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Fair Value Reclassifications of Financial Assets during the Financial Crisis

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At the peak of the financial crisis in October 2008, the IASB amended IAS 39 to grant companies the option of abandoning fair value recognition for selected financial assets. Using a comprehensive global sample of publicly listed IFRS banks, we find that banks use the reclassification option to forgo the recognition of fair value losses and ultimately the regulatory costs of supervisory intervention. Analyses of stock market reactions suggest that a small subset of the most troubled banks benefit from such reclassifications. However, analyses of related footnote disclosures reveal that two-thirds of reclassifying banks do not fully comply with the accompanying IFRS 7 requirements. These banks experience a significant increase in bid-ask spreads in the long run.

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1. Introduction

Many bank regulators, bank managers, and politicians blame fair value accounting for having accelerated the recent financial crisis (e.g., Financial Stability Forum, 2009). One response to the allegedly adverse effects of fair value accounting has been the introduction of an option to retroactively reclassify financial assets that were previously measured at fair value through profit or loss or through other comprehensive income into alternative measurement categories. By reclassifying financial assets, a bank can forgo the recognition of unrealized fair value losses deemed to be temporary and thus increase its income as well as its regulatory capital during market downturns. In this study we examine (1) whether reclassifications of financial assets served as an effective means of regulatory capital arbitrage during the crisis (i.e., granted regulatory forbearance to banks that otherwise would have been at risk of costly regulatory intervention), and (2) whether these short-term benefits came at the long-term cost of increased information asymmetry and adverse selection resulting from financial instruments no longer being measured at fair value on banks' financial statements.

We address the questions above by studying the accounting choices of an international sample of IFRS reporting banks following the October 2008 amendments to IAS 39 and IFRS 7. The amendment to IAS 39 introduces the option to abandon the fair value measurement of trading assets (apart from derivatives) and available-for-sale assets. The book value of reclassified assets is frozen at the reclassification date and subsequent measurement is at amortized cost, with writedowns recognized only for other-than-temporary impairment losses. The amendment to IFRS 7 introduces disclosure requirements designed to mitigate the informational effects of reclassification.

Focusing on the international setting offers at least two advantages compared to the reclassification option under SFAS 65 and 115 for U.S. banks. First, the reclassification option under US-GAAP has been used by few U.S. banks.[1] This is due to the low number of U.S. banks applying fair value accounting on a substantial basis (S.E.C., 2008), as well as to major differences between the two accounting regimes. For instance, in contrast to its US-GAAP equivalent, the IAS 39 reclassification option could be applied *retroactively* at the peak of the financial crisis for the July to October 2008 period, providing banks exact information about the amount of fair value write-downs they would forgo when choosing to reclassify. Moreover, the rules for the recognition of other-than-temporary impairment losses that are to be applied after reclassification into cost categories are more restrictive under US-GAAP. Thus the extent of write-downs that a bank could potentially forgo by reclassifying fair value assets is, ceteris paribus, larger under IFRS. The second advantage of the international setting is that it allows us to exploit cross-country differences in the link between fair value accounting and capital regulation and hence to identify more precisely how prudential supervision may have affected accounting choices during the financial crisis.

Our analysis proceeds in two steps. First, we empirically analyze the determinants of an individual bank's reclassification choice. To this end, we document and exploit cross-country differences in the link between fair value accounting under IFRS and the determination of regulatory capital (see Barth and Landsman, 2010, for an overview). Major differences stem not only from the level of the minimum capital adequacy ratio, but also from the prudential filter for unrealized fair value gains of available-for-sale assets. Second, we investigate the short- and long-term capital market effects of abandoning fair value measurement. We examine short-term reactions by

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1 In an automated text analysis of the SEC filings of all U.S. banks included in the Compustat Bank File, we identify only six banks (out of more than 600) that take advantage of the reclassification option during the 2008 financial crisis. This is consistent with the evidence in Laux and Leuz, 2010.

identifying bank-specific benefits from regulatory capital arbitrage in the cross-section of abnormal stock returns around both the regulatory announcement in October 2008 and the bank-specific reclassification announcements. We examine long-term changes in information asymmetry by comparing the bid-ask spreads of reclassifying and non-reclassifying banks using a difference-in-differences design. To disentangle the effects of recognition and disclosure, we distinguish between banks that fully comply with the accompanying IFRS 7 disclosure requirements and banks that withhold information about the reclassified assets.

Using a comprehensive global sample of 302 publicly traded IFRS-reporting banks, we find that more than one-third choose to use the reclassification option, thereby increasing aggregate profits by 22.7 billion Euros and firm-specific profits by 44% on average (see also CESR, 2009). Further, we document that almost two-thirds of the reclassifying banks do not fully comply with the simultaneously introduced IFRS 7 disclosure requirements. Consistent with reclassification being an effective means of regulatory capital arbitrage, we find that the risk of costly regulatory intervention and the lack of prudential filters for unrealized fair value gains explain the reclassification choice at the bank level. We also provide evidence that banks with a high commitment to transparency (i.e., those banks that would suffer most if reclassification were perceived as a decrease in reporting quality) are less likely to reclassify, consistent with banks weighing the relative expected benefits and costs in their reclassification decision. Finally, we find that the reclassification choice has capital market consequences. For a small group of banks that suffered severe financial difficulties and faced the highest risk of regulatory intervention, the possibility of increasing their regulatory capital ratio through accounting choice is associated with abnormally positive stock returns around the announcement of the amendments. In addition, the bid-ask spread analysis reveals that, relative to non-reclassifying banks, the perceived information asymmetry among investors does not rise for reclassifying banks that are compliant with the related

IFRS 7 disclosure requirements. In contrast, non-compliant banks experience a significant increase in bid-ask spreads. Additional analyses suggest that this increase is associated with but not solely attributable to missing reclassification disclosures.

Our paper contributes to several threads of the literature. First, we add to the literature on regulatory arbitrage (e.g., Ryan, 2007, Chapter 5) as well as the literature on how institutions shape financial reporting practice (e.g., Wysocki, 2011) by examining the link between fair value accounting and regulatory capital in an international context. More specifically, we study the effects of country-specific prudential filters on accounting choices using regulatory data gathered from a survey of bank regulators in 39 countries. Second, we extend the literature on the capital market effects of recognition versus disclosure (e.g., Schipper 2007) by analyzing a setting in which the reliability of disclosed information is comparable to the reliability of recognized information, as the procedures for estimating reclassified assets' fair value were implemented at a time when the fair values had to be recognized. Third, we contribute to the literature on the economic consequences of disclosure (e.g., Beyer et al., 2010) by introducing a measure that is based on non-compliance with disclosure requirements. Finally, in a broader sense, we add to the current fair value debate (e.g., Barth, 2006; Laux and Leuz, 2009, 2010) and the debate on the effects of accounting standards on the global financial crisis (e.g., Barth and Landsman, 2010; Bushman and Landsman, 2010) by providing evidence based on an international sample; prior work focuses almost exclusively on the U.S. context (e.g., Bhat et al., 2011; Vyas, 2011).

The remainder of the paper is organized as follows. In Section 2 we describe the institutional background. In Section 3 we review related literature and develop our testable hypotheses. Section 4 discusses our empirical strategy. In Section 5 we summarize the data and present our main results. Section 6 reports the results of additional analyses and Section 7 concludes.

2. Background: The October 2008 Amendments to IAS 39 and IFRS 7

2.1. The Reclassification Option for Financial Assets

At the peak of the financial crisis in October 2008, the IASB forwent the regular due process to issue amendments to IAS 39 and IFRS 7 (André et al., 2009; Howieson, 2011). These amendments allow companies reporting under IFRS to retroactively reclassify financial assets previously measured at fair value into categories that require measurement at amortized cost (i.e., to effectively abandon fair value accounting for these assets). The IASB decision was preceded by intense lobbying from politicians and banking regulators mainly from Europe (House of Commons, 2008), which culminated in the EU Commission threatening to amend IAS 39 unilaterally ("carve-in").

Accounting for financial assets under IAS 39 is based on three different measurement bases: fair value through profit or loss, fair value through other comprehensive income (OCI), and amortized cost (e.g., Spooner, 2007). Trading securities, derivatives, and financial assets designated under the fair value option are measured at fair value through profit or loss. Available-for-sale (AFS) assets are measured at fair value through OCI. Loans & receivables (L&R) as well as marketable debt securities classified as held to maturity (HTM) are measured at amortized cost. After initial recognition, five types of reclassifications of assets measured at fair value are possible. The original IAS 39 only allowed the reclassification of AFS assets into the HTM category (para. 54). The October 2008 amendment provides for four additional types of reclassifications in rare circumstances such as the 2008 financial crisis: trading assets may be reclassified into the AFS, HTM, or L&R category, and AFS assets may be reclassified into the L&R category if they are debt instruments. Equity instruments are only eligible for reclassification from the trading

category into the AFS category. Assets for which the IAS 39 fair value option is used as well as financial derivatives are exempt from reclassification.

For several weeks after the amendment became effective (specifically, until November 1, 2008), reclassifications could be made *retrospectively*, taking effect as of July 1, 2008 (para. 103H). This transitional rule allowed banks to perfectly assess the income and capital effects of the reversal of fair value write-downs that would have otherwise been recognized during the quarter. In making their reclassification decision, banks were therefore able to consider the accounting outcome with perfect hindsight for four months.

The five types of reclassifications differ in their accounting consequences. Overall, three effects on the measurement of assets and the recognition of gains and losses can be distinguished. First, reclassifications from the trading category into the HTM or L&R category affect both net income and equity if no impairment is triggered, because fair value gains and losses cease to be recognized in profit or loss and thus in equity. Second, reclassifications from the trading category into the AFS category affect net income but not equity because fair value gains and losses are still considered in the revaluation reserve as part of shareholders' equity but are now reported in OCI rather than in profit or loss (unless impaired). Third, reclassifications from the AFS category into the L&R or HTM category affect OCI (equity) but not net income because fair value gains and losses have not been previously considered in the income statement but rather only in OCI unless an impairment had been triggered. IAS 39 impairment rules are identical for L&R and HTM (para. 63) and require objective evidence relating to a specific event that a loss is not temporary (i.e., a decrease in fair value is not necessarily leading to an impairment).

The IASB adopted its own version of a reclassification amendment largely to ensure the simultaneous introduction of disclosure requirements on the use of the option (House of Commons,

2008). These extensive disclosure requirements, which are now part of IFRS 7, mandate the disclosure of quantitative information about reclassification amounts and resulting accounting effects as well as qualitative information about the rare situation that gave rise to the reclassification (para. 12A). If a reclassifying bank fully complies with these disclosure requirements, an investor is able to perfectly adjust the balance sheet and income statement for the effects of the reclassification. As a consequence, a bank's reclassification choice is effectively a choice between disclosing fair value information in the footnotes versus recognizing changes in profit or loss or in OCI.

2.2. Consequences for Banks' Regulatory Capital

To the extent prudential supervision and regulatory capital are linked to financial reporting, reclassifications also affect the regulatory capital that banks report to the national supervisory authorities. The effect depends on country-specific regulation. In our 39 sample countries, unrealized gains and losses from trading assets (net of deferred taxes) are fully reflected in tier 1 capital via retained earnings. Retroactive reclassifications from the trading category thus always affect a bank's tier 1 capital on a one-to-one basis if accumulated unrealized gains and losses exist.

Major differences across countries arise, however, from the treatment of accumulated unrealized gains from AFS assets, which are recognized in the revaluation reserves (via OCI). While accumulated unrealized losses (after deferred taxes) are fully deducted from tier 1 capital, the Basel II framework recommends that accumulated unrealized fair value gains be included in tier 2 capital using a general discount of 55% to reflect both the risk of market illiquidity and the future tax charge (Art. 49(v)). Notwithstanding, implementation of this prudential filter differs substantially across countries, with different discounts for equity securities, debt securities, and loans. For instance, in our 39 sample countries, an average discount of 48.23% is applicable for

accumulated unrealized gains on equity securities (including deductions for tax effects), whereas accumulated gains and losses on loans classified as AFS are fully neutralized in the determination of regulatory capital. Further, debt securities are treated like AFS equity securities in 27 countries but like AFS loans in 12 countries (see CEBS, 2007, for an overview of EU member states). The higher the filter, the lower is the potential regulatory benefit of a reclassification during a market downturn. This effect is both country-specific (dependent on the prudential filter) and firm-specific (dependent on the sign of the bank's *accumulated* fair value gains and losses, that is, of the revaluation reserves).

Consider the following example: A bank reports accumulated unrealized fair value gains from AFS debt instruments of CU 100 on July 1, 2008. Until September 30, 2008, the fair value of the AFS portfolio decreases by CU 100 (deemed to be temporary, that is, impairment is not required under HTM). By retroactively reclassifying the entire AFS portfolio into the HTM category before closing the quarterly report in October 2008, the bank can freeze its revaluation reserves at CU 100 (the value as of July 1).[2] This reclassification may affect tier 2 capital because the *accumulated* unrealized fair value changes before reclassification are *positive* (negative reserves are fully deducted from tier 1 capital). The size of the impact depends on the country-specific prudential filter. A prudential filter of 100% would result in the reclassification being irrelevant for regulatory capital, whereas a prudential filter of 0% would result in the bank avoiding a loss of tier 2 capital of CU 100 (abstracting from any corresponding tax effect).

While most jurisdictions apply a net approach in determining the adjustments (i.e., the prudential adjustment is based on the aggregate unrealized gains), a few regulators (Netherlands, Portugal, Slovakia, Slovenia) require determination on an item-by-item basis (i.e., the prudential adjustment is determined for each AFS asset individually). Since IFRS 7 disclosures do not allow

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2   The amount is amortized over the remaining life of the debt instrument.

us to take this regulatory variation into account, and regulatory reports are not publicly available in most jurisdictions outside the U.S., we need to approximate the regulatory effect of reclassifications from or into the AFS category by using the net approach for countries where the item-by-item approach is applied.

Finally, a bank's proximity to regulatory capital restrictions before and after a reclassification depends on country-specific regulations because different jurisdictions employ different minimum capital ratios. The Basel II framework recommends a total capital ratio (tier 1 plus tier 2 capital divided by risk-weighted assets) of at least 8% (Art. 40). While most countries follow this recommendation, a few countries require a ratio of 10% or 12% (see Table 1 for details).

3. Related Literature and Hypothesis Development

3.1. Banks' Incentives for Regulatory Capital Arbitrage through the Reclassification Choice

Related Literature

In this section, we discuss how banks' reclassification choices may be affected by the contracting role of accounting (in particular, the use of accounting numbers for prudential oversight). Our study is related to two streams of literature on accounting choice. First, we add to the literature on banks' incentives to engage in regulatory capital arbitrage through their accounting choice. Several studies in this area examine loan-loss provisioning for capital management purposes and find systematic use of managerial discretion to avoid violations of regulatory capital restrictions (see Ryan, 2007, Chapter 5, for an overview). Ramesh and Revsine (2001) further document that incentives to raise regulatory capital affect the timing of U.S. banks' adoption of a new accounting rule for formerly unrecognized liabilities (SFAS 106). Skinner (2008) shows that

deferred tax assets were substantially overstated by Japanese banks during the banking crisis in an effort to comply with regulatory capital requirements.

Prior studies on the discretionary use of fair value accounting for regulatory arbitrage fail to detect a significant relationship. For instance, Bernard et al. (1995) find no evidence that the mark-to-market system then applicable in the Danish banking sector was opportunistically used to avoid regulatory costs (during a non-crisis period), and Bhat et al. (2011) find that less capitalized U.S. banks do not observe abnormally positive share prices reactions to the FASB's perceived easing of mark-to-market accounting requirements in April 2009. In contrast to these studies, we do not analyze the use of discretion in fair value estimates, but rather the choice to *abandon* fair value measurement of recognized assets and switch from recognition to the disclosure of fair values in the footnotes.

Our analysis contributes to this literature by examining the interaction between bank-specific incentives for capital management and prudential supervision at the country level. Prior evidence on this interaction relies on broad proxies for the effectiveness of banking supervision (Fonseca and Gonzalez, 2008). In contrast, our evidence is based on differences in the inclusion of unrealized fair value changes in the determination of regulatory capital (prudential filter). Moreover, by constructing precise measures linking fair value accounting and country-level banking regulation, we add to the growing literature on how institutions shape financial reporting practice (Ball, 2006; Holthausen, 2009; Wysocki, 2011) as well as to the debate on whether such a link should be eliminated (e.g., Barth and Landsman, 2010).

Second, our study contributes to the literature linking accounting choice to the classification of financial instruments. Godwin et al. (1998) find that liquidity risk is negatively associated with, and tolerance for income volatility is positively associated with the probability of a proper-

ty-liability insurer applying fair value accounting to fixed maturity investment securities. Gramlich et al. (2001) examine the reclassification of short-term obligations into long-term categories and report evidence consistent with firms opportunistically managing balance sheet ratios. Neither of these studies analyzes the role of capital management incentives in the classification choice. In this respect, Hodder et al. (2002) find that the exclusion of unrealized fair value gains and losses from regulatory capital following the implementation of SFAS 115 in the U.S. was accompanied by an increase in the use of fair value accounting for investment securities by publicly traded banks. This result suggests that the previously existing link between fair value measurement and regulatory capital increased the risk of non-compliance with regulatory covenants. Our study differs from Hodder et al. in that their result is derived from a time series of observations, while our international setting allows us to exploit variation in prudential filters for fair value gains and losses in the cross-section.

Hypotheses

Management's incentives to comply with regulatory capital restrictions stem mainly from the risk of the regulatory costs that would be incurred if these restrictions were violated and supervisory actions were taken (e.g., Beatty et al., 1995). The supervisory interventions can take various forms (up to the forced closure of the bank) and may vary across countries, but they generally result in a substantial loss of shareholder value. For example, Jordan et al. (2000) report that on average the share prices of U.S. banks drop by approximately 5% around the announcement of formal supervisory actions against a bank. We conjecture that if a bank faces the risk of incurring regulatory costs, that is, if the bank is weakly capitalized, then all else equal it is likely to use fair value reclassifications to increase its regulatory capital during a financial crisis.

The regulatory benefits from the reclassification of AFS assets depend largely on the prudential filters for *accumulated* unrealized fair value gains. If an AFS asset is reclassified, the revaluation reserve is frozen at the level on the reclassification date, with the reserve included in tier 2 capital safeguarded against future decreases in cumulative unrealized fair value gains (provided that the fair value decreases do not lead to simultaneous impairment write-downs). The less restrictive the prudential filter for unrealized gains from AFS assets is (see Section 2 for details), the more regulatory capital is at risk and hence the greater the incentive will be to use the reclassification option when a bank expects a decrease in the fair value of its AFS assets.

Taken together, the above observations lead to our first hypothesis:

(H1)   The probability of a bank using the reclassification option is positively associated with the bank's risk of violating regulatory capital restrictions and negatively associated with the restrictiveness of prudential filters for accumulated unrealized fair value gains.

Assuming that the market anticipates the economic benefits of a bank's regulatory arbitrage, the stock price reaction around the announcements of the regulatory decision and the bank-specific reclassification choice should be abnormally positive. This expectation is consistent with reclassifications effectively granting regulatory forbearance to international banks. This leads to our second hypothesis:

(H2)   The stock price reaction to the announcement of fair value reclassifications is positively associated with the size of the bank's (potential) benefits resulting from regulatory arbitrage.

3.2. Economic Consequences of Reclassification Disclosures and Non-compliance

Related Literature

In this section, we discuss how banks' reclassification choices may affect the informational role of accounting. Our study is related to two streams of literature. First, we extend a large literature that addresses the capital market effects of recognition versus disclosure. Focusing on a cross-section of oil and gas firms, Aboody (1996) finds that the stock market reacts to the recognition of write-downs but not to mere footnote disclosures. Similarly, Davis-Friday et al. (2004) find that the perceived reliability of liabilities for retiree benefits other than pensions increases when the amounts are recognized (after SFAS 106 adoption) rather than disclosed, and Ahmed et al. (2006) find that the fair values of financial derivatives are only value-relevant when recognized (after SFAS 133 adoption). Theory suggests that these observations are due to the higher cost of acquiring the expertise needed to process the information disclosed in footnotes (Barth et al., 2003) or to investors' lack of time or ability to absorb the less salient information in footnote disclosures (Hirshleifer and Teoh, 2003). Experimental evidence also points to the role of auditors who view recognized values as more material and therefore permit more misstatements in disclosed, as opposed to recognized, values (Libby et al., 2006). In contrast to most of this literature, we analyze a setting in which the reliability of disclosed information is close to the reliability of recognized information because the estimation procedures for the fair values of reclassified assets were implemented when the fair values were recognized (i.e., before reclassification). As a result, the fair values of reclassified assets are prepared and audited with greater diligence than ordinary footnote disclosures. We therefore contribute to this literature by examining the market's perception of fair value disclosures when the reliability of disclosed fair values is comparable to the reliability of recognized values.

Second, our study adds to the literature on the economic consequences of disclosure (Beyer et al., 2010). Extant studies typically rely on subjective measures of voluntary disclosure (e.g., Botosan, 1997) or assumptions with regard to changes in disclosure policies (e.g., Leuz and Ver-

recchia, 2000; Verrecchia and Weber, 2006). We contribute to this literature by introducing a measure that is based on (non-)compliance with disclosure requirements. Due to differences in auditing and enforcement institutions across countries (Street and Gray, 2001; Brown and Tarca, 2005), our international setting offers heterogeneity in the degree of compliance with IFRS 7 disclosure requirements. We exploit this heterogeneity to develop a clinical disclosure score.

Hypotheses

Economic theory links the quality of a firm's disclosure and information environment to its cost of capital primarily via the adverse selection component of the bid-ask spread when market makers price-protect against informed traders (e.g., Stoll, 1978; Glosten and Harris, 1988; Diamond and Verrecchia, 1991). All else equal, negative effects of fair value reclassifications on a bank's information asymmetry and cost of capital depend on whether this accounting choice is perceived to be a decrease in disclosure quality. The general consensus is that fair value disclosures increase financial assets' value-relevance (Barth, 1994; Barth et al., 1996; Eccher et al., 1996; see Wahlen et al., 2000, for an overview). Moreover, evidence from surveys conducted by the CFA Institute (2008) indicates that financial analysts consider fair value information to be useful. These insights suggest that the use of the reclassification option may signal a decrease in a bank's commitment to transparency, at least if the bank had previously built a reputation for its reporting quality and the reclassifications affect the accounts in a material way. Managers will anticipate these adverse effects of the reclassification choice and weigh the corresponding increase in the cost of equity capital against the regulatory benefits discussed above (hypothesis (H1)). Our third hypothesis is thus as follows:

(H3)   The probability of a bank using the reclassification option is negatively associated with its commitment to transparency.

We exploit heterogeneity in the degree of compliance with IFRS 7 disclosure requirements to distinguish between two groups of reclassifying banks: banks that fully comply with these disclosure requirements and banks that do not. If the disclosure requirements are fully met, reclassifications simply result in formerly recognized fair values now being disclosed in the footnotes. Since the different effects of recognition versus disclosure are subject to debate (Bernard and Schipper, 1994; Schipper, 2007), we do not expect this group of reclassifying banks to experience a change in the perceived level of information asymmetry. In contrast, banks that do not comply are withholding potentially material information post-reclassification, in which case the perceived level of information asymmetry is likely to increase for this group of banks. This discussion leads to the following set of hypotheses:

(H4a) The perceived level of information asymmetry does not change for reclassifying banks if they fully comply with the IFRS 7 disclosure requirements.

(H4b) Non-compliance with the IFRS 7 disclosure requirements is associated with an increase in the perceived level of information asymmetry.

4. Data and Research Design

4.1. Sample Selection and Data Sources

Our sample selection proceeds as follows. First, we identify 702 banks with publicly listed equity shares that are classified as IFRS users for financial year 2008 in BvD Bankscope (ACCSTAND)[3], Worldscope, or Compustat Global (Industry Groups 4310 and 4320). Next, we

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3 Consistent with the approach in Daske et al. (2011), we check and modify the Bankscope ACCSTAND coding in two ways. First, we treat banks from Taiwan as IFRS adopters even if they are classified as Local GAAP adopters, because Taiwanese SFAS 34 and 36 largely correspond to IAS 39 and IFRS 7, respectively; both standards have been effective since 2006 and the reclassification amendments were endorsed immediately on October 17, 2008. Second, we change the classification of Malaysian banks from IFRS to Local GAAP, because the Malaysian Accounting Standards Board has decided that FRS 139 and FRS 7, which are the equivalent standards to IAS 39 and IFRS 7, were not effective before 2010.

exclude 264 banks due to missing capital market data in Thomson Reuters Datastream for the periods of interest (October 2008 and June 2009 for bid-ask spreads, and January 2008 and March 2009 for stock returns). Our initial sample therefore comprises 438 banks.

The inclusion of non-banking firms in our sample would pose the issue of heterogeneous accounting incentives as accounting choices in the banking industry are largely a result of its industry-specific capital regulation. As a result, we exclude 112 institutions that are not subject to external capital oversight (hedge funds, brokerage houses, and securities firms) or for which we cannot retrieve any data on regulatory capital. Due to practical impediments, we further exclude 24 banks that do not publish a financial report in English, French, German, or Chinese on their websites. This procedure results in a final sample that comprises 302 banks from 39 countries.

For the final sample of banks, we manually collect detailed information on reclassification choices and relevant disclosures from the footnotes to the annual financial statements and all previously filed quarterly financial statements for reporting periods that end between October 2008 and September 2009. In total, we extract data from 544 quarterly, interim, and annual reports. In addition, we use Dow Jones Factiva and LexisNexis to identify the exact date of the initial public announcement of each bank's reclassification choice. If information on such a public announcement is not available, we define the official filing date of the complete financial statement containing footnote disclosures on the reclassifications as the reclassification announcement date. Finally, we collect data on country-specific capital regulation. As a starting point, we use the CEBS (2007) report on prudential filters for regulatory capital in European countries to update and broaden the information from the Barth et al. (2001) World Bank dataset. To verify this information, we contact bank regulators from each of the 39 countries represented in our sample to gather information on the proportion of accumulated unrealized fair value gains or losses from

AFS assets that is excluded from a bank's tier 1 or 2 capital for each country (see Section 2 for details).[4]

4.2. Determinants of the Reclassification Choice

In our first set of analyses, we run the following probit regression to provide evidence on the determinants of the firm-specific reclassification choice:

$$(AFS)Recl\_Dummy \ = \ \beta_0 + \beta_1 \ Regulatory \ Capital \ Restriction + \beta_2 \ AFS \ Prudential \ Filter$$
$$+ \ \beta_3 \ Reporting \ Quality + \Sigma \ \beta_j \ Controls_j + \varepsilon \qquad (1)$$

We estimate two different specifications with regard to the dependent variable. In the first specification, we use the dummy variable *Recl_Dummy,* which takes a value of one if the bank reclassifies trading or AFS assets, and zero otherwise. In the second specification, we use the binary dependent variable *AFSRecl_Dummy,* which equals one if the bank reclassifies AFS assets. We estimate the determinants of AFS reclassifications separately because AFS assets feature idiosyncratic characteristics with respect to capital regulation that we can exploit in our identification strategy. The independent variables comprise both a bank's incentives and costs (regulatory costs, commitment to transparency, earnings targets) associated with the reclassification option as well as opportunities (percentage of trading and AFS assets before reclassification, existence of accounting slack) to use the reclassification option. To account for potential within-country correlation among the residuals from equation (1), we calculate standard errors clustered by country.

Regulatory Capital Restriction is the difference between the individual bank's total capital ratio before reclassification (i.e., the 2008 figure adjusted for the reclassification effect) and the

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4 We also asked whether the amendments to IAS 39 induced any regulatory changes to the determination of regulatory capital. None of the responding authorities indicated that this was the case.

minimum total capital ratio at the country level (see Table 1). To ease interpretation, the value is multiplied by -1, so that a higher value represents a tighter restriction and thus a higher probability of incurring regulatory costs.

AFS Prudential Filter is the proportion of accumulated unrealized gains and losses from investments in AFS assets that is excluded from the determination of total regulatory capital (tier 1 plus tier 2). This variable takes the country-specific value (including tax adjustments) for accumulated unrealized gains reported in Table 1 (see Section 2 for details). Since equity securities are not eligible for reclassification out of the AFS category, our analyses use the prudential filter for debt securities. The filter is set to 0% if a bank reports accumulated unrealized fair value losses from total AFS investments (i.e., if the reserves reported for financial year 2008 and adjusted for the reclassification effect are negative) and to 100% if a bank indicates that it does not determine regulatory capital on the basis of the IFRS financial statements due to country-specific options for a transition period. The higher the proportion, the less regulatory capital will be safeguarded by a reclassification of AFS assets. In accordance with hypothesis (H1), we expect β_1 to be positive and β_2 to be negative.

The variable *Reporting Quality* is a proxy for a bank's commitment to transparency. Due to measurement error inherent in the estimation of any reporting quality metric (e.g., Dechow et al., 2011; Barth and Schipper, 2008; Schipper and Vincent, 2003), we tabulate results for two different approaches and report sensitivity tests using alternative measures in Section 6. First, we use the magnitude of accruals (*RQ1*) as an accrual-based characterization of actual reporting that proxies for the extent of discretion used in reporting earnings (Leuz et al., 2003). The magnitude of accruals is calculated as a bank's median ratio of yearly absolute accruals to absolute cash flows from operations over the period 1990 to 2008, where we follow Altamuro and Beatty (2010) and use pre-tax income before loan loss provisions as a bank-specific proxy for cash flows

from operations. We convert *RQ1* into ranks, with higher ranks representing higher reporting quality, and then scale it between 0 and 1. Second, we use the abnormal bid-ask spread (*RQ2*) in the period prior to the reclassification choice (January 2007 to September 2008) as a market-based proxy for a bank's commitment to transparency. The abnormal bid-ask spread is calculated as the firm-level median of the quarterly prediction errors during this period (actual log(spread) minus predicted log(spread)). To ease interpretation, we multiply the abnormal bid-ask spread by -1 so that higher values indicate higher information quality. The predicted bid-ask spread is derived from quarterly regressions of log(spread) on the established control variables log(share turnover), log(return variability), and log(market value) using daily capital market data (Stoll, 1978; Glosten and Harris, 1988). In accordance with hypothesis (H3), we expect β_3 to be negative.

We introduce two control variables intended to capture a bank's opportunity to take advantage of the IAS 39 reclassification option. The first control variable, *Accounting Slack,* reflects the possibility that banks could prefer more opaque accounting choices (particularly loan loss provisioning) for earnings and capital management than fully disclosed reclassifications. This variable takes a value of one if a bank's loan loss provisions for financial year 2008 are abnormally low, that is, income increasing, and zero otherwise. We follow prior literature (e.g., Beatty et al., 2002; Gebhardt and Novotny-Farkas, 2011) to estimate the nondiscretionary portion of the loan loss provision by regressing loan loss provisions on loan loss reserves (t-1), net charge-offs, the change in non-performing loans between t-1 and t, and bank size (the natural logarithm of the book value of total assets) on a yearly basis for the period from 2005 to 2008. All variables (except bank size) are scaled by total assets and adjusted for the effect of reclassifications in 2008. The 2008 loan loss provision is taken to be income increasing if the actual provision is lower than the predicted value. The second control variable, *Reclassification Potential,* represents the pro-

portion of financial assets that is eligible for reclassification. This variable is calculated as the sum of the book values of trading and AFS assets and scaled by the book value of total assets. Book values are the 2008 figures adjusted for reclassification effects.

Our next control variable is *No Loss Target,* which controls for a bank's earnings management incentives to use the reclassification option. In the banking industry, the zero earnings threshold has been shown to be of psychological importance for private depositors (Goldberg and Hudgins, 2002; Shen and Chih, 2005; Spiegel and Yamori, 2007). A bank that already faces a decrease in deposits will thus be inclined to not report a loss that could potentially further undermine depositors' confidence. *No Loss Target* is a dummy variable that takes a value of one if net income in 2008 (adjusted for the effects of reclassification) is smaller than zero. The interaction term *No Loss Target * Δ Customer Deposits* is constructed as a binary variable equal to one if the sign of the change in customer deposits between 2007 and 2008 is negative and *No Loss Target* has a value of one. We include the interaction term to capture the proportional marginal effects of the interacted variables (Kolasinski and Siegel, 2010).

Finally, we include two additional control variables. First, we construct a summary measure that captures a bank's direct exposure to the financial crisis (*Exposure to Crisis*), as reclassifications could be more likely the more a bank suffers from illiquidity of its assets caused by the crisis. This measure is estimated as the first principal factor using (1) a bank's stock return performance between January and September 2008, (2) the bank's stock return volatility between January and September 2008, and (3) a binary variable that indicates whether the bank reports securitization activity in its financial statement. Second, we include *IIF Membership,* which indicates whether a bank is member of the IIF. Since the IIF had a leading role in lobbying for reclassifications, we assume that member firms support its position on fair value reclassifications.

4.3. Stock Price Reactions to Reclassification Announcements

We perform two sets of tests to examine whether regulatory arbitrage through fair value rec-lassifications has measurable economic effects during the crisis.[5] Assuming that capital markets are sufficiently efficient, any benefits should manifest in abnormal stock price reactions when investors learn about them. The first set of tests analyzes stock price reactions to the announce-ment of the IAS 39 and IFRS 7 reclassification amendments. The second set of tests examines stock price reactions to banks' eventual reclassification choice.

The basic regression specification for the first set of tests is as follows:

$$Abn\_Return_{RegAnn} = \beta_0 + \beta_1 \ Expected \ Reclassification + \beta_2 \ Regulatory \ Capital \ Restriction$$
$$+ \beta_3 \ Expected \ Reclassification * Regulatory \ Capital \ Restriction + \varepsilon \qquad (2)$$

The dependent variable *Abn_Return_{RegAnn}* is the abnormal return around the regulatory an-nouncement introducing the reclassification option on October 13 and 14, 2008.[6] We estimate the abnormal return as the prediction error from the market model using the DJ STOXX 1800 market index[7] and the period October 1, 2008 to December 31, 2008 as the estimation window. *Expected Reclassification* is a proxy for the unobservable market expectation about a bank's eventual rec-

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5   We focus on saving regulatory costs as the immediate benefit. In additional tests (not tabulated), we fail to detect meaningful and robust short-term reactions to other economic benefits and costs identified in the determinants analysis (for example, the avoidance of losing depositors). These effects presumably take more time to material-ize, are harder to quantify, and are less likely to be unambiguously identified by market participants given the un-certainties during the financial crisis.

6   IASB approval of the reclassification amendments was announced in the late afternoon (GMT) of October 13, 2008, when the stock exchanges in several sample countries had already closed. We therefore use the cumulative abnormal return on October 13 and 14, 2008 to ensure that the stock market reaction in all sample countries is taken into account. Also note that the reclassification amendments were adopted without due process and related discussions did not start until early October 2008 (André et al., 2009). As a result, we do not expect that investors anticipated the amendment decision before its official announcement.

7   The DJ STOXX Global 1800 Index comprises the largest 600 firms, based on free float market capitalization, from Europe, North and South America, and the Asia/Pacific region (e.g., Armstrong et al., 2010). Since this in-dex also includes banks, we cannot rule out the possibility that part of the return effect we aim to detect is picked up by the market index control variable. However, this impact is likely to be rather small as the DJ STOXX Global 1800 contains only 64 of our sample banks (as of December 2008), which works against detecting signifi-cant abnormal returns.

lassification choice. We use three approaches to estimate this proxy. The first approach assumes that investors perfectly predict the eventual reclassification choice, that is, *Expected Reclassification* equals one if a bank reclassifies ex post, and zero otherwise. The second and the third approaches are based on the fitted probabilities from the determinants model in equation (1) using the magnitude of accruals (*RQ1*) and the abnormal bid-ask spread (*RQ2*), respectively, as reporting quality measures. In the latter two specifications, *Expected Reclassification* takes a value of one if the fitted probability is higher than 0.5, and zero otherwise.[8] *Regulatory Capital Restriction* is a dummy variable based on the continuous variable used in the determinants model and indicates banks with the highest incentives to engage in regulatory arbitrage. Specifically, *Regulatory Capital Restriction* equals one if the difference between an individual bank's total capital ratio before reclassification and the minimum capital ratio at the country level is less than 0% (6 banks in total; 4 of these banks eventually reclassify), and zero otherwise.[9] In order to account for cross-sectional heteroskedasticity and cross-correlation of the residuals, we estimate equation (2) using the weighted portfolio approach by Sefcik and Thompson (1986). In accordance with hypothesis (H2), we predict that those banks expected to reclassify experience higher abnormal returns when the potential regulatory benefits from reclassification are greatest, that is, $\beta_1 + \beta_2 + \beta_3 > \beta_1$.

In the second set of tests, we analyze stock returns around bank-specific announcements. We use the first reclassification announcement for reclassifying banks and, as benchmark announcements, the first earnings announcement for non-reclassifying banks following the reclassification amendment. Since these dates cannot be identified for all sample banks, the analyses are based on a reduced sample of 117 reclassifying and 161 non-reclassifying banks. Of the 117 reclassifying

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8   We acknowledge that the second and third approaches also require perfect foresight of the reclassification choice. However, we think that the determinants model provides a useful tool to condense the information observable in October 2008 into one single measure.

9   The two banks that violated the capital restriction and did not use the reclassification option barely used the fair value categories in their 2008 financial statements. In sensitivity analyses, we perform the same tests with alternative specifications of *Regulatory Capital Restriction*; see Section 6.

banks, 14 (67) [36] make the reclassification announcement before (during) [after] the respective earnings announcement. In addition, 39 of the 117 reclassifying banks announce reclassifications in an interim report prior to the first annual report following the amendment to IAS 39. The basic regression specification is as follows:

$$Abn\_Return_{BankAnn} = \beta_0 + \beta_1 \text{ } Reclassification + \beta_2 \text{ } Regulatory \text{ } Capital \text{ } Restriction$$
$$+ \beta_3 \text{ } Reclassification * Regulatory \text{ } Capital \text{ } Restriction$$
$$+ \beta_4 \text{ } Earnings \text{ } Surprise + \varepsilon \tag{3}$$

The dependent variable $Abn\_Return_{BankAnn}$ is the abnormal stock return around the bank-specific announcement. The abnormal stock return is the prediction error from the market model during the announcement window $[0, +1]$, with day 0 being the announcement date. The market model is estimated for the intervals $(-60, -11)$ and $(+11, +60)$ using DJ STOXX 1800 as the market index. Since some stocks in our sample are thinly traded, we follow the trade-to-trade approach of Maynes and Rumsey (1993). *Reclassification* equals one for banks that announce reclassifications, and zero otherwise. *Regulatory Capital Restriction* is defined as in the analysis of stock market reactions to the regulatory announcement (equation (2)). *Earnings Surprise* is an indicator variable that takes a value of one if the earnings number reported at an earnings announcement is higher than the mean analyst forecast as reported by IBES for the last statistical period before the announcement, and zero otherwise. In accordance with hypothesis (H2) and similar to the test above, we predict that reclassifying banks with the highest incentives to engage in regulatory arbitrage experience higher abnormal returns than other reclassifying banks, that is, $\beta_1 + \beta_2 + \beta_3 > \beta_1$. To the extent that the stock market already reacts to expected reclassifications around the regulatory announcement, the predicted effect around subsequent bank-specific announcements depends on the remaining uncertainty with regard to the reclassification choice and its accounting effects. This uncertainty is likely to be a complex function of market expectations

around the regulatory announcements and various other factors, particularly the timing of the bank-specific announcement relative to the regulatory announcement and competitors' reclassification announcements. We estimate average effects and predict these to be muted around the bank-specific announcements.

4.4. Long-Term Effects on Information Asymmetry

To examine whether reclassifying IFRS banks experience an increase in information asymmetry in the long run, we follow related literature (e.g., Leuz and Verrecchia, 2000; Muller and Riedl, 2002) and use the bid-ask spread as a proxy for information asymmetry. The basic regression specification is as follows:

$$Log(Bid\text{-}Ask\ Spread) = \beta_0 + \beta_1\ Reclassification + \beta_2\ Complete\ Disclosure$$
$$+ \Sigma\ \beta_j\ Controls_j + \varepsilon \quad\quad\quad (4)$$

In equation (4) all variables are measured at the firm-quarter level. The estimation period is from 2007Q1 to 2009Q4. *Bid-Ask Spread* is the median of the daily quoted spread (i.e., the difference between the closing bid and the closing ask price divided by the midpoint). We use the natural logarithm of the bid-ask spread because the raw values of this variable are highly skewed (see the descriptive statistics in Table 7, Panel A). *Reclassification* equals one for all reclassification quarters starting with the first quarter during which the respective bank announced a reclassification, and equals zero otherwise. *Complete Disclosure* indicates whether a reclassifying bank discloses all related items required by IFRS 7 in the footnotes to its financial statements (see Tables 1 and 4 for details on this variable). Consistent with hypothesis (H4b), we expect the coefficient estimates on *Reclassification* to be positive, that is, $\beta_1 > 0$. Consistent with hypothesis (H4a), we expect the coefficient estimate on *Complete Disclosure* to offset the positive effect of β_1, that is, $\beta_1 + \beta_2 = 0$.

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We estimate equation (4) using a firm fixed effects model that controls for time trends. This difference-in-differences approach identifies an association between a treatment (reclassification choice) and an endogenous variable (bid-ask spread) by comparing the treatment's impact on affected firms (banks that take the reclassification option) to its impact on unaffected firms (banks that do not take the reclassification option). To account for potential cross-sectional and serial correlation among the residuals from equation (4), we calculate standard errors clustered by firm and quarter (two-way) as suggested by Gow et al. (2010) and Petersen (2009). Since we estimate a firm fixed effects model, our set of control variables is restricted to variables that capture firm-specific changes over time. Consistent with prior finance literature (Huang and Stoll, 1997), we predict that, all else equal, changes in bid-ask spreads are negatively correlated with changes in share turnover and market capitalization and positively correlated with changes in stock return variability. For all three control variables, we use the natural logarithm because the raw values are highly skewed (see the descriptive statistics in Table 7, Panel A).

5. Results

5.1. Descriptive Evidence

Accounting Effects of the Reclassification Amendments

Table 1 presents details on the sample composition by country as well as selected country variables. More than one-third of our sample (124 banks) chose to take the reclassification option during financial year 2008. This proportion is lower than the 61% reported by CESR (2009) for large EU banks but is comparable to the descriptive evidence in Fiechter (2011). We find that 97 of the 124 reclassifying banks take the option for trading securities, while 72 banks reclassify AFS assets. Among the banks that reclassify trading securities, 40 institutions transfer assets into

cost categories (HTM or L&R), 30 institutions transfer assets into the AFS category, and 27 institutions transfer assets into both categories (results not tabulated).

Table 2 shows that the effects of the reclassification choice on banks' key summary accounting figures are quite substantial. Most importantly, the evidence indicates that avoidance of the recognition of fair value decreases is only partially offset by impairment write-downs on the assets now measured at amortized cost, suggesting that banks and their auditors treated the declines in value as temporary. On average, pre-tax net income is EUR 182.96m or 43.7% higher after reclassification. This is equivalent to an average (median) increase of 6.8 (0.5) percentage points in return on equity. The pre-tax impact on shareholders' equity, which includes the additional effects from reclassification of AFS securities, is even larger (EUR 287.07m on average). This observation provides initial evidence that the reclassification of AFS securities is associated with safeguarding regulatory capital and avoiding regulatory interventions. However, the evidence also reveals that the positive effects of fair value reclassifications on regulatory capital are driven by a relatively small number of banks: only seven banks in our sample increase their regulatory capital (total capital ratio) by more than one percentage point.

Footnote Disclosures of Reclassifications

While the reclassification amendments to IAS 39 affect the measurement of financial assets, informational effects should depend largely on the accompanying IFRS 7 disclosures. Our evidence from the published financial statements of our sample banks reveals that compliance with these disclosure requirements varies substantially across countries and banks. Only 42 reclassifying banks (34%) in our sample fully comply with all six requirements laid out in IFRS 7 in the first annual report following the amendments (*Complete Disclosure*, see Table 1). These findings

are in accordance with CESR (2009), suggesting that compliance with certain disclosure requirements in IFRS 7 is far from perfect.[10]

Further analyses based on reclassification disclosures show that IFRS 7 disclosure practice varies by reclassification type (see Table 3, Panel A). In addition, Table 3, Panel B relates *Complete Disclosure* to various country and bank variables that proxy for the quality of governance and enforcement as well as other incentives for transparent reporting. Univariate analyses reveal that IFRS 7 compliance is significantly higher in countries with a developed capital market (*Log(MCAP/GDP)*) and in countries with a developed governance system (*CGI Score*). At the bank level, *Complete Disclosure* is positively related to bank size (*Log(Total Assets)*) and the number of analysts following the bank (*Analyst Following*).[11] The quality of the auditing process (*Big 4 Auditor*)[12] and the reporting quality proxies (*RQ1 = Accrual Size*, *RQ2 = Abnormal Spread*) are not significantly associated with *Complete Disclosure*. The results are similar in the multivariate analyses, although some variables lose their statistical significance. In sum, our analyses provide evidence that IFRS 7 compliance is positively related to the quality of governance and enforcement at the bank and country levels. For descriptive statistics on the country and bank variables in this and the subsequent analyses, see Table 4.

5.2. Determinants of Reclassification Choice

Table 5 presents the results of multivariate probit regressions explaining a bank's reclassification choice. The table reports the marginal effects evaluated at the mean (median) of the conti-

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10 The finding that required disclosures are not adequately enforced is consistent with the existing literature on compliance, particularly in the case of IAS/IFRS (e.g., Cairns, 1999; Street and Gray, 2001; Brown and Tarca 2005). Given the political controversy surrounding the reclassification amendment, along with its significant accounting effects, it is even more surprising that many banks (still) get away with substantial non-compliance with disclosure requirements.

11 Seven reclassifying banks are cross-listed in the U.S. and therefore registered with the SEC. All of these banks provide complete IFRS 7 disclosures. Therefore, a cross-listing/SEC variable cannot be estimated in the probit analyses.

12 Only eight reclassifying banks are not audited by one of the Big 4 auditors. Seven of these banks do not fully comply with the disclosure requirements of IFRS 7.

nuous (binary) independent variables. The analyses differ in the dependent variable used. The

first two columns correspond to the analysis of total reclassifications, whereas the last two col-

umns focus on AFS reclassifications. In the first column of each specification, the variable *Re-*

porting Quality is given by the magnitude of accruals. In the second column, the abnormal bid-

ask spread is used instead. Consistent with hypothesis (H1), the results suggest that the closer a

bank's total capital ratio is to the country-specific minimum capital ratio, the higher is the proba-

bility of a reclassification (either trading or AFS). Univariate tests (not tabulated) show that the

distance between a non-reclassifying bank's total capital ratio and the minimum capital ratio is,

on average, more than 50% higher than that for a reclassifying bank (6.50 versus 4.29 percentage

points, p<0.01). In multivariate analyses, the coefficient estimate on *Regulatory Capital Restric-*

tion takes the expected positive sign and is statistically significant in all versions of the model.

The marginal effects indicate that a 100 basis point decrease in the total capital ratio is associated

with a 1.1 to 2.4 percentage point increase in the reclassification probability. Thus, all else equal,

the reclassification probability of a bank with a capital ratio of exactly the minimum adequacy

level is more than 6 percentage points higher than that of the average bank in our sample with a

capital ratio of 5.55 percentage points above the minimum level and more than 36 percentage

points higher than that of the average bank with a capital ratio equal to the first percentile in our

sample (33.00 percentage points above the minimum level). These statistics demonstrate that the

association between capital regulation and accounting choice is economically substantial.

In addition, the analysis of AFS reclassifications that exploits cross-country differences in

prudential filters for unrealized fair value gains highlights the importance of incentives arising

from capital regulation for the reclassification choice. The coefficient on *AFS Prudential Filter* is

significantly negative (p<0.05), suggesting that the incentive to reclassify AFS assets is decreas-

ing in the extent to which the accumulated unrealized gains are excluded from the determination

of regulatory capital. In line with hypothesis (H2), the incentive is particularly small when reclassifications cannot serve to safeguard regulatory capital, i.e. when the link between prudential supervision and financial reporting is weakest. More specifically, all else equal, a regulatory switch from a 0% to a 100% prudential filter on accumulated unrealized AFS gains is associated with an approximately 11.5 percentage point reduction in the probability of reclassification.

The reclassification probability is significantly negatively associated with the proxies for a bank's prior *Reporting Quality*, suggesting that as hypothesized, banks with a reputation for higher quality pre-reclassification reporting are less likely to reclassify. Results are very similar using the accounting-based and the market-based proxies (*RQ1* and *RQ2*). This finding may suggest how banks evaluate the informational usefulness of fair value recognition for investors.

The coefficient estimates on *Reclassification Potential* are positive and statistically significant at the 1% level. This result is consistent with the notion that banks need to have a substantial trading and AFS portfolios prior to reclassification in order to take advantage of the accounting option. Further, the negative association between the reclassification choice and the use of abnormally deflated (income-increasing) loan loss provisions in 2008 (*Accounting Slack*) suggests that banks use alternative and more opaque means of earnings and capital management if possible. Finally, the coefficient estimates on the other control variables provide initial evidence that there are other benefits associated with the reclassification choice apart from the reduction in regulatory costs, namely, the avoidance of a continued loss in customer deposits (when failing to meet the zero earnings target) and of political costs (from membership in the lobbying organization IIF).

The percentage of reclassification choices correctly predicted by the probit model is between 72% (for total reclassifications) and 80% (for AFS reclassifications). This is an increase of up to

36% compared with a naïve prediction model calculated in accordance with Veall and Zimmermann (1996). This ratio corresponds to an (adjusted) Pseudo-R^2 (McFadden, 1973) of between 21% and 24% (17% and 20%).

5.3. Short-Term Market Effects of Reclassification Disclosures

Table 6 presents results of our analysis of stock price reactions to reclassification announcements. In the first three columns we focus on the reaction to the regulatory announcement on October 13 and 14, 2008. The tests in the bottom of the table provide evidence consistent with our hypothesis (H2) that those banks expected to reclassify experience higher abnormal returns when the potential regulatory benefits from reclassification are greatest. Specifically, banks expected to reclassify that violate the regulatory capital restrictions have abnormal returns that, depending on the reporting quality measure used in the determinants analysis, are between 4.2% (t-statistic 2.10) and 6.2% (t-statistic 3.11) higher than those of banks expected to reclassify that do not violate the capital restrictions. In contrast to the coefficient estimates on *Expected Reclassification* and *Regulatory Capital Restriction*, this effect is not sensitive to the underlying prediction model.[13]

The last two columns of Table 6 present results on stock price reactions to bank-specific announcements of the actual reclassification choice. The test in the specification with benchmark announcements shows that banks that take the reclassification option and violate regulatory capital restrictions experience abnormal announcement returns that are 2.6% higher relative to those of other reclassifying banks. However, this effect is not statistically significant at conventional

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13 A potential concern is that our tests capture stock price reactions to other economic events that coincided with the regulatory announcement of the reclassification amendment. For example, on October 13, the Financial Times reports that European governments (among them France, Germany, and the UK) pledged a total of US$ 2,546bn in guarantees for new bank debt as part of coordinated plans to rescue their financial sectors. While such events almost certainly have an impact on stock prices in general, it is not clear whether they affect the cross-sectional differences in abnormal returns that we are interested in.

levels (t-statistic 1.53). The coefficient estimate on *Regulatory Capital Restriction* in the second specification is very similar, suggesting that this result is not sensitive to the inclusion of benchmark announcements.

Taken together, our analyses suggest that the stock market reacts positively to reclassifications if and only if the potential regulatory benefits from reclassification are sufficiently large. The stock price reactions are statistically more pronounced for the regulatory announcement than for the eventual bank-specific announcements, suggesting that most of the potential benefits are anticipated around the regulatory event. Our findings are therefore consistent with hypothesis (H2).

5.4. Long-Term Market Effects of Reclassification Disclosures

Table 7 presents results for the analysis of long-term consequences of fair value reclassifications on bid-ask spreads. Panel A reports descriptive statistics for the dependent and the independent variables. Panel B presents results from multi-period difference-in-differences analyses using the data for all quarters. The first (second) column reports regression results without (with) the control variables. The sample comprises 124 reclassifying and 178 non-reclassifying banks, for a total of 3,467 firm-quarter observations over the period 2007Q1 to 2009Q4.

In the first specification, the coefficient estimate on the reclassification dummy is 0.143 (t-statistic 1.78), suggesting that reclassifying banks that do not comply with corresponding footnote disclosures experience a significant increase in bid-ask spreads of over 15% relative to non-reclassifying banks.[14] The negative but statistically insignificant coefficient estimate on *Reclassification + Complete Disclosure* indicates that this effect is offset if banks fully comply with the reclassification disclosure requirements. The second specification shows that these effects are

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14 Note that the bid-ask spread regression model is log-linear. The percentage increase in bid-ask spreads is therefore computed as $\exp(0.143) - 1 = 0.154$.

similar if the control variables are included, although the negative coefficient estimate on *Reclassification + Complete Disclosure* becomes statistically significant. The coefficient estimates on the control variables take the expected signs and are also significant.

Overall, the empirical analysis provides evidence that is largely consistent with hypotheses (H4a) and (H4b), suggesting that the impact of fair value reclassifications on information asymmetry is associated with the extent to which the bank complies with the corresponding disclosure requirements. Specifically, reclassifying banks that fully disclose related fair value information experience no change in information asymmetry, while the bid-ask spreads of non-compliant banks increase significantly. We acknowledge, however, that interpretation of these results relies on strong ceteris paribus assumptions. We therefore discuss potential alternative explanations in the next section.

6. Additional Analyses

6.1. Alternative Interpretations of the IFRS 7 Compliance Measure

We perform two sets of analyses to examine whether the statistically significant associations between IFRS 7 (non-)compliance and changes in bid-ask spreads suggest a direct impact of the reclassification disclosures per se or whether they are more likely to proxy for other effects that we do not control for (e.g., a bank's general disclosure behavior during the financial or the market's perception of this behavior).

In the first set of analyses, we test whether the observed associations vary with the reclassification effects on net income, which we use as a proxy for the materiality of the reclassification. The resulting regression specification is as follows:

$$Log(\textit{Bid-Ask Spread}) = \beta_0 + \beta_1 \textit{ Reclassification} + \beta_2 \textit{ Complete Disclosure}$$

$$+ \beta_3 \textit{ Effect on Net Income}$$

$$+ \beta_4 \textit{ Complete Disclosure * Effect on Net Income}$$

$$+ \Sigma \beta_j \textit{ Controls}_j + \varepsilon \qquad\qquad (5)$$

Effect on Net Income is a dummy variable that takes a value of one if the percentage net income effect of the first reclassification is above the sample median (see Table 2, Panel A for details on this variable), and zero otherwise. All other variables are the same as in regression specification (4). To the extent that potential information asymmetry effects increase with the reclassification impact on financial statements, we expect the coefficient estimate on *Reclassification* + *Effect on Net Income* to be positive, that is, $\beta_1 + \beta_3 > 0$, and to be offset when disclosure is of high quality, that is, $\beta_1 + \beta_2 + \beta_3 + \beta_4 = 0$. The first specification in Table 8, Panel A provides evidence that is consistent with these expectations. Specifically, the bid-ask spreads of reclassifying, non-complying banks with a strong impact on net income increase by nearly 40% relative to the bid-ask spreads of non-reclassifying banks (see the coefficient estimate on *Reclassification* + *Effect on Net Income*). In contrast, reclassifying banks that provide full reclassification disclosures experience a decline in bid-ask spreads, regardless of their impact on net income. However, this decrease is insignificant or only mildly statistically significant (see, for example, the coefficient estimate on *Reclassification* + *Complete Disclosure* for banks with a modest net income effect). These findings are consistent with observed bid-ask spread changes being directly related to the reclassification disclosures under the assumption that these changes increase with the size of the reclassification effects on net income.

Notwithstanding the above findings, it is still possible that the magnitude of the reclassification effect and the extent of reclassification disclosures are correlated with other omitted factors. Therefore, in the second set of analyses we evaluate alternative interpretations for the increase in

bid-ask spreads that are unrelated to compliance with IFRS 7 disclosure requirements directly related to reclassification. Towards this end, we begin by collecting information on banks' investments in toxic Alt-A assets to construct the variable *Toxic Assets*. This variable takes a value of one for all quarters (between the first quarter after the regulatory amendment in October 2008 and the end of the sample period) in which a bank's 2008 financial statements indicate exposure to or recent losses from investments in the subprime/Alt-A market, including corresponding derivative instruments (CDOs, MBS, etc.) as well as guarantees or credit lines to Special Purpose Entities involved in the securitization of such assets, and zero otherwise.[15] We then use this variable in two different tests.

First, we re-run regression equations (4) and (5) including *Toxic Assets* as an additional control variable. The second and third specifications in Panel A of Table 8 show that the overall results change very little. Hence, the existence of toxic Alt-A assets does not explain the significant association between reclassification disclosures and bid-ask spread changes, suggesting that a simultaneous increase in uncertainty about banks' asset quality does not seem to confound the observed effects.

Second, we perform a falsifiability test by using *Toxic Assets* in lieu of *Reclassification* as an independent variable in the spread analysis. We conjecture that an investment in toxic assets is positively associated with bid-ask spread changes only if banks imperfectly disclose these investments. We use the *Complete Disclosure* variable derived from a bank's reclassification disclosures to capture the interaction between investment in toxic Alt-A assets and disclosure. If the observed bid-ask spread effects are specific to reclassifications and unrelated to a bank's overall disclosure policy, we should fail to detect a significant interaction because the IFRS 7 reclassifi-

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15 The data are hand-collected from footnotes to financial statements using a variety of search terms followed by thorough analysis of the respective text.

cation disclosures do not contain any direct information about banks' Alt-A investments. Since *Complete Disclosure* is only available for reclassifying banks, we exclude all other banks from the analysis. Panel B of Table 8 presents the results. We find a positive and statistically significant association between Alt-A investments and bid-ask spread changes. This effect is mitigated by the significantly negative interaction term between *Toxic Assets* and *Complete Disclosure*. To the extent that our conjecture above is valid, these findings are consistent with the idea that the specific reclassification disclosures are highly correlated with a bank's general disclosure policy during the crisis. Alternatively, these results may indicate that reclassifications are perceived as a signal that a bank is hiding additional bad news if its overall disclosure policy (e.g., about its toxic Alt-A investments) is weak.

Taken together, our additional tests suggest that the increase in average bid-ask spreads presented in Table 7 is not solely attributable to missing reclassification disclosures. While our results provide some evidence consistent with a lack of compliance with specific reclassification disclosure requirements contributing to the cross-sectional heterogeneity in the general increase in spreads during the crisis, our research design does not allow us to disentangle their importance relative to other potential drivers.

6.2. Alternative Reporting Quality Measures

Our main analyses use the magnitude of accruals and abnormal bid-ask spreads as proxies for reporting quality. We perform additional tests to examine whether our results are sensitive to the choice of these proxies. The first alternative proxy, *RQ3,* is based on Dechow and Dichev (2002) and equals the standard deviation of the estimated residual of bank-specific regressions that relate current accruals to lagged, current, and future cash flows from operations (all scaled by total assets). The second alternative proxy, *RQ4,* is the negative adjusted-R^2 from bank-specific regres-

sions in which the dependent variable is pre-tax income scaled by the market value at the end of the previous fiscal year, and the independent variables are the bank's 15-month stock return ending three months after the end of the fiscal year, a binary dummy that equals one if the stock return is negative, as well as the interaction between these latter two variables (e.g., Basu, 1997; Ball et al., 2000; Francis et al., 2004). The bank-specific regressions are estimated on a yearly basis over the period 1990 to 2008 for both proxies. Both variables are converted into ranks, with higher ranks representing higher reporting quality, and then scaled between 0 and 1.

Similar to *RQ1* and *RQ2*, we find that *RQ3* is significantly negatively associated with *Recl_Dummy* (at the 5% level with a t-statistic of 2.11) and *AFSRecl_Dummy* (at the 10% level with a t-statistic of 1.69). We find no evidence, however, of a statistically significant association between *RQ4* and the dependent variables (with t-statistics of 1.28 and 0.13, respectively). In multivariate analyses, the coefficient estimates are insignificant or only mildly statistically significant (with t-statistics of 1.51 and 1.53 for *RQ3* and 0.52 and 1.61 for *RQ4*). The coefficient estimates for the other variables included in the analysis of Table 5 are unchanged in terms of size and statistical significance.

The main result of the analysis of stock price reactions to the regulatory announcement is similar if not stronger when we use the alternative proxies for reporting quality to model market expectations about a bank's eventual reclassification choice. Specifically, using *RQ3* (*RQ4*) as the proxy for reporting quality, the average abnormal return of banks expected to reclassify that violate the regulatory capital restrictions is 7.0% (6.8%) higher than that of banks expected to reclassify that do not violate the capital restrictions. Also in line with the main analyses, this effect is significant with t-statistics of 3.43 for *RQ3* and 1.72 for *RQ4*.

Taken together, the above results corroborate the key findings of our main analyses, but also emphasize the innate difficulty of adequately measuring reporting quality.

6.3. Alternative Definitions of Regulatory Capital Restriction

The analyses of the stock price reactions to the regulatory and bank-specific reclassification announcements are based on a dummy variable that equals one if the difference between an individual bank's total capital ratio before reclassification and the minimum capital ratio at the country level is less than 0% (i.e., if the bank violates the regulatory capital restrictions before reclassification), and zero otherwise. In additional tests we use two alternative definitions for *Regulatory Capital Restriction*. First, we apply the continuous variable as described in Table 4. Second, we employ the dummy variable approach but use higher cut-off points of 1% (16 banks in total; 8 of these banks eventually reclassify) and 2% (61 banks in total; 34 of these banks eventually reclassify).

We do not find statistically significant results when using the continuous variable. In contrast, the stock market reactions to the regulatory announcement remain significant when using the alternative cut-off definitions. Specifically, banks expected to reclassify that fall below the cut-off point of 2% experience average abnormal returns that, depending on the specification, are 1.4% (t-statistic 1.63) to 2.0% (t-statistic 3.39) higher than those of banks expected to reclassify that do not fall below the 2% cut-off. This effect is stronger when we set the cut-off to 1% (abnormal returns that are 2.9% to 5.5% higher), but still falls short of the results reported in the main analyses that are based on a cut-off point of 0% (abnormal returns are 4.2% to 6.2% higher; see Table 6). Overall, these findings emphasize that the stock market reactions to reclassification announcements are confined to a small group of banks whose potential regulatory benefits from reclassification are greatest.

7. Conclusion

In this study, we examine the magnitude, determinants, and economic consequences of banks' fair value reclassifications of financial assets during the financial crisis following the October 2008 amendments to IAS 39 and IFRS 7.

Using a comprehensive global sample of IFRS reporting banks, we find that more than one-third of the sample banks choose to reclassify some financial assets. Further analyses suggest that abandoning fair value through reclassification serves as an effective means of regulatory capital arbitrage for some banks, particularly those facing greater risk of costly regulatory interventions. The incentive to use the reclassification option is mitigated, however, by country-specific prudential filters that temper the link between fair value accounting and regulatory capital. For a small subset of banks facing severe financial difficulties, the regulatory benefits are reflected in abnormally positive stock returns around the regulatory announcement. Some banks, however, use the reclassification option to withhold potentially material information by not complying with corresponding footnote disclosure requirements. These banks experience an increase in information asymmetry as measured by the bid-ask spread.

Taken together, this study provides international evidence that contributes to the ongoing debate on fair value. In addition, the paper's results might be useful to regulators interested in conducting a post-implementation review of the IASB's measures during the financial crisis.

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TABLE 1

Reclassification Data and Selected Country Variables

| Country | Reclassifications | | | | | | | Capital Regulation | | | | |
| | No | Yes | | | | | | | | | | |
	Total	Total	Only Trading	Only AFS	Both	Complete Disclosure Yes	Complete Disclosure No	Regulatory Authority	Legal Source	Minimum Capital	AFS Prudential Filter	Tax Deductions
Australia	8	1	-	1	-	-	1	Australian Prudential Regulation Authority	Prudential Standard APS 111	0.080	55%	No
Austria	1	1	1	-	-	-	1	Financial Market Authority	Austrian Banking Act	0.080	30%	Yes (25%)
Bahrain	6	3	-	2	1	2	1	Central Bank	Rulebook Vol. 1 Part A CA-2	0.120	100%	No
Belgium	-	2	-	1	1	1	1	Banking, Finance and Insurance Commission	CBFA Circular PPB-2007-1-CPB	0.080	100%	No
China	10	-	-	-	-	-	-	China Banking Regulatory Commission	Capital Adequacy Regulation	0.080	100%	No
Cyprus	2	2	-	-	2	1	1	Central Bank	Directive 436/2006 & 328/2007	0.100	0%	Yes (10%)
Denmark	6	4	4	-	-	2	2	Finanstilsynet (Danish FSA)	Financial Business Act	0.080	100%	No
Finland	1	1	-	-	1	-	1	Financial Supervisory Authority	FIN-FSA Standard 4	0.080	0%	Yes (26%)
France	14	5	2	-	3	5	-	Central Bank	Regulation 90/02	0.080	100%	No
Germany	7	7	-	3	4	4	3	Federal Financial Supervisory Authority	Regulation KonÜV	0.080	55%	No
Hong Kong	6	4	-	3	1	2	2	Hong Kong Monetary Authority	Banking (Capital) Rules	0.080	55%	No
Hungary	2	-	-	-	-	-	-	Hungarian Financial Supervisory Authority	HFSA Regulation	0.080	0%	No
Ireland	-	3	1	2	-	3	-	Irish Financial Regulator	Notice BSD S 2/00	0.080	0%	Yes (12.5%)
Italy	8	13	5	-	8	1	12	Central Bank	Circular 263	0.080	50%	Yes (27.5%)
Jordan	6	5	3	1	1	1	4	Central Bank	CBJ Instructions	0.120	55%	No
Kazakhstan	-	1	1	-	-	1	-	Financial Supervision Agency	Kazakhstan Banking Law	0.120	20%	No
Kuwait	5	4	4	-	-	-	4	Central Bank	Instruction No. 2/BS/94/2002	0.120	55%	No
Liechtenstein	2	-	-	-	-	-	-	Financial Market Authority	Regulation ERV	0.080	100%	No
Lithuania	4	-	-	-	-	-	-	Central Bank	Resolution No. 138	0.080	15%	Yes (20%)
Netherlands	3	2	1	1	-	1	1	Central Bank	Decree on Prudential Rules	0.080	100%	No
Norway	8	4	4	-	-	-	4	Finanstilsynet (FSA of Norway)	Capital Adequacy Framework	0.080	100%	No
Oman	5	-	-	-	-	-	-	Central Bank	Capital Guidelines II.A	0.120	100%	No
Philippines	2	9	2	4	3	3	6	Central Bank	Circular 538/06	0.100	100%	No
Poland	9	4	1	2	1	-	4	Polish Financial Supervision Authority	KNF Resolutions	0.080	100%	No
Portugal	-	5	2	-	3	-	5	Central Bank	Notice 12/92	0.080	55%	No
Qatar	5	2	-	2	-	1	1	Central Bank	QCB Instructions Part 7	0.100	55%	No
Russian Federation	2	3	1	-	2	2	1	Central Bank	Instruction on Bank Regulation	0.100	100%	No

TABLE 1 (continued)

								Regulatory Authority	Legal Source	Minimum Capital	AFS Prudential Filter	Tax Deductions
Saudi Arabia	7	2	1	1	-	-	2	Saudi Arabia Monetary Agency	SAMA Capital Requirements	0.080	55%	No
Singapore	4	1	-	-	1	1	-	Monetary Authority of Singapore	Notice 637	0.100	100%	No
Slovakia	1	-	-	-	-	-	-	Central Bank	Decree 4/2007	0.080	100%	No
Slovenia	-	2	1	1	-	-	2	Central Bank	Regulation OJ 135/06 & 104/07	0.080	100%	No
South Africa	7	1	1	-	-	1	-	Central Bank	Notice R3/2008	0.095	100%	No
Spain	7	1	1	-	-	-	1	Central Bank	Circular 4/2004	0.080	65%	No
Sweden	4	3	1	-	2	3	-	Swedish Finansinspektionen	Regulation FFFS 2007:1	0.080	100%	No
Switzerland	6	2	2	-	-	1	1	Financial Market Supervisory Authority FINMA	Circular 2008/34	0.080	55%	No
Taiwan	4	5	4	1	-	1	4	Financial Supervisory Commission	Capital Adequacy Regulation	0.080	55%	No
Turkey	5	8	-	1	7	-	8	Banking Regulation and Supervision Agency	Regulation OJ 26333/06	0.080	55%	No
United Arab Emirates	7	8	6	1	1	-	8	Central Bank	Circular 13/1993	0.100	55%	No
United Kingdom	4	6	3	-	3	5	1	Financial Services Authority	Handbook GENPRU 2.2.185	0.080	100%	No
Total / Average	178	124	52	27	45	42	82			0.089	84%	

This table presents the sample composition by country and selected country variables. The full sample comprises 302 listed IFRS-reporting banks from 39 countries. The sample is divided in reclassifying (*Yes*) and non-reclassifying banks (*No*). A reclassifying bank is defined as a bank that chooses to reclassify fair value assets in accordance with the amendment to IAS 39 in financial year 2008. The column *Only Trading* reports the number of banks that reclassify exclusively trading securities. The column *Only AFS* reports the number of banks that reclassify exclusively available for sale (AFS) securities. The column *Both* reports the number of banks that reclassify both trading and AFS securities. *Complete Disclosure* indicates whether a reclassifying bank discloses all six items required by IFRS 7, para. 12A, in the footnotes to its financial statements. *Regulatory Authority* denotes the institution which is responsible for the capital regulation of commercial banks at the country level. *Legal Source* provides the source of our information about the capital regulation variables. *Minimum Capital* is the total capital ratio (tier 1 plus tier 2) required for commercial banks by national regulators (source: The World Bank / own survey). *AFS Prudential Filter* is the proportion of accumulated unrealized gains from AFS debt securities that is deducted from equity in the determination of total regulatory capital (excluding taxes). *Tax Deductions* indicates the additional deduction of future tax charges for accumulated unrealized gains from AFS debt securities in the determination of total regulatory capital (source: CEBS / own survey). Country-specific tax rates are taken from the OECD tax survey.

TABLE 2

Reclassification Effects

Variables	Absolute Effects		Relative Effects				
	Mean	Median	Mean	Std. Dev.	P1	Median	P99
All Reclassfications (N = 124)							
Net Income	182.960	4.978	43.74%	132.75%	-6.45%	3.41%	790.91%
Return on Equity	6.758	0.449	47.36%	141.50%	-12.38%	3.71%	790.91%
Tier 1 Capital Ratio	0.174	0.063	2.05%	4.58%	-2.24%	0.65%	18.36%
Total Capital Ratio	0.332	0.102	19.58%	191.95%	-1.96%	0.86%	28.44%
AFS Reclassifications Only (N = 27)							
Total Capital Ratio	0.331	0.093	2.58%	3.50%	-0.88%	0.90%	11.62%

This table presents statistics on the effects of a bank's IAS 39 reclassification choice on its net income and equity capital. The sample of reclassifying banks comprises 124 IFRS-reporting banks from 39 countries (see Table 1 for details). Absolute effects on net income are reported in millions of Euros. Absolute effects on return on equity, the tier 1 capital ratio and the total capital (tier 1 plus tier 2) ratio are reported in percentage points. Relative effects are calculated as the absolute effect scaled by the size of the respective variable before reclassifications and are reported in percent. The upper part of the table comprises all reclassifying banks. The bottom part of the table focuses on all banks that reclassified exclusively available for sale (AFS) securities, i.e. those reclassifications which did not affect net income and tier 1 capital but only the revaluation reserve as part of shareholder's equity and, proportionately (as indicated by *AFS Prudential Filter*, see Table 1 for details), tier 2 capital.

TABLE 3

Reclassification Disclosures

Panel A: Reclassification Disclosures

		Type of Reclassification					
		HFT2Cost		HFT2AFS		AFS2Cost	
Amount Reclassified	IFRS 7.12A (a)	65	(97%)	54	(95%)	69	(96%)
New Category	IFRS 7.12A (a)	66	(99%)	57	(100%)	72	(100%)
FV of Reclassified Assets at BS Date	IFRS 7.12A (b)	62	(93%)	49	(86%)	66	(92%)
BV of Reclassified Assets at BS Date	IFRS 7.12A (b)	62	(93%)	not applicable		63	(88%)
Reason for Reclassification	IFRS 7.12A (c)	49	(73%)	38	(67%)	59	(82%)
Income / OCI Before Reclassification	IFRS 7.12A (d)	44	(66%)	35	(61%)	47	(65%)
Effect of Reclassification on Income / OCI	IFRS 7.12A (e)	59	(88%)	50	(88%)	59	(82%)
Effective Interest Rate	IFRS 7.12A (f)	38	(57%)	23	(40%)	46	(64%)
Estimated Cash Flow Recovery	IFRS 7.12A (f)	33	(49%)	18	(32%)	37	(51%)

Panel B: Determinants of Complete Disclosure

Indepedent Variables	Dependent Variable: Complete Disclosure	
	Univariate	Multivariate
Log(MCAP/GDP)	0.168	0.192
	(2.51)**	(2.57)**
CGI Score	0.160	-0.024
	(2.35)**	(-0.25)
Log(Total Assets)	0.098	0.132
	(4.04)***	(2.91)***
Analyst Following	0.012	-0.008
	(2.72)***	(-1.12)
Big 4 Auditor	0.245	0.174
	(1.50)	(0.92)
RQ1 = Accrual Size	-0.134	-0.090
	(-0.85)	(-0.53)
RQ2 = Abnormal Spread	0.019	-0.042
	(0.30)	(-0.64)
Intercept		Yes
# Observations	124	124
Correct predictions (scaled)		0.79 (0.38)
McFadden's (adjusted) R-squared		0.21 (0.11)

This table presents descriptive evidence on reclassification disclosures in the first annual report following the amendment to IAS 39. Panel A shows the number and the percentage of banks that disclose selected items required by IFRS 7 across three different types of reclassifications (HFT2Cost = reclassification out of the trading account into the HTM or L&R category, HFT2AFS = reclassification out of the trading account into the AFS category, AFS2Cost = reclassification out of the AFS category into the HTM or L&R category). Panel B shows the results from univariate and multivariate probit regressions that relate the reclassification disclosure strategy to various country and bank variables. The dependent variable *Complete Disclosure* is a dummy variable that takes a value of one (zero) if a reclassifying bank discloses all (less than) six items required by IFRS 7, para. 12A, in the footnotes to its financial statements (see Table 1). All independent variables are described in Table 4. The table reports marginal effects at the mean (median) of all continuous (binary) independent variables and z-statistics in parentheses. The z-statistics are based on robust standard errors. The proportion of correct predictions is scaled according to Veall and Zimmermann (1996). McFadden's (adjusted) R-squared is calculated according to McFadden (1973). ***, **, * indicate statistical significance at the 1%, 5% and 10% levels (two-tailed), respectively.

TABLE 4

Descriptive Statistics

Panel A: Bank Variables

Variables	# Banks	Mean	Std. Dev.	P1	Median	P99
Analyst Following	302	7.040	8.452	0.000	4.000	34.000
Big 4 Auditor	302	0.924	0.266	0.000	1.000	1.000
Δ Customer Deposits	302	0.500	0.501	0.000	0.500	1.000
Existence of Accounting Slack	302	0.477	0.500	0.000	0.000	1.000
Exposure to Crisis	302	0.000	0.646	-1.204	-0.031	1.770
IIF Membership	302	0.308	0.462	0.000	0.000	1.000
No Loss Target	302	0.149	0.357	0.000	0.000	1.000
Reclassification Potential	302	0.109	0.096	0.000	0.083	0.449
Regulatory AFS Prudential Filter	302	0.619	0.402	0.000	0.550	1.000
Regulatory Capital Restriction	302	-5.567	6.839	-33.639	-3.908	0.700
RQ1 = Accrual Size	302	-0.502	0.289	-0.990	-0.502	-0.013
RQ2 = Abnormal Spread	302	-0.019	0.698	-1.702	0.787	1.259
Total Assets	302	127,127	371,986	276	11,444	2,105,760
Toxic Assets	302	0.197	0.400	0.000	0.000	1.000

Panel B: Country Variables

Variables	# Countries	Mean	Std. Dev.	P1	Median	P99
MCAP/GDP	39	1.206	0.959	0.084	1.022	5.005
CGI Score	39	0.929	0.731	-0.678	0.915	1.970

This table provides descriptive statistics for all variables used in the analyses of the determinants of reclassification choices (Table 5) and disclosure strategies (Table 3, Panel B). The descriptive statistics are based on the full sample of 302 banks (Panel A) or 39 countries (Panel B), respectively. *Analyst Following* is the number of analysts that follow the respective bank at the end of financial year 2008 (source: IBES). *Big 4 Auditor* is a dummy variable that takes a value of one if a bank's 2008 financial statements are audited by one of the big 4 auditors, and zero otherwise (source: BvD BankScope). Δ *Customer Deposits* is a dummy variable for banks that experience a decrease in customer deposits, scaled by total liabilities, between financial years 2007 and 2008 that is greater than the median value (source: BvD Bankscope). *Existence of Accounting Slack* takes a value of one if a bank uses income-increasing abnormal loan loss provisions in financial year 2008. We use the following regression model to estimate the non-discretionary portion of the loan loss provision (yearly data over the period 2005 to 2008): Loan Loss Provisions / Total Assets = $\beta_0 + \beta_1$ Loan Loss Reserves $_{t-1}$ / Total Assets + β_2 Net Charge-Offs / Total Assets + β_3 Δ Non-Performing Loans / Total Assets + β_4 Log(Total Assets) + ε. *Exposure to Crisis* is the extent to which a bank is affected by the global financial crisis in 2008. It is the first principal factor of the following three variables: (1) *Stock Return* is a bank's cumulative stock return between January and September 2008 (source: Thomson Reuters Datastream), (2) *Stock Return Volatility* is the standard deviation of a bank's daily stock return between January and September 2008 (source: Thomson Reuters Datastream), (3) *Securitization Activity* equals one if the bank reports engagements in securitizations in its financial statement, and zero otherwise (source: own data). *IIF Membership* equals one if a bank is a member of the International Institute of Finance, and zero otherwise (source: IIF). *No Loss Target* takes a value of one if net income before reclassifications is smaller than zero, and zero otherwise. *Regulatory AFS Prudential Filter* is the proportion of accumulated unrealized gains from AFS debt securities that is not included in the determination of total regulatory capital. The variable takes the country-specific value (including tax adjustments) reported in Table 1. It is set at 0% if a bank reports accumulated unrealized fair value losses from total AFS investments and at 100% if a bank indicates that it does not determine regulatory capital on the basis of the IFRS financial statements due to country-specific options. *Regulatory Capital Restriction* represents capital management incentives to reclassify fair value assets, which are defined as the difference between the minimum capital ratio at country level (as presented in Table 1) and the individual bank's total capital ratio for 2008 adjusted for the effect of reclassifications. *RQ1 = Accrual Size* is defined as a bank's median ratio of absolute accruals to absolute cash flows from operations over the period 1990 to 2008. We use pre-tax income before loan loss provisions as a bank-specific measure of cash flows from operations. The variable is converted into ranks with higher ranks representing higher reporting quality and then scaled on the range between 0 and 1. *RQ2 = Abnormal Spread* is the abnormal bid-ask spread in the period prior to the reclassification choice (January 2007 to September 2008). The abnormal bid-ask spread is calculated as the firm-level median of the quarterly prediction errors during this period (actual log(spread) minus predicted log(spread)). We multiply the abnormal bid-ask

TABLE 4 (continued)

spread by -1, the variable is thus increasing in a bank's reporting quality. The predicted bid-ask spread is derived from quarterly regressions of log(spread) on the control variables log(share turnover), log(return variability), and log(market value) using daily capital market data. For further details on the variables and the regression approach, see Table 7. *Reclassification Potential* is the proportion of trading assets and AFS assets relative to total financial assets in 2008 and adjusted for the effect of reclassifications. *Total Assets* is the book value of total assets in million Euros as of financial year 2008 and adjusted for the effect of reclassifications (source: BvD BankScope). *Toxic Assets* equals one for banks that disclose Alt-A investments for financial year 2008, and zero otherwise. *CGI Score* is a country-specific governance score from Kaufmann et al. (2009). *Code Law Country* is a dummy variable that takes a value of one if a country has a code law legal origin (33 countries in our sample), and zero otherwise (source: CIA World Factbook). *MCAP/GDP* is the ratio of a country's stock market capitalization to its Gross Domestic Product (source: The World Bank).

TABLE 5

Determinants of Reclassification Choice

Indepedent Variables	Expected Sign	Dependent Variable: Recl_Dummy		Dependent Variable: AFSRecl_Dummy	
		RQ1 = Accrual Size	RQ2 = Abnormal Spread	RQ1 = Accrual Size	RQ2 = Abnormal Spread
Regulatory Capital Restriction	+	0.017	0.024	0.011	0.018
		(3.22)***	(3.45)***	(2.18)**	(3.18)***
Regulatory AFS Prudential Filter	-			-0.115	-0.117
				(-2.06)**	(-2.10)**
Reporting Quality	-	-0.278	-0.082	-0.241	-0.085
		(-2.29)**	(-1.65)*	(-2.35)**	(-2.66)***
Existence of Accounting Slack	-	-0.179	-0.173	-0.088	-0.086
		(-2.07)**	(-2.02)**	(-1.58)	(-1.48)
Reclassification Potential	+	1.784	1.915	1.530	1.670
		(3.06)***	(3.10)***	(4.83)***	(4.70)***
No Loss Target	+	0.080	0.092		
		(0.78)	(0.79)		
No Loss Target * Δ Customer Deposits	+	0.303	0.290		
		(2.96)***	(2.41)**		
Exposure to Crisis	+	0.082	0.134	0.083	0.120
		(1.24)	(2.37)**	(1.65)*	(2.64)***
IIF Membership	+	0.150	0.123	0.154	0.112
		(2.85)***	(2.37)**	(2.61)***	(2.15)**
Intercept		Yes	Yes	Yes	Yes
# Observations		302	302	302	302
Correct predictions (scaled)		0.74 (0.36)	0.72 (0.32)	0.80 (0.17)	0.80 (0.14)
McFadden's (adjusted) R-squared		0.22 (0.18)	0.21 (0.17)	0.24 (0.20)	0.24 (0.19)

This table presents the results from multivariate regressions that relate the reclassification choice to various bank variables. The dependent variable *Recl_Dummmy* is a dummy variable that takes a value of one if a bank reclassifies trading or AFS assets in accordance with IAS 39 in financial year 2008, and zero otherwise (see Table 1). The dependent variable *AFSRecl_Dummy* is a dummy variable that takes a value of one if a bank reclassifies AFS assets in accordance with IAS 39 in financial year 2008, and zero otherwise (see Table 1). All independent variables are described in Table 4. The table reports marginal effects at the mean (median) of all continuous (binary) independent variables and z-statistics (in parentheses). The z-statistics are based on standard errors that are clustered by country. The proportion of correct predictions is scaled according to Veall and Zimmermann (1996). McFadden's (adjusted) R-squared is calculated according to McFadden (1973). ***, **, * indicate statistical significance at the 1%, 5% and 10% levels (two-tailed), respectively.

TABLE 6

Stock Market Reactions

Independent Variables	Expected Sign	Dependent Variable: Abn_Return 13/14 October 2008			Dependent Variable: Abn_Return Reclassification Announcements	
		Prediction Model			Benchmark Announcements	
		Perfect Foresight	RQ1 = Accrual Size	RQ2 = Abnormal Spread	Yes	No
Expected Reclassification		-0.007	-0.010	-0.015		
		(-0.99)	(-1.28)	(-1.75)*		
Reclassification					-0.014	
					(-1.66)*	
Regulatory Capital Restriction (Dummy - Cut-off 0%)		0.026	0.025	0.070	-0.015	0.027
		(1.59)	(1.54)	(4.44)***	(-1.83)*	(1.55)
Expected Reclassification x Regulatory Capital Restriction		0.033	0.037	-0.027		
		(1.23)	(1.42)	(-1.07)		
Reclassification x Regulatory Capital Restriction					0.041	
					(2.17)**	
Earnings Surprise					0.022	0.028
					(1.79)*	(1.53)
Intercept		0.030	0.031	0.032	0.004	-0.010
		(2.71)***	(2.73)***	(2.89)***	(0.78)	(-1.46)
# Observations		302	302	302	278	117
R-squared		-	-	-	0.02	0.02
Additional Tests						
Regulatory Capital Restriction + Interaction	+	0.059	0.062	0.042	0.026	
		(2.85)***	(3.11)***	(2.10)**	(1.53)	

This table presents analyses of stock market reactions to selected events related to the reclassification amendments and subsequent reclassification choices. The first three specifications analyze the cross-sectional determinants of bank-specific abnormal returns following the IASB's official announcement of the amendment to IAS 39 on October 13, 2008. The event window covers two days, because the amendment was announced in the late afternoon of October 13, 2008 (GMT) when the exchanges in many sample countries had already closed. *Expected Reclassification* is a proxy for the unobservable market expectations about a bank's eventual reclassification choice. We use three approaches to estimate this proxy. The first approach assumes that investors perfectly predict the eventual reclassification choice, i.e. *Expected Reclassification* equals one if a bank reclassifies ex post, and zero otherwise. The second and the third approach are based on fitted probabilities from the determinants model in equation (1) using the accrual size (*RQ1*) and the abnormal bid-ask spread (*RQ2*) as reporting quality measures. In the latter two specifications, *Expected Reclassification* takes a value of one if the fitted probability is higher than 0.5, and zero otherwise. *Regulatory Capital Restriction (Dummy – Cut-off 0%)* is a dummy variable that takes a value of one if the difference between an individual bank's total capital ratio before reclassifications and the minimum capital ratio at country level is less than 0% (6 banks in total; 4 of these banks eventually reclassify). The coefficient estimates and t-statistics (in parentheses) for these specifications are based on the weighted portfolio approach by Sefcik and Thompson (1986) using the DJ STOXX 1800 market index. R-squared is not applicable with this approach. The last two specifications analyze the cross-sectional determinants of bank-specific abnormal returns to bank-specific reclassification announcements. We use the first reclassification announcement for reclassifying banks and, as benchmark announcements, the first earnings announcement for non-reclassifying banks following the official announcement of the amendment to IAS 39 in October 2008. Since these dates cannot be identified for all sample banks, the analyses in this table are based on a reduced sample of 117 reclassifying and 161 non-reclassifying banks. Of the 117 reclassifying banks, 14 (67) (36) announce the reclassification before (during) (after) the respective earnings announcement. 39 of 117 reclassifying banks announce reclassifications in interim reports prior to the first annual report following the amendment to IAS 39. The dependent variable is the prediction error from the market model using the DJ STOXX 1800 market index, with interval (-60, -11) and interval (+11, +60) relative to announcement day 0 as estimation window. We follow the trade-to-trade approach by Maynes and Rumsey (1993) to account for thin trading in some of the stocks. *Reclassification* equals one (zero) for banks that (do not)

TABLE 6 (continued)

announce reclassifications. *Regulatory Capital Restriction (Dummy – Cut-off 0%)* is defined as in the first three specifications. *Earnings Surprise* is an indicator variable that takes a value of one if the earnings number reported at an earnings announcement is higher than the mean analysts' forecast reported by IBES for the last statistical period before the announcement, and zero otherwise. The last two specifications report OLS coefficient estimates and t-statistics (in parentheses). The t-statistics are based on robust standard errors. In all specifications, ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 7

Reclassification Disclosures and Information Asymmetry

Panel A: Descriptive Statistics

Variables	# Quarters	Mean	Std. Dev.	P1	Median	P99
Bid-Ask Spread	3,467	1.60%	3.34%	0.04%	0.66%	16.05%
Share Turnover	3,467	0.25%	0.39%	0.00%	0.10%	1.71%
Market Value (m Euro)	3,467	7,073	16,533	24	1,354	86,608
Return Variability	3,467	2.59%	1.57%	0.64%	2.26%	8.31%

Panel B: Multivariate Regressions

Independent Variables	Expected Sign	Dependent Variable: Log(Bid-Ask Spread)	
Reclassification	+	0.143	0.142
		(1.78)*	(1.86)*
Complete Disclosure	-	-0.210	-0.319
		(-2.00)**	(-2.99)***
Log(Share Turnover)	-		-0.194
			(-7.57)***
Log(Market Value)	-		-0.322
			(-5.17)***
Log(Return Variability)	+		0.305
			(6.21)***
Fixed Effects		Firm, Quarter	Firm, Quarter
# Observations		3,467	3,467
R-squared		0.91	0.92
Additional Tests			
Reclassification + Complete Disclosure	0	-0.067	-0.177
		(-0.72)	(-2.01)**

This table presents results from regressions that relate bid-ask spreads to the effect of IFRS reclassifications. Panel A reports descriptive statistics for the dependent as well as the control variables. All variables are measured at the firm-quarter level. The sample comprises of 124 reclassifying and 178 non-reclassifying banks, for a total of 3,467 firm-quarter observations over the period 2007Q1 to 2009Q4. Panel B presents results from multi-period difference-in-differences. *Bid-Ask Spread* is the median of the daily closing bid-ask spreads. *Reclassification* equals one for all reclassification quarters starting with the first quarter during which the respective bank announced IFRS reclassifications, and zero otherwise. *Complete Disclosure* indicates whether a reclassifying bank discloses all six items required by IFRS 7, para. 12A, in the footnotes to its financial statements (see Table 1). *Share Turnover* is the average percentage trading volume (i.e. trading volume in units divided by the number of outstanding shares). *Market Value (mEuro)* is the median market value of outstanding equity in Million Euros. *Return Variability* is the standard deviation of daily stock returns. Panel B reports OLS coefficient estimates and t-statistics (in parentheses). The t-statistics are based on standard errors that are clustered by firm and quarter. We use the natural logarithm of the raw values where indicated in the panels. ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 8

Additional Tests

Panel A: Effect on Net Income Partition and Toxic Assets as Control Variable

Independent Variables	Expected Sign	Dependent Variable: Log(Bid-Ask Spread)		
Reclassification	+	-0.073	0.130	-0.077
		(-1.01)	(1.80)*	(-1.04)
Complete Disclosure	-	-0.052	-0.363	-0.082
		(-0.48)	(-3.01)***	(-0.71)
Effect on Net Income	+	0.407		0.395
		(3.32)***		(3.32)***
Complete Disclosure x Effect on Net Income	-	-0.501		-0.516
		(-3.03)***		(-3.05)***
Toxic Assets	+		0.109	0.093
			-1.02	-0.92
Other Controls		Yes	Yes	Yes
Fixed Effects		Firm, Quarter	Firm, Quarter	Firm, Quarter
# Observations		3,467	3,467	3,467
R-squared		0.92	0.92	0.92
Additional Tests				
Reclassification + Complete Disclosure	0	-0.125	-0.233	-0.159
		(-1.35)	(-2.36)**	(-1.63)
Reclassification + Effect on Net Income	+	0.334		0.318
		(3.02)***		(3.01)***
Reclassification + Complete Disclosure + Effect on Net Income + Interaction Term	0	-0.219		-0.280
		(-1.89)*		(-2.13)**

Panel B: Toxic Assets in lieu of Reclassification

Independent Variables	Expected Sign	Dependent Variable: Log(Bid-Ask Spread)
Toxic Assets	+	0.479
		(2.15)**
Complete Disclosure	-	-0.117
		(-1.02)
Complete Disclosure x Toxic Assets	-	-0.661
		(-2.58)**
Controls		Yes
Fixed Effects		Firm, Quarter
Observations		1,428
R-squared		0.93

This table presents results from additional tests that examine alternative explanations for the findings reported in Table 7. Panel A corresponds to Table 7, Panel B, but includes *Toxic Assets* and *Effect on Net Income* (raw and interacted with *Complete Disclosure*) as additional control variables. Panel B presents results from multi-period difference-in-differences analyses that relate bid-ask spreads to *Toxic Assets*, *Complete Disclosure*, and the interaction of these two variables. This analysis focuses on the 124 reclassifying banks which results 1,428 firm-quarter observations over the period 2007Q1 to 2009Q4. In both Panels, *Toxic Assets* is defined as in Table 4 and set to zero for all quarters before the reclassification amendment became effective in October 2008. *Effect on Net Income* is a dummy variable that takes a value of one if the percentage net income effect of the reclassification is above the sample median (see Table 2), and zero otherwise. All other variables are defined in Table 7. The t-statistics are based on standard errors that are clustered by firm and quarter. ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

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