using Level 1 inputs scaled by beginning total assets;

$SHARE\_L2_{it}$ = fair value assets measured using Level 2 inputs scaled by beginning total assets;

$SHARE\_L3_{it}$ = fair value assets measured using Level 3 inputs scaled by beginning total assets.

Our main interest lies on the coefficients of the fair value disclosures. Hypothesis 1 predicts positive values for all three coefficients. Hypothesis 2 predicts a higher coefficient on SHARE_L3 than on SHARE_L2, which should be larger than the coefficient on SHARE_L1. Regarding the control variables, we expect the coefficients on SIZE and the proxies for credit risk to be positive. The coefficient on the variable SENSITIVE, capturing market risk, depends on the development of the interest rate (Fields et al. (2004)); therefore, we leave our prediction unsigned. We follow Fields et al. (2004) and expect a positive sign for the coefficient on SECURITIES, as these approximate less liquid portfolios and, consequently, higher liquidity risk. In contrast, firms with a higher deposit ratio have less funding risk; therefore, we expect a negative coefficient on DEPOSITRATIO. If business risk is high, auditors charge higher audit fees (Stanley (2011)) and, hence, we expect positive coefficients on the business risk proxies VOLA, LOSS, and ROE. Intangible assets in banks' balance sheets are predominantly goodwill, which adds complexity. Moreover, goodwill increases capital risk; therefore, we expect a positive coefficient on INTANGIBLE as well as on T1RATIO. We predict a positive coefficient on BIG4, since the prior literature has shown that Big-4 auditors are able to charge a fee premium (Fields et al. (2004)). We also expect a positive coefficient on REPLAG, because a longer reporting lag indicates a more time-consuming audit, which increases audit fees. Finally, we predict no sign for AUDITORCHANGE. Low-balling might result in lower audit fees, whereas the lack of client-specific knowledge might increase audit fees (Hay et al. (2006)).

We are aware that the share of fair value assets per class scaled by beginning total assets is not an optimal measure, as it is affected by both net transfers and fair value changes. Fair value changes might induce a change in audit fees and Tobin's Q that is not related to estimation discretion. Nevertheless, we argue that our approach is appropriate. First, the time period of our sample is characterized by decreasing market prices for many asset classes. Most importantly, house prices approximated by the Standard and Poor's Case-Shiller Index were decreasing. Mortgage-related securitizations are probably one of the major constituents of the Level 3 category. Second, Fiechter and Meyer (2011) present hand-collected data on

the distribution of fair value gains and losses. There are only few fair value gains, and the 75% percentile is still zero. While decreasing fair values might shift audit fees upwards because the auditor's risk is increasing, Tobin's Q should decrease when fair values are decreasing. Both effects work against our hypotheses, therefore our approach is rather conservative.

We follow Kanagaretnam et al. (2010) and use the estimated residuals of Equation (1) as our estimate of abnormal audit fees.

In the second stage, we consider investors' perceptions of abnormal fees, fair value assets, and the interaction of abnormal audit fees and Level 3 fair values, as those fair value assets are by definition opaque and subject to the highest degree of managerial discretion. As measure for investors' perceptions, we use Tobin's Q. This measure goes back to the theoretical work of Brainard and Tobin (1968) and Tobin (1969) and is one of the most established performance and valuation measures in the accounting and finance literature. Tobin's Q measures the present value of future expected cash flows scaled by the current balance sheet value of these assets (see, e.g., Daske et al. (2008)). As we are interested in investors' perceptions of an asset's value compared to its balance sheet value, Tobin's Q is especially suited to study the question at hand. Furthermore, Tobin's Q can be easily compared across firms without any adjustments for risk, capital structure, or size (see, e.g., Lang and Stulz (1994)), which makes this metric preferable to other capital market measures, such as the stock price. Although Tobin's Q has some desirable features, the recent literature also has addressed some drawbacks. Mansi and Reeb (2002) and Glaser and Müller (2010) document a bias in Tobin's Q due to the use of the book value of debt in the nominator. They present evidence that the approximation of the market value of debt by its book value yields overestimated Qs when the debt is highly risky. This bias might influence our results if the higher estimation uncertainty in Level 3 fair values affects the market value of debt. However, as we predict a negative link between the more risky Level 3 assets and Tobin's Q, the bias described by Mansi and Reeb (2002) and Glaser and Müller (2010) works against our hypotheses. Furthermore, Tobin's Q by definition is a number which cannot drop below zero, which might raise concerns regarding the consistency of the OLS estimate. Nevertheless, as can be seen in Table 2 Panel B, even the 1% percentile of Tobin's Q lies around 0.914, which is way above the lower bound. Untabulated results show that all predicted values are way above zero. Following from this result and in line with prior literature, we do not see evidence that the bounded nature of Q in this study leads to inconsistent OLS estimates.

To deal with various levels of fair value assets, we use the breakdown of the three fair value categories. In addition, we include abnormal audit fees estimated as described above, and the interaction term between the share of Level 3 assets and abnormal audit fees. To control for client's size and current profitability, we include the natural logarithm of total assets and the return on equity. Concerning the bias documented by Mansi and Reeb (2002) and Glaser and Müller (2010), we include banks' ratios of regulatory Tier 1 capital. Net unrealized gains are included to control for the potential influence of changes in fair values that naturally influence the share of fair value assets.[3] We add further control variables that represent the business model of the bank. Specifically, we use the relation between non-interest income and total operating income to capture the non-banking book activities of a bank (Bischof et al. (2011b); Demirgüc-Kunt and Huizinga (2010); Laeven and Levine (2007); Stiroh (2006)). The share of mortgage loans indicates the importance of the mortgage sector (Bischof et al. (2011b)), which is of special interest during the financial crisis. The deposit ratio proxies the funding activities of the bank (Bischof et al. (2011b); Demirgüc-Kunt and Huizinga (2010)). Finally, we add control variables that were identified by prior research to proxy the usage of the Level 3 category. Mortgage-backed securities are a major constituent of the Level 3 category and, thus, the usage of Level 3 should depend on the liquidity of the MBS market. We use the model of Bhat et al. (2011) to estimate the liquidity of the mortgage-backed securities market. Specifically, we use the residual of the following regression as our liquidity measure:

$$CMBS\_RET_m=\beta_0+\beta_1 CS\_RET_m+\beta_2 R\_RET_m+\beta_3 TB\_RET_m+\varepsilon_m \quad (2)$$

where:

$CMBS\_RET_m$ = monthly-return of the BBB collateralized mortgage-backed security index from the Barclay Bank;

CS_RET_m = monthly-return of the Case-Shiller 20 city composite home price index;

R_RET_m = monthly-return of the U.S. Datastream residential REITS index;

TB_RET_m = monthly change in the yield of constant-maturity, 30-year U.S. treasury bonds.

[3] We note that a control based on the level breakdown of unrealized gains corresponding to the fair value levels is better suited. Unfortunately, such a breakdown is not available.

As additional control variables, we use the industry expertise of the auditor, a dummy variable indicating a new auditor, and the book value of mortgage-backed securities (Botosan et al. (2011); Glaser et al. (2013)).

$$\begin{aligned} TOBINSQ_{it} = {} & \beta_0 + \beta_1 SHARE\_L1_{it} + \beta_2 SHARE\_L2_{it} + \beta_3 SHARE\_L3_{it} + \beta_4 ABNFEES_{it} \\ & + \beta_5 SHARE\_L3_{it} \times ABNFEES_{it} + \beta_6 SIZE_{it} + \beta_7 ROE_{it} \\ & + \beta_8 T1RATIO_{it} + \beta_9 NETUNREALGAIN_{it} + \beta_{10} NIItoOPREV_{it} \\ & + \beta_{11} RELOANS_{it} + \beta_{12} DEPOSITRATIO_{it} + \beta_{13} INDUSTRYEXPERT_{it} \\ & + \beta_{14} CMBS\_LIQ_{it} + \beta_{15} MBS_{it} + \beta_{16} AUDITORCHANGE_{it} + \varepsilon_{it} \end{aligned} \quad (3)$$

where:

$TOBINSQ_{it}$ = Tobin's Q, defined as market value of equity plus book value of liabilities divided by total assets;

$ABNFEES_{it}$ = abnormal audit fees;

$NETUNREALGAIN_{it}$ = net unrealized gains, defined as the sum of the differences between an asset's fair value and its historical costs;

$NIItoOPREV_{it}$ = non-interest income divided by operating revenue;

$INDUSTRYEXPERT_{it}$ = the market share of the audit firm;

$CMBS\_LIQ_{it}$ = liquidity of the CMBS market, estimated as the fiscal year end residual from Equation (2);

MBS_{it} = book value of mortgage-backed securities,

and all other variables are as defined before. Our main interest lies on the coefficients of the different fair value asset categories and the interaction term between abnormal audit fees and the share of Level 3 assets. While we do not postulate a direction of the coefficient on the share of Level 2 assets, Hypotheses 3.1 and 3.3 predict a positive link between Level 1 assets and Tobin's Q and a negative link between Level 3 assets and Q, respectively. Hypothesis 4 postulates a positive coefficient on the abnormal audit fee variable if abnormal audit fees are perceived as reliability-enhancing, and a negative coefficient if abnormal audit fees are perceived as an indicator for higher uncertainty regarding the valuation of the underlying assets. Among the control variables, only ROE should have a positive influence, whereas all other bank-specific variables should remain insignificant. In particular, we do not assume any influence of SIZE, risk, and leverage (T1RATIO), or business activity, as Tobin's Q should already account for influences of these variables. Concerning the auditor-specific variables, we assume that auditors with industry expertise are perceived as suppliers of higher audit quality (Becker et al. (1998)). Therefore, we assume a positive link between

INDUSTRYEXPERT and Tobin's Q. We expect a negative relation between Tobin's Q and AUDITORCHANGE as prior research has documented a negative link between auditor tenure and cost of capital (Gosh and Moon (2005)).

3.2 Sample Description

We collected data from three different sources. We first took all U.S. banks reporting information on the level breakdown of fair value assets between 2008 and 2011 covered in SNL Financial.[4] We matched these observations with financial statement and auditor data from Thomson Reuters Worldscope and capital market data from Thomson Reuters Datastream. Our initial sample consists of 875 banks and 3,500 bank-years. We deleted stocks for which the standard deviation of daily returns is probably not interpretable. In particular, we followed Ince and Porter (2006) and dropped daily stock returns of above 300% that were reversed within one day and penny stocks. Furthermore, we dropped bank-years with more than 150 zero-return days in a year (745 observations). Next, we deleted observations with missing fair value data (496 observations), missing auditor data (528 observations), and incomplete financial statement data (564 observations). Finally, we dropped bank-years with a Tier 1 capital ratio below 4%, as these banks are probably in default (12 observations). The final sample consists of 385 banks and 1,155 bank-years. Table 1 describes the sample selection procedure.

[Insert Table 1 around here]

Panel A of Table 2 reports the sample composition per industry and year. The number of observations per year remains nearly constant within one industry. Regarding industries, State Commercial Banks (Primary SIC Code 6022) are the largest subgroup, followed by National Commercial Banks (Primary SIC Code 6021). There are only few Savings Institutions (Primary SIC Code 6035 and 6036) and other banks.

[Insert Table 2 around here]

Panel B of Table 2 reports descriptive statistics. The mean (median) of the share of assets measured at fair value is 22.4% (20.5%), with Level 2 fair values as the largest subgroup. The share of Level 3 fair values has a mean (median) of 2.3% (1.4%). However, there are some banks that heavily rely on Level 3 fair values, as can be seen from the 99% percentile of 12.8%. These values are comparable with prior research on fair value accounting. Tobin's Q

[4] Some banks started to report fair value information in 2007 on a voluntary basis. We do not include these observations in our sample because of a possible self-selection bias.

has a mean (median) of 0.987 (0.978), i.e., the market value, on average, is below the book value. For financial institutions this is a common result in times of crisis. There is a wide range of values of total assets, indicating that our sample reflects the full variety of the U.S. banking sector. Surprisingly, only 34% of the sample banks are audited by a Big-4 audit firm. This is well below the values reported in Fields et al. (2004) and Kanagaretnam et al. (2010), but comparable to evidence from Ettredge et al. (2013) and Goh et al. (2009). In our sample period, the audit of a bank generates increasing litigation risk due to the worsening of the financial crisis. Therefore, the decrease in the share of Big-4 auditors is consistent with findings of high risk clients' migration from Big-4 to mid-tier audit firms in the post-Sarbanes Oxley era (Hogan and Martin (2009)). An alternative explanation could be that the samples of the former studies include fewer small banks, which are more likely audited by small audit firms. As our sample is not limited to a small number of large banks but also includes many medium-sized banks, the lower share of Big-4 audited banks seems to reflect the true proportions in the U.S. banking industry.

Panel C of Table 2 presents Spearman and Pearson correlation coefficients. Audit fees are positively correlated with each fair value class. Moreover, Level 1 and Level 2 fair values are positively correlated with Tobin's Q, whereas Level 3 fair values are negatively correlated with Tobin's Q.

4 Empirical Results

4.1 Fair Values and Audit Fees

Table 3 reports the estimation results for audit fees. The model presented in Column 1 does not include fair value information. All significant coefficients have the expected signs. Firm size (SIZE) has a significant positive influence on audit fees. Considering the credit risk variables, only the ratio of non-performing loans (NPL) and, thus, credit quality is statistically significant. Non-performing loans might be more important for auditors because they directly affect net income, while the other credit risk variables only affect the balance sheet. Moreover, loans are valued at historical costs, which are less complex to audit. Our market risk measure, the difference between rate-sensitive assets, and rate-sensitive liabilities (SENSITIVE) is positive and marginally significant. The positive sign is consistent with decreasing interest rates in our sample period and, hence, favoring rate-sensitive liabilities. The deposit ratio (DEPOSITRATIO) enters the regression with a negative sign, probably reflecting lower risk and lower complexity of the audit. The significant positive coefficient on LOSS implies that auditors charge more fees for banks with negative net income. The Tier 1

capital ratio (T1RATIO) is positive and statistically significant, which might reflect higher audit complexity. The Big-4 dummy is positive and statistically significant, indicating that the market leaders can charge a fee premium in the banking industry.[5] In contrast to findings for non-financial firms, audit fees are not significantly related to return on equity (ROE). The year and industry dummies are not statistically significant. Thus, there is no time-trend in our data, and auditors do not charge the different types of banks different fees. The R-squared of 89% is comparable with prior research (Chen et al. (2010); Fields et al. (2004); Kanagaretnam et al. (2010)).

[Insert Table 3 around here]

In Column 2, we add the share of total fair value assets to our model. Hypothesis 1 predicts a positive link between fair value assets and audit fees. The coefficient on FVA is positive and statistically significant at the 5% level, confirming Hypothesis 1. All significant variables from Column 1 remain significant. The percentage of securities held (SECURITIES) is significant at the 5% level in Column 2. Moreover, the percentage of commercial and industrial loans (COMLOANS) becomes marginal significant.

The level breakdown of fair value assets is included in Column 3. As predicted by Hypothesis 1, the coefficients on SHARE_L1, SHARE_L2, and SHARE_L3 are positive. The coefficient on the share of Level 3 (Level 2) fair values is significant at the 5% (10%) level. The share of Level 1 fair values is not associated with audit fees in a statistically significant way. Thus, it seems that audit firms charge higher fees only for auditing model-based fair values. Hypothesis 2 predicts an increase of the coefficients from Level 1 to Level 3. Contrary to the findings of Chen et al. (2010) and Ettredge et al. (2013), we do not find such a pattern. Additional F-tests reveal that the three fair value coefficients are not significantly different. Moreover, we do not find significant differences when comparing pairs of coefficients. Thus, we cannot confirm Hypothesis 2.

The control variables are robust to the split of total fair value assets into estimation classes. Only the coefficient on the ratio of non-performing loans (NPL) is not statistically significant anymore (p-value > 0.115). Non-performing loans, however, are usually seen as the primary earnings management tool of banks (see Wahlen (1994), among others). Our results indicate

[5] If we replace the Big-4 dummy by the auditor industry expertise (INDUSTRYEXPERT), results are qualitatively unchanged. Also INDUSTRYEXPERT becomes highly significant while all other inferences are unchanged.

that auditors shift their attention from non-performing loans to Level 3 fair values in the presence of fair value estimates containing high valuation uncertainty.

4.2 Market Perceptions of Fair Values and Audit Fees

Next, we turn to our valuation model. The results of the estimation of Equation (4) are reported in Table 4. In Column 1, we regress Tobin's Q on the level breakdown of fair value assets, abnormal audit fees, the interaction between the share of Level 3 fair values and abnormal audit fees, and several control variables. Consistent with Hypothesis 3.1, the share of Level 1 fair values enters the regression with a positive sign, but remains statistically insignificant (p-value > 0.111). A possible explanation for this result is the comparatively high share of banks in our sample that do not have assets valued using Level 1 inputs. For the share of Level 2 fair values, Hypothesis 3.2 does not predict a sign. The estimated coefficient is positive and significant, i.e. market participants seem to interpret Level 2 fair values as reliable enough to increase Tobin's Q. Additional F-tests show that there are no significant differences between the market perception of Level 1 and Level 2 fair values, consistent with the findings of Kolev (2008) and Song et al. (2010). The coefficient on the share of Level 3 assets is negative and significant, as predicted by Hypothesis 3.3. This result is consistent with high estimation uncertainty and, thus, unreliable valuations. Additional F-tests reveal that the market perception of Level 3 assets differs from the perceptions of Level 1 and Level 2 assets respectively.

In Hypothesis 4, we do not predict a direction between abnormal audit fees and Tobin's Q. The coefficient on abnormal audit fees (ABNFEES) is positive, but remains statistically insignificant (p-value > 0.186). Thus, in general, market participants do not take into account abnormal audit fees in their market valuation. However, turning to the interaction term, we observe a negative and significant effect on Tobin's Q. Thus, given a certain share of Level 3 fair values, investors react negatively to increases in abnormal audit fees, or vice versa. This is consistent with our expectation, that abnormal audit fees are especially important in the presence of assets with high estimation uncertainty. The negative coefficient implies that market participants interpret abnormal audit fees in the presence of Level 3 fair values as bad news. Possible explanations for this finding could be seen in disagreements between auditor and client over the valuation of Level 3 fair values, in additional risk of the underlying, or in additional estimation and audit risk. In calculating abnormal audit fees, we control for the reporting lag that is a proxy for disagreements (Carcello et al. (1995); Geiger and Rama (2003)). Since the effect of the reporting lag is not part of the abnormal portion of audit fees,

disagreements as an explanation for the discount seems less likely, provided disagreements increase the time span between fiscal year end and reporting date. However, we are aware that this is rather weak evidence. Further research is needed to differentiate between possible explanations.

Turning to the control variables, size and return on equity (ROE) are significantly positively associated with Tobin's Q. The coefficient on the Tier1 ratio and unrealized fair value gains (NETUNREALGAINS) are positive but insignificant.

[Insert Table 4 around here]

In Column 2, we add additional control variables that reflect a bank's business model. The coefficient on the share of mortgage loans (RELOANS) is negative and marginally significant, probably reflecting the high default risk of mortgage loans in our sample period. The deposit ratio (DEPOSITRATIO) is positive and significant, which reflects the lower funding risk. Finally, the ratio of non-interest income to total operating revenues (NIItoOPREV) is insignificant. The coefficient on the interaction term between abnormal audit fees and the share of Level 3 fair values as well as the coefficient on the share of Level 3 fair values remain negative and significant. Only the coefficient on the share of Level 2 fair values is not significant anymore (p-value > 0.113). We infer from these findings that it is not the bank's business model that drives our results.

In Column 3, we additionally control for variables that are associated with the use of the Level 3 category. We find a positive influence of the industry expertise of the audit firm[6], but our main findings are not altered. Because the liquidity of the CMBS market (CMBS_LIQ) is measured at the fiscal year end, which is clustered at December, the variable CMBS_LIQ is highly correlated with the year fixed effects. In Column 4, we re-estimate the model without the year dummies. CMBS_LIQ is now positive and significant as expected, but our findings regarding the Level 3 fair values and abnormal audit fees are robust. We conjecture that it is not the factors that drive the Level 3 usage that induce our findings. With CMBS_LIQ and the exposure to mortgage-backed securities (MBS), we added two variables that should reflect the riskiness of the underlying assets. Therefore, the risk explanation for the negative perceptions of abnormal audit fees in the presence of Level 3 valuations is less likely.

[6] All inferences remain constant if we use a Big-4 dummy instead the market share of the audit firm.

5 Sensitivity Analyses

In this section, we run several sensitivity analyses to check the robustness of our results. Specifically, we test the robustness regarding the specification of the audit fee model, we estimate the valuation model per year, and we include earnings management and liquidity proxies in our valuation model.

Our first set of robustness checks regards the specification of the audit fee model. Our inferences on Hypothesis 4 are based on abnormal audit fees that are defined as regression residuals. It is a well-known fact that regression residuals are sensitive to changes in the underlying model specification. Therefore, we estimate different variants of Equation (1) and re-run our valuation model with the different abnormal audit fees estimates. Table 5 presents the estimation results.

[Insert Table 5 around here]

In Column 1 of Panel A of Table 5, we use the audit fee model as proposed by Fields et al. (2004). This model does not include the deposit ratio (DEPOSITRATIO), return on equity (ROE), the auditor change dummy (AUDITORCHANGE), and the reporting lag (REPLAG). Moreover, only a dummy indicating savings institutions is used instead of industry-fixed-effects.[7] The results generally do not differ from our main results. Most importantly, the coefficient on SHARE_L3 remains positive and significant. In Column 2, we replace the dummy variable SAVINGS with a full set of industry-fixed-effects. This does not alter our results. In Column 3, we include the deposit ratio as an additional liquidity risk measure (DEPOSITRATIO), return on equity (ROE) as a performance metric, and non-audit fees in logarithmic form (LNNAF). The deposit ratio is negatively linked to audit fees in a statistically significant way, whereas non-audit fees are positively associated with audit fees. The latter finding is consistent with knowledge-spillovers between audit- and non-audit services, i.e., clients are willing to pay higher audit fees if the auditor can access knowledge gained from the provision of non-audit services (see Butterworth and Houghton (1995), Craswell and Francis (1999), DeBerg et al. (1991), Ezzamel et al. (1996), Simon (1985), and Simunic (1984) for empirical evidence for knowledge-spillovers; Palmrose (1986), and Whisenant et al. (2003) find evidence contradicting the argument for knowledge-spillovers). In Column 4, we extend the Fields-model with some additional auditor variables. Specifically,

[7] Fields et al. (2004) use two more variables. TRANSACCT is the number of transaction accounts divided by total deposits and is a measure of liquidity risk. EFFICIENCY is defined as total operating expenses divided by total revenue and is a measure of operating risk. We do not include these variables due to data availability.

we add a dummy variable indicating a new auditor (AUDITORCHANGE), the reporting lag (REPLAG), and a dummy indicating if the audit is performed in the business season of the audit firms (BUSYSEASON). None of these variables turns significant, whereas our main results are unaffected. In Column 5, finally, we add all additional variables and find no deviation from our main analysis.

Panel B of Table 5 reports the estimates of the valuation model. The inclusion of different abnormal audit fee estimates does not change our findings. Specifically, the coefficient on the interaction term between abnormal audit fees and Level 3 fair values remains negative and significant for all specifications. Moreover, Level 2 fair values become marginally significant in two specifications, whereas there is still a negative link between Level 3 fair values and the market valuation.

In the next set of robustness checks, we run the Tobin's Q regressions on an annual basis. As can be seen from Table 6, Level 3 fair values are negatively and significantly associated with Tobin's Q in every year. The interaction between Level 3 fair values and abnormal audit fees remains negative throughout all years. However, the coefficient is statistically significant only in 2008. A particularly strong impact of crisis-specific factors during the financial crisis might yield a possible explanation for these findings. Alternatively, the insignificance can be explained by a lack of power due to the reduced sample size.

[Insert Table 6 around here]

Our final set of sensitivity analyses controls for earnings management and liquidity as possible competing explanations for our main results. Kanagaretnam et al. (2010) show that abnormal audit fees are positively linked to earnings management in small banks. It is possible that the observed negative relation between Tobin's Q and the interaction term of abnormal audit fees and Level 3 fair values is a confound caused by this relation. Therefore, we add abnormal loan loss provisions (ABNLLP) as a proxy for earnings management to our valuation model. Abnormal loan loss provisions have been used in the previous literature as a typical measure for earnings management in banks (Kanagaretnam et al. (2010); Wahlen (1994)). We use variables that prior research has identified to determine expected loan loss provisions and take the unexplained share as our approximation of abnormal loan loss provisions (Beatty et al. (2002); Beaver and Engel (1996); Kanagaretnam et al. (2010); Wahlen (1994)). Specifically, we estimate the following regression for loan loss provisions (LLP):

$$LLP_{it}=\beta_0+\beta_1 GLOANS_{it}+\beta_2 NPA_{it}+\beta_3 LLA_{it}+\beta_4 \Delta NPA_{it}+\beta_5 NCHARGEOFF_{it}+\varepsilon_{it} \quad (4)$$

where:

LLP_{it} = loan loss provisions scaled by beginning total assets;

$GLOANS_{it}$ = gross loans scaled by beginning total assets;

NPA_{it} = beginning non-performing assets scaled by beginning total assets;

LLA_{it} = beginning loan loss allowances scaled by beginning total assets;

and all other variables are as defined before.

As there are incentives for both profit-increasing and profit-decreasing earnings management activities, we use the raw residual from the estimation of Equation (4) and the absolute value of this residual, respectively. Furthermore, investors might react differently to upward and downward manipulations. Therefore, we use two interaction terms ABNLLP+ (ABNLLP-) which are defined as abnormal loan loss provisions times an indicator variable taking the value one if abnormal loan loss provisions are positive (negative) and zero otherwise.

We estimate the following regression model:

$$TOBINSQ_{it}=\beta_0+\beta_1 SHARE\_L1_{it}+\beta_2 SHARE\_L2_{it}+\beta_3 SHARE\_L3_{it}+\beta_4 ABNFEES_{it} +\beta_5 SHARE\_L3_{it}\times ABNFEES_{it}+\beta_6 ABNLLP_{it}+\sum_j \gamma_j Controls_{it}+\varepsilon_{it} \quad (5)$$

where:

$ABNLLP_{it}$ = abnormal loan loss provisions;

Controls = all control variables from Equation (3);

and all other variables are as defined before.

[Insert Table 7 around here]

Regression results are reported in Columns 1 to 3 of Table 7. None of the earnings management metrics become significant in the regressions. Most importantly, the inclusion of abnormal loan loss provisions does not alter our main findings. We infer that we do not find an earnings management effect, but that abnormal audit fees in combination with Level 3 fair values have a distinct effect on Tobin's Q.

Finally, liquidity might drive our results. Banks that make use of the Level 3 category are exposed to illiquid assets, as illiquidity is one of the most important preconditions for the use of Level 3 valuations. While we control for the asset liquidity with the market liquidity of the CMBS market, Gopalan et al. (2012) show a positive link between asset liquidity and stock liquidity. This might affect the bank's market value because there is a well-documented negative relation between stock liquidity and required rate of returns (Amihud and Mendelson (1986); Brennan et al. (1998); Chordia et al. (2001); Datar et al. (1998); Haugen and Baker

(1996)). Moreover, firms with high stock illiquidity tend to have high liquidity risk, i.e., a high return sensitivity to market liquidity (Acharya and Pedersen (2005)). Thus, it is possible that market participants do not react to managerial discretion in determining Level 3 fair values, but to the stock illiquidity caused by the existence of these assets. We employ two often used illiquidity measures to control for this possibility, the number of zero return days (Bekaert et al. (2007); Lang et al. (2012); Lesmond et al. (1999)) and the Amihud (2002) illiquidity measure (Acharya and Pedersen (2005); Amihud (2002); Lang and Maffett (2011)). Amihud's illiquidity measure defines a stock's illiquidity as

$$ILLIQ_{it} = {}^{1}/_{D_{it}} \sum_{d=1}^{D_{it}} \left({}^{|R_{itd}|}/_{VOL_{itd}} \right) \quad (6)$$

where:

$ILLIQ_{it}$ = illiquidity measure of Amihud (2002);

D_{it} = number of daily observations for stock i in year t;

R_{itd} = return of stock i on day d in year t;

VOL_{itd} = trading volume of stock i on day d in year t.

The intuition behind this measure is that illiquid stocks have a high stock price response to little trading volume. We estimate the following regression model:

$$TOBINSQ_{it} = \beta_0 + \beta_1 SHARE\_L1_{it} + \beta_2 SHARE\_L2_{it} + \beta_3 SHARE\_L3_{it} + \beta_4 ABNFEES_{it} + \beta_5 SHARE\_L3_{it} \times ABNFEES_{it} + \beta_6 Liquidity_{it} + \sum_j \gamma_j Controls_{it} + \varepsilon_{it} \quad (7)$$

where:

$Liquidity_{it}$ = is either the number of zero return days (ZERORETDAYS) or the illiquidity measure of Amihud (2002) (ILLIQ);

and all other variables are as defined before.

Regression results are reported in Columns 4 and 5 of Table 7. The illiquidity measures are negative and significant as expected. The inclusion of the liquidity controls does not alter any of our findings regarding the fair value breakdown and abnormal audit fee variables. To the contrary, if illiquidity is taken into account, the share of Level 2 fair values becomes significant. We conclude that it is not stock liquidity that drives our findings.

6 Conclusion

This paper analyzes the economic consequences of the joint announcement of fair value disclosures and audit fees. SFAS 157 mandates the disclosure of fair value levels, where levels differ in their estimation inputs. Thus, investors can infer the reliability of the estimates from these disclosures. Prior research documents a market discount of fair value assets (Goh

et al. (2009); Kolev (2008); Song et al. (2010)), which is increasing in estimation uncertainty. While there is evidence of a relation between the market discount of fair value assets, corporate governance, and the auditors' type, only little is known about the role of audit fees. Audit fees capture both audit effort and audit risk. Recent research suggests that audit fees are related to fair value assets (Ettredge et al. (2013)) and earnings management (Chen et al. (2010)). We complement this research in documenting the missing link between abnormal audit fees, the share of Level 3 fair values, and the market discount of fair value assets. Our dataset contains more than 1,000 U.S. bank-years from 2008 to 2011. We confirm prior findings of higher audit fees if the share of Level 3 fair values is high.

Our main results address the market perception of audit fees and fair value assets. We report a robust link between fair value assets and Tobin's Q as a measure for investors' perceptions, whereby the direction of the link depends on estimation uncertainty. Level 1 and Level 2 fair values are positively associated to market value, whereas the share of Level 3 fair values is negatively perceived. We conclude that investors prefer positions measured at fair value over positions valued at historical costs if the reliability of the estimates is sufficient. Abnormal audit fees are negatively linked to Tobin's Q if they are interacted with the share of Level 3 fair values. This indicates estimation risk, audit risk, or additional risk of the underlying assets as the dominant interpretation of abnormal audit fees by market participants.

We are aware of some limitations of our research design and some implicit assumptions inherent in our interpretation of the results. It is possible that fair value assets are discounted not due to estimation uncertainty, but as a result of the underlying assets' riskiness. Our model includes two variables that controls for the riskiness of the underlying assets, which points towards estimation and audit risk as explanation for our findings. However, the controls cannot capture all of the investors' possible expectations if Level 3 assets are overvalued. Moreover, we approve that market valuation is not the single objective of standard setters (Holthausen and Watts (2001)) and overvaluation might be desired as part of a regulatory forbearance strategy (Huizinga and Laeven (2012)). Nevertheless, our findings on abnormal audit fees are unaffected by this criticism.

Our results have important consequences for a bank's reporting and auditing strategy. High uncertainty estimations increase the costs of the audit. Moreover, in the presence of high shares of assets with potentially unreliable valuations, it is not possible to signal a more reliable and intense audit by a unexpectedly high amount of audit fees. This strategy has even negative consequences, as investors interpret abnormal audit fees as an indication of additional risk. Consequentially, firms have to rely on additional voluntary disclosures to

communicate a more reliable and intense audit. Furthermore, the results on the link between different levels of fair values and Tobin's Q are in line with the notion of Laux and Leuz (2010) that fair value accounting in general is not problematic and even preferred by investors. From a valuation point of view, standard setters should continue their shift towards fair value accounting and focus their attention on the estimation of model-based fair values.

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TABLE 1

Sample Selection

Criterion	Observations
Initial Sample	3,500
Illiquid Firms and Data Errors	(745)
Missing Fair Values	(496)
Missing Auditor Data	(528)
Incomplete Financial Statement Data	(564)
Regulatory constrained Banks	(12)
Final Sample	1,155

Note: This table presents the sample selection procedure. The initial sample covers all banks from SNL Financial that report the level breakdown of the fair value hierarchy and have a Worldscope ID. "Illiquid firms and data errors" are firms with daily stock returns above 300% that are reversed within one day, penny stocks, and bank-years with more than 150 zero-return days per year. "Missing fair values" are bank-years for which one or more fair value levels are not available. "Missing auditor data" are bank-years for which the auditor or audit fees are unknown. "Incomplete financial statement data" are bank-years for which one or more explanatory variables are not available. Banks are deemed as regulatory constrained if the Tier 1 capital ratio is below 4%.

TABLE 2

Descriptive Statistics

Panel A: Sample Composition

Primary SIC / Year	2008	2009	2010	2011	Total
6021	95	99	94	87	375
6022	158	162	168	154	642
6029	6	2	4	4	16
6035	18	15	16	20	69
6036	6	9	10	11	36
6712	6	5	4	2	17
Total	289	292	296	278	1,155

Panel B: Descriptive Statistics

Variable	N	mean	sd	p01	p25	p50	p75	p99
FVA	1,155	0.224	0.116	0.026	0.147	0.205	0.28	0.594
SHARE_L1	1,155	0.007	0.023	0.000	0.000	0.000	0.003	0.116
SHARE_L2	1,155	0.194	0.112	0.000	0.122	0.177	0.247	0.555
SHARE_L3	1,155	0.023	0.032	0.000	0.004	0.014	0.030	0.128
lnFEES	1,155	12.782	1.152	11.067	11.989	12.539	13.379	16.625
TOBINS Q	1,155	0.987	0.045	0.914	0.954	0.978	1.012	1.119
SIZE	1,155	7.743	1.512	5.627	6.726	7.360	8.368	12.547
COMLOANS	1,155	0.234	0.171	0.010	0.110	0.191	0.305	0.821
CONSLOANS	1,155	0.088	0.103	0.000	0.019	0.047	0.129	0.447
RELOANS	1,155	0.660	0.222	0.055	0.521	0.703	0.816	1.092
NPL	1,155	0.026	0.024	0.001	0.010	0.020	0.034	0.110
NCHARGEOFF	1,155	0.009	0.009	0.000	0.002	0.006	0.013	0.043
SENSITIVE	1,155	-0.022	0.213	-0.564	-0.143	-0.005	0.114	0.465
SECURITIES	1,155	0.784	0.116	0.404	0.724	0.805	0.865	0.976
DEPOSITRATIO	1,155	0.800	0.118	0.470	0.731	0.798	0.868	1.120
VOLA	1,155	0.041	0.029	0.013	0.026	0.036	0.050	0.100
LOSS	1,155	0.301	0.459	0	0	0	1	1
ROE	1,155	-0.004	0.230	-0.644	-0.025	0.048	0.089	0.227
INTANGIBLE	1,155	0.014	0.018	0.000	0.000	0.007	0.023	0.078
T1RATIO	1,155	0.129	0.036	0.057	0.109	0.125	0.143	0.232
BIG4	1,155	0.343	0.475	0	0	0	1	1
INDUSTRYEXPERT	1,155	0.073	0.051	0.001	0.028	0.069	0.103	0.169
AUDITORCHANGE	1,155	0.071	0.257	0	0	0	0	1
REPLAG	1,155	37.559	22.15	13	25	28	41	91
NETUNREALGAINS	1,155	-7.238	459.61	-535	-0.541	1.003	4.443	360
NIItoOPREV	1,155	23.290	11.768	3.068	15.529	22.035	28.746	70.382
CMBS_LIQ	1,155	0.010	0.070	-0.069	-0.046	-0.018	0.119	0.119
MBS	1,155	0.116	0.095	0.000	0.048	0.100	0.164	0.461

TABLE 2 (continued)

Panel C: Correlations

	FVA	SHARE_L1	SHARE_L2	SHARE_L3	lnFEES	TOBINS Q
FVA	1	0.1328***	0.9384***	-0.0095	0.0386	0.1474***
SHARE_L1	0.2961***	1	0.0683**	-0.0370	0.2695***	0.1694***
SHARE_L2	0.9398***	0.0972***	1	-0.2085***	0.0133	0.1987***
SHARE_L3	0.1291***	0.0142	-0.1558***	1	0.1196***	-0.3195***
lnFEES	0.1898***	0.1654***	0.1445***	0.0640**	1	0.1803***
TOBINS Q	0.1374***	0.0917***	0.1805***	-0.1978***	0.1237***	1

Note: This table presents descriptive statistics for the pooled sample. In Panel C, Spearman correlation coefficients are reported above and Pearson correlation coefficients below the diagonal. */**/*** marks significance at the 10%/5%/1% level (two-tailed). All variables are defined as in Appendix A.

TABLE 3

Determinants of Audit Fees

	(1)	(2)	(3)
CONSTANT	7.425***	6.965***	7.057***
	(0.350)	(0.425)	(0.451)
SIZE	0.614***	0.602***	0.600***
	(0.024)	(0.020)	(0.020)
COMLOANS	0.366	0.387*	0.386
	(0.238)	(0.233)	(0.237)
CONSLOANS	0.285	0.317	0.335
	(0.264)	(0.256)	(0.255)
RELOANS	-0.092	-0.062	-0.060
	(0.218)	(0.214)	(0.217)
NPL	2.813***	2.355**	1.830
	(0.985)	(1.067)	(1.157)
NCHARGEOFF	1.046	0.643	0.363
	(2.373)	(2.405)	(2.410)
SENSITIVE	0.177*	0.197**	0.193**
	(0.093)	(0.091)	(0.091)
SECURITIES	0.083	0.649**	0.572
	(0.177)	(0.328)	(0.348)
DEPOSITRATIO	-0.319*	-0.338*	-0.343**
	(0.178)	(0.173)	(0.173)
VOLA	0.571	0.504	0.557
	(0.783)	(0.773)	(0.745)
LOSS	0.109**	0.106**	0.101**
	(0.043)	(0.043)	(0.042)
ROE	-0.008	-0.032	-0.055
	(0.112)	(0.114)	(0.112)
INTANGIBLE	0.373	0.786	0.776
	(1.261)	(1.138)	(1.140)
CAPRATIO	2.354***	2.371***	2.355***
	(0.447)	(0.444)	(0.446)
BIG4	0.320***	0.334***	0.338***
	(0.046)	(0.044)	(0.044)
AUDITORCHANGE	0.065	0.072	0.070
	(0.056)	(0.056)	(0.056)
REPLAG	0.000	0.000	0.000
	(0.001)	(0.001)	(0.001)
FVA		0.691**	
		(0.310)	
SHARE_L1			0.962
			(1.001)
SHARE_L2			0.567*
			(0.332)
SHARE_L3			1.410**
			(0.694)

TABLE 3 (continued)

Fixed Effects	Industry Year	Industry Year	Industry Year
Observations	1,155	1,155	1,155
R-squared	0.89	0.89	0.89
F-Stat	109.40	118.90	112.10
Prob > F	0.0000	0.0000	0.0000
SHARE_L1 = SHARE_L2 = SHARE_L3 [p-value]			0.447
SHARE_L1 = SHARE_L2 [p-value]			0.677
SHARE_L1 = SHARE_L3 [p-value]			0.720
SHARE_L2 = SHARE_L3 [p-value]			0.249

Note: This table reports OLS regression results for the pooled sample, regressing lnFEES on the displayed variables. Huber/White standard errors are clustered on the firm level and reported in parentheses. Fixed effects are not reported. All variables are as defined in Appendix A. */**/*** marks significance at the 10%/5%/1% level (two-tailed t-tests).

TABLE 4

The Effect of Fair Value Disclosures and Abnormal Audit Fees on Tobin's Q

	(1)	(2)	(3)	(4)
CONSTANT	0.962***	0.929***	0.912***	0.924***
	(0.014)	(0.018)	(0.025)	(0.018)
SHARE_L1	0.116	0.108	0.109	0.110
	(0.072)	(0.071)	(0.075)	(0.076)
SHARE_L2	0.041*	0.034	0.033	0.032
	(0.021)	(0.021)	(0.029)	(0.029)
SHARE_L3	-0.286***	-0.278***	-0.264***	-0.273***
	(0.062)	(0.059)	(0.057)	(0.058)
ABNFEES	0.008	0.007	0.005	0.005
	(0.006)	(0.006)	(0.006)	(0.006)
SHARE_L3*ABNFEES	-0.321***	-0.288**	-0.258**	-0.264**
	(0.116)	(0.112)	(0.108)	(0.108)
SIZE	0.003**	0.004**	0.002	0.002
	(0.002)	(0.002)	(0.002)	(0.002)
ROE	0.060***	0.053***	0.053***	0.051***
	(0.011)	(0.011)	(0.011)	(0.010)
T1RATIO	-0.043	-0.015	-0.006	-0.017
	(0.063)	(0.063)	(0.065)	(0.063)
NETUNREALGAIN	0.104	-0.063	-0.273	-0.602
	(0.423)	(0.422)	(0.428)	(0.398)
NIItoOPREV		0.000	0.000	0.000
		(0.000)	(0.000)	(0.000)
RELOANS		-0.019*	-0.019*	-0.017
		(0.011)	(0.011)	(0.011)
DEPOSITRATIO		0.056***	0.059***	0.056***
		(0.013)	(0.013)	(0.013)
INDUSTRYEXPERT			0.129***	0.128***
			(0.042)	(0.041)
CMBS_LIQ			0.100	0.031*
			(0.113)	(0.016)
MBS			0.003	0.003
			(0.030)	(0.030)
AUDITORCHANGE			-0.002	-0.003
			(0.005)	(0.005)
Fixed Effects	Industry Year	Industry Year	Industry Year	Industry
Observations	1,155	1,155	1,155	1,155
R-squared	0.19	0.21	0.23	0.21
F-Stat	12.39	12.49	10.64	7.51
Prob > F	0.0000	0.0000	0.0000	0.0000
SHARE_L1 = SHARE_L2 = SHARE_L3 [p-value]	0.0000	0.0000	0.0000	0.0000
SHARE_L1 = SHARE_L2 [p-value]	0.3090	0.3030	0.3260	0.3230
SHARE_L1 = SHARE_L3 [p-value]	0.0000	0.0001	0.0002	0.0001
SHARE_L2 = SHARE_L3 [p-value]	0.0000	0.0000	0.0000	0.0000

Note: This table reports OLS regression results for the pooled sample, regressing Tobin's Q on the displayed variables. Huber/White standard errors are clustered on the firm level and reported in parentheses. Fixed effects are not reported. ABNFEES are abnormal audit fees, defined as the residuals from Equation (1). All other variables are as defined in Appendix A. */**/*** marks significance at the 10%/5%/1% level (two-tailed t-tests).

TABLE 5

Alternative Audit Fee Model Specifications and Market Valuation

Panel A: Estimation Results of Different Audit Fee Model Specifications

	(1)	(2)	(3)	(4)	(5)
CONSTANT	7.028***	6.862***	7.124***	6.847***	7.065***
	(0.469)	(0.484)	(0.478)	(0.474)	(0.472)
SIZE	0.605***	0.607***	0.578***	0.609***	0.586***
	(0.019)	(0.020)	(0.022)	(0.020)	(0.022)
COMLOANS	0.230	0.261	0.355	0.272	0.369
	(0.226)	(0.225)	(0.248)	(0.225)	(0.248)
CONSLOANS	0.220	0.226	0.243	0.236	0.264
	(0.245)	(0.242)	(0.260)	(0.242)	(0.260)
RELOANS	-0.197	-0.171	-0.060	-0.165	-0.055
	(0.203)	(0.202)	(0.228)	(0.201)	(0.228)
NPL	2.049*	1.961*	1.614	1.987*	1.605
	(1.119)	(1.146)	(1.111)	(1.136)	(1.102)
NCHARGEOFF	-0.221	0.152	0.454	0.224	0.481
	(2.209)	(2.225)	(2.323)	(2.210)	(2.318)
SENSITIVE	0.143	0.148	0.206**	0.148	0.206**
	(0.089)	(0.090)	(0.093)	(0.090)	(0.092)
SECURITIES	0.591*	0.572	0.441	0.585	0.450
	(0.349)	(0.360)	(0.366)	(0.360)	(0.366)
VOLA	0.677	0.701	0.532	0.647	0.456
	(0.828)	(0.821)	(0.676)	(0.792)	(0.643)
LOSS	0.128***	0.124***	0.108***	0.120***	0.100**
	(0.040)	(0.040)	(0.042)	(0.040)	(0.042)
INTANGIBLE	0.591	0.540	1.080	0.538	1.052
	(1.102)	(1.101)	(1.140)	(1.097)	(1.131)
T1RATIO	2.635***	2.518***	2.421***	2.511***	2.474***
	(0.448)	(0.439)	(0.449)	(0.443)	(0.454)
BIG4	0.353***	0.347***	0.342***	0.349***	0.343***
	(0.044)	(0.044)	(0.044)	(0.044)	(0.045)
SAVINGS	-0.059				
	(0.062)				
DEPOSITRATIO			-0.352**		-0.342*
			(0.176)		(0.177)
ROE			0.011		0.007
			(0.087)		(0.084)
LNNAF			0.027**		0.026**
			(0.012)		(0.012)
AUDITORCHANGE				0.066	0.017
				(0.055)	(0.053)
REPLAG				0.000	0.001*
				(0.001)	(0.001)
BUSYSEASON				-0.037	-0.049
				(0.075)	(0.085)
SHARE_L1	0.847	0.948	1.088	0.943	1.074
	(1.007)	(1.012)	(0.914)	(1.008)	(0.912)
SHARE_L2	0.551*	0.537	0.448	0.548	0.433
	(0.332)	(0.347)	(0.336)	(0.350)	(0.338)
SHARE_L3	1.245*	1.252*	1.436**	1.236*	1.392**
	(0.669)	(0.669)	(0.665)	(0.666)	(0.664)
Fixed Effects	Year	Industry Year	Industry Year	Industry Year	Industry Year
Observations	1,155	1,155	997	1,155	997
R-squared	0.89	0.89	0.90	0.89	0.90
F-Stat	153.00	130.40	126.60	120.70	116.80
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE 5 (continued)

Panel B: Tobin's Q and Different Abnormal Audit Fee Estimates

	(1)	(2)	(3)	(4)	(5)
SHARE_L1	0.110	0.110	0.063	0.110	0.063
	(0.075)	(0.075)	(0.079)	(0.075)	(0.079)
SHARE_L2	0.034	0.034	0.045*	0.034	0.046*
	(0.029)	(0.029)	(0.026)	(0.029)	(0.027)
SHARE_L3	-0.262***	-0.260***	-0.230***	-0.261***	-0.230***
	(0.059)	(0.060)	(0.055)	(0.060)	(0.056)
ABNFEES	0.005	0.005	0.001	0.005	0.002
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
SHARE_L3*ABNFEES	-0.226**	-0.222**	-0.204*	-0.225**	-0.210**
	(0.105)	(0.107)	(0.106)	(0.107)	(0.106)
Controls	Yes	Yes	Yes	Yes	Yes
Fixed Effects	Industry Year	Industry Year	Industry Year	Industry Year	Industry Year
Observations	1,155	1,155	997	1,155	997
R-squared	0.23	0.23	0.23	0.23	0.23
F-Stat	10.62	10.61	10.77	10.54	10.38
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000

Note: This table presents results of the robustness check regarding the estimation of abnormal audit fees. Panel A reports OLS regression results for the pooled sample, regressing lnFEES on the displayed variables. Panel B reports OLS regression results for the pooled sample, regressing Tobin's Q on the displayed variables. ABNFEES are abnormal audit fees, defined as regression residuals from the models from Panel A of Table 5. Additionally, all control variables from Column (3) of Table 4 are included. Controls and fixed effects are not displayed. Huber/White standard errors are clustered on the firm level and reported in parentheses. All other variables are as defined in Appendix A. */**/*** marks significance at the 10%/5%/1% level (two-tailed t-tests).

TABLE 6

Tobin's Q Model Estimated per Year

	(1) 2008	(2) 2009	(3) 2010	(4) 2011
CONSTANT	1.028***	0.899***	0.877***	0.872***
	(0.045)	(0.035)	(0.028)	(0.028)
SHARE_L1	0.030	0.117	0.211**	0.137*
	(0.138)	(0.096)	(0.106)	(0.082)
SHARE_L2	0.032	0.044	0.047	-0.007
	(0.036)	(0.038)	(0.040)	(0.031)
SHARE_L3	-0.284***	-0.240***	-0.215**	-0.258*
	(0.098)	(0.076)	(0.091)	(0.133)
ABNFEES	0.018**	-0.003	0.003	-0.006
	(0.009)	(0.009)	(0.010)	(0.008)
SHARE_L3*ABNFEES	-0.445**	-0.047	-0.241	-0.086
	(0.186)	(0.113)	(0.256)	(0.264)
SIZE	0.002	0.000	0.004**	0.005***
	(0.002)	(0.002)	(0.002)	(0.002)
ROE	0.132***	0.053***	0.033	0.035***
	(0.024)	(0.013)	(0.021)	(0.008)
T1RATIO	-0.344***	0.030	0.097	0.083
	(0.126)	(0.100)	(0.077)	(0.063)
NETUNREALGAIN	-0.912**	0.488	-0.217	1.715**
	(0.430)	(1.066)	(1.276)	(0.833)
NIItoOPREV	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
RELOANS	-0.016	-0.033**	-0.027*	0.005
	(0.015)	(0.016)	(0.016)	(0.014)
DEPOSITRATIO	0.001	0.066***	0.089***	0.076***
	(0.024)	(0.022)	(0.021)	(0.019)
INDUSTRYEXPERT	0.123*	0.110**	0.150***	0.121***
	(0.067)	(0.052)	(0.048)	(0.041)
CMBS_LIQ		0.143	-0.114	-0.043
		(0.108)	(0.272)	(0.147)
MBS	0.013	0.008	(0.027)	(0.013)
	(0.029)	(0.042)	(0.040)	(0.031)
AUDITORCHANGE	-0.005	-0.014*	0.016	0.003
	(0.012)	(0.007)	(0.011)	(0.008)
Fixed Effects	Industry	Industry	Industry	Industry
Observations	289	292	296	278
R-squared	0.29	0.27	0.29	0.27
F-Stat	4.87	4.00	5.61	6.65
Prob > F	0.0000	0.0000	0.0000	0.0000
SHARE_L1 = SHARE_L2 = SHARE_L3 [p-value]	0.0060	0.0005	0.0063	0.0832
SHARE_L1 = SHARE_L2 [p-value]	0.9930	0.4900	0.1370	0.1120
SHARE_L1 = SHARE_L3 [p-value]	0.0694	0.0063	0.0036	0.0261
SHARE_L2 = SHARE_L3 [p-value]	0.0014	0.0001	0.0040	0.0616

Note: This table reports results of separate OLS regressions for each year, regressing Tobin's Q on the displayed variables. Huber/White standard errors are reported in parentheses. Fixed effects are not reported. ABNFEES are abnormal audit fees, defined as the residuals from Equation (1). All other variables are as defined in Appendix A. */**/*** marks significance at the 10%/5%/1% level (two-tailed t-tests).

TABLE 7

The Effect of Earnings Management and Liquidity on Tobin's Q

	(1)	(2)	(3)	(4)	(5)
CONSTANT	0.913***	0.913***	0.913***	0.969***	0.947***
	(0.025)	(0.025)	(0.025)	(0.028)	(0.025)
SHARE_L1	0.104	0.104	0.104	0.130*	0.127*
	(0.075)	(0.075)	(0.075)	(0.069)	(0.071)
SHARE_L2	0.031	0.031	0.031	0.053**	0.045*
	(0.029)	(0.029)	(0.029)	(0.027)	(0.027)
SHARE_L3	-0.267***	-0.260***	-0.262***	-0.278***	-0.253***
	(0.058)	(0.057)	(0.058)	(0.060)	(0.055)
ABNFEES	0.005	0.005	0.005	0.003	0.001
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
SHARE_L3*ABNFEES	-0.259**	-0.257**	-0.257**	-0.244**	-0.205**
	(0.108)	(0.107)	(0.106)	(0.110)	(0.103)
SIZE	0.002	0.002	0.002	-0.002	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
ROE	0.052***	0.052***	0.052***	0.056***	0.057***
	(0.010)	(0.010)	(0.010)	(0.011)	(0.010)
T1RATIO	-0.009	-0.012	-0.011	-0.054	-0.060
	(0.065)	(0.065)	(0.065)	(0.065)	(0.065)
NETUNREALGAIN	-0.212	-0.199	-0.201	-0.346	-0.395
	(0.461)	(0.461)	(0.462)	(0.418)	(0.413)
NIItoOPREV	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
RELOANS	-0.021*	-0.021*	-0.021*	-0.019*	-0.017
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
DEPOSITRATIO	0.061***	0.060***	0.061***	0.053***	0.056***
	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)
INDUSTRYEXPERT	0.128***	0.127***	0.128***	0.112***	0.120***
	(0.042)	(0.042)	(0.042)	(0.040)	(0.040)
CMBS_LIQ	0.100	0.106	0.103	0.098	0.105
	(0.112)	(0.113)	(0.114)	(0.120)	(0.117)
MBS	0.001	0.001	0.001	-0.009	-0.001
	(0.030)	(0.030)	(0.030)	(0.027)	(0.028)
AUDITORCHANGE	-0.002	-0.002	-0.002	-0.001	-0.001
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
ABNLLP	-0.165				
	(0.307)				
ABSABNLLP		-0.258			
		(0.462)			
ABNLLP+			-0.331		
			(0.486)		
ABNLLP-			0.096		
			(0.694)		
ZERORETDAYS				-0.001***	
				(0.000)	
ILLIQ					-0.001***
					(0.000)
Fixed Effects	Industry Year	Industry Year	Industry Year	Industry Year	Industry Year
Observations	1,141	1,141	1,141	1,155	1,151
R-squared	0.23	0.23	0.23	0.271	0.26
F-Stat	9.91	9.96	9.59	11.07	10.17
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE 7 (continued)

Note: This table reports OLS regression results for the pooled sample, regressing Tobin's Q on the displayed variables. Huber/White standard errors are clustered on the firm level and reported in parentheses. Fixed effects are not reported. ABNFEES are abnormal audit fees, defined as the residuals from Equation (1). ABNLLP are abnormal loan loss provisions, defined as the residuals from Equation (3). ABSABNLLP are the absolute value of ABNLLP. ABNLLP+ (ABNLLP-) are defined as ABNLLP times an indicator variable that takes on the value one if abnormal loan loss provisions are positive (negative) and zero otherwise. ILLIQ is the illiquidity measure of Amihud (2002), defined in Equation (5). All other variables are as defined in Appendix A. */**/*** marks significance at the 10%/5%/1% level (two-tailed t-tests).

APPENDIX A: Variable Definitions

Variable	Definition
lnFEES	Natural logarithm of audit fees
SIZE	Natural logarithm of total assets
COMLOANS	Commercial and industrial loans outstanding scaled by beginning total assets
CONSLOANS	Consumer and installment loans outstanding scaled by beginning total assets
RELOANS	Real estate mortgage loans outstanding scaled by beginning total assets
NPL	Non-performing loans scaled by beginning total assets
NCHARGEOFF	Net charge offs scaled by beginning total assets
SENSITIVE	Rate-sensitive assets minus rate-sensitive liabilities scaled by beginning total assets
SECURITIES	One minus total securities scaled by beginning total assets
DEPOSITRATIO	Total deposits scaled by beginning total assets
VOLA	Standard deviation of the previous 250 daily stock returns
LOSS	Indicator variable that takes on the value one if net income is negative
ROE	Return on equity, defined as net income scaled by beginning equity
INTANGIBLE	Intangible assets scaled by beginning total assets
T1RATIO	Tier 1 capital ratio
BIG4	Indicator variable that takes on the value one if the firm is audited by Deloitte, Ernst & Young, KPMG, or PricewaterhouseCoopers
INDUSTRYEXPERT	Market share of the audit firm
AUDITORCHANGE	Indicator variable that takes on the value one if the firm is audited by a new auditor
REPLAG	Reporting lag, defined as days between fiscal year end and reporting date
SHARE_L1	Fair value assets measured using Level 1 inputs scaled by beginning total assets
SHARE_L2	Fair value assets measured using Level 2 inputs scaled by beginning total assets
SHARE_L3	Fair value assets measured using Level 3 inputs scaled by beginning total assets
TOBINSQ	Market value of equity plus book value of liabilities divided by total assets
CMBS_RET	Monthly-return of the BBB collateralized mortgage-backed security index from the Barclay Bank
CS_RET	Monthly-return of the Case-Shiller 20 city composite home price index
R_RET	Monthly-return of the U.S. Datastream residential REITS index
TB_RET	Monthly change in the yield of constant-maturity, 30-year US treasury bonds
NIItoOPREV	Non-interest income divided by operating revenue
NETUNREALGAINS	Net unrealized gains, defined as the difference between fair value and historical costs

CMBS_LIQ	Liquidity measure for the CMBS market from Bhat et al. (2011)
MBS	Book value of mortgage-backed securities
SAVINGS	Indicator variable that takes on the value one if the firm is a savings institution (Primary SIC Code 6035 or 6036)
LNNAF	Natural logarithm of non-audit fees
BUSYSEASON	Indicator variable that takes on the value one if the reporting date is between November and February
LLP	Loan loss provisions scaled by beginning total assets
GLOANS	Gross loans scaled by beginning total assets
NPA	Beginning non-performing assets scaled by beginning total assets
LLA	Beginning loan loss allowances scaled by beginning total assets
ZERORETDAYS	Number of days with zero returns
ILLIQ	Illiquidity measure of Amihud (2002)