Asset Reclassifications and Bank Recapitalization during the Financial Crisis

Jannis Bischof
University of Mannheim

Ulf Brüggemann
Humboldt University of Berlin

Holger Daske
University of Mannheim

May 2019

Asset Reclassifications and Bank Recapitalization during the Financial Crisis

May 2019

ABSTRACT. EU politicians pressured the IASB to change the accounting rules for financial assets at the peak of the financial crisis in October 2008. The new rules enabled banks to forgo the recognition of unrealized fair value losses through reclassifications. This paper puts the ensuing regulatory relief for banks into perspective. We find that banks use asset reclassifications as a substitute to other discretionary but less visible accounting choices that have a similar impact on regulatory capital (e.g., loan loss provisions). At the same time, asset reclassifications complement real capital measures that tend to be substantially larger in magnitude (e.g., capital injections). We observe negative stock returns and increased bid-ask spreads following banks' reclassification announcements. Consistent with a trade-off between these costs and the regulatory benefits, return reactions are muted if the reclassification helps a bank avoid regulatory capital reductions. In contrast, the increase in bid-ask spreads is larger for banks that provide incomplete disclosures about their reclassification choice.

1. Introduction

The recapitalization of the banking sector was the key concern of politicians and regulators at the peak of the financial crisis in October 2008. A set of government interventions such as state guarantee schemes, the acquisition of impaired assets, or direct capital injections through bail-outs were important parts of the recapitalization strategy in many countries. Prior literature offers extensive evidence on the design of these financial sector rescue programs and the effectiveness of the measures (e.g., Bank for International Settlements, 2009; European Central Bank, 2009, 2010; Duchin and Sosyura, 2014; Hryckiewicz, 2014; Acharya et al., 2014). However, banks' regulatory capital is linked to book equity in most jurisdictions and, therefore, bank recapitalization also hinges on financial accounting regulation.

Simultaneous to the governmental recapitalization programs, the IASB permitted the reclassifications of financial assets out of fair value categories and into amortized cost categories in October 2008. The new accounting rule provided banks with the option to forgo fair value write-downs and, if regulatory capital was linked to IFRS accounting, a further reduction in the capital buffer. Prior literature offers evidence on banks' use of the reclassification option (e.g., CESR, 2009; Fiechter et al., 2017) and the corresponding capital market perceptions (e.g., Paananen et al., 2012; Lim et al., 2013). Less evidence exists about the role that reclassifications ultimately played in meeting the overall political objective of bank recapitalization (i.e., whether they served as an effective means of regulatory forbearance), and how they interacted with other recapitalization measures. We also know little about the potential costs that managers trade off against the regulatory incentives in the accounting choice (Acharya and Ryan, 2016). This paper addresses these questions.

In October 2008, the IASB adopted two amendments to IAS 39 and IFRS 7. On the one hand, the amendments permit the reclassification of trading assets (apart from derivatives) and available-for-sale (AFS) assets into alternative accounting categories. On the other hand, they mandate extensive footnote disclosures explaining this accounting choice. Then-IASB chairman Sir David Tweedie later acknowledged that the new accounting rules were a direct response to political pressure that mainly came from EU politicians and regulators (IASB, 2008; House of Commons, 2008). The amendments came without any regular due process and less than one week after the EU Commission and the Euro Summit decided on political actions intended to stabilize the banking sector (such as direct capital injections into the banking sector through government bail-outs or the purchase of troubled assets by government funds). The actions, by all accounts, aimed at the avoidance of any further bank closures after the recent experience with the bankruptcy of Lehman Brothers (e.g., Howieson, 2011). The accounting measure is, thus, an additional means of providing the banking sector with regulatory relief (i.e., an act of regulatory forbearance).

Yet, even at the peak of the 2008 financial crisis, the measure was highly controversial with capital market participants still demanding fair value information about troubled assets (e.g., André et al., 2009). Analyst and investor groups publicly argued that the new rules "threaten to undermine investor confidence in company accounts" (Financial Times, October 20, 2008). Put differently, the potential regulatory relief came along with the risk of capital market participants perceiving a decline in financial statement transparency or a signal for weak fundamentals. Consistent with the trade-off between regulatory benefits and these potential costs, we document a heterogeneous usage of the accounting option with only 124 of the 302 international banks in our sample reclassifying some financial assets out of fair value categories.

In the first part of our empirical analysis, we provide evidence on the interaction of the reclassification option with other means of regulatory capital management. We find that the regulatory capital of our sample banks, on aggregate, is higher by about EUR 19.1bn on December 31, 2008, as a consequence of the reclassification choice. This effect is relatively at par with the aggregate effects of other accounting-based measures such as recognizing deferred tax assets (EUR 23.7bn) or reporting lower loan loss provisions (EUR 8.0bn). However, the effect is relatively small compared to the aggregate effects of real capital measures (e.g., capital injections (EUR 137.5bn), dividend cuts (EUR 51.0bn), or a reduction of risk-weighted assets (RWAs, EUR 75.5bn)). In contrast to both accounting-based and real recapitalization measures which banks continue to rely on in the next financial year, the fair value reclassifications provide for a one-time effect; that is, hardly any bank uses the option again in 2009 or thereafter. The decline of the importance arguably comes from the retroactive option that gave bank managers the opportunity to exactly foresee the regulatory capital effect of the accounting choice but that they were only allowed to apply for a few weeks in October until November 1, 2008.

We use a two-stage approach to model the reclassification choice. At the first stage, we test whether a bank's reclassification choice is associated with bank-specific incentives to increase the regulatory capital and with other recapitalization measures. Consistent with fair value reclassifications being used for regulatory capital management, we find that reclassifying banks are at greater risk of violating regulatory capital restrictions. We also find that the use of the reclassification option is positively associated with a bank's use of capital injections, dividend cuts, or asset sales (i.e., a complement to real recapitalization measures). At the same time, the use of the option is negatively associated with the recognition of higher deferred tax assets and gains from non-recurring activities (i.e., a substitute to accounting-based recapitalization measures). The latter finding suggests that banks, when complementing real recapitalization

measures with accounting measures, tend to prefer accounting choices that require less visible disclosures and attract less public attention than fair value reclassifications did at that time. The finding is therefore supporting the notion that reclassifications are associated with informational costs that banks weigh off against potential regulatory benefits.

At the second stage, we exploit cross-country variation in the extent to which unrealized fair value gains and losses of financial assets in the AFS category are included in the regulatory capital computation (prudential filters). The existence of prudential filters mutes the potential impact of the accounting choice on regulatory capital. We find a negative association between the magnitude of the prudential filter and a bank's choice to reclassify AFS assets, even after controlling for differences in asset composition. We conclude that regulatory capital management is the most likely explanation for the negative association.

In the second part of our empirical analysis, we investigate short-term reactions in equity markets around the reclassification announcements. We examine the association between market expectations about banks' reclassification choice and abnormal stock returns around the regulatory announcement on October 13, 2008. While we observe slightly negative abnormal returns for banks that are most likely to use the reclassification option, the event is confounded by several simultaneous government interventions into the banking sector (see Acharya and Ryan, 2016, for a detailed discussion of the limitations of our approach). To overcome this challenge and disentangle market reactions to reclassification announcements from reactions to other regulatory measures, we also investigate abnormal stock returns around the bank-specific announcements of the reclassification choice. We observe substantial variation in the timing of these bank-specific announcements over the period from October 2008 to June 2009 that mitigates the potential impact from simultaneous policy actions. We benchmark the returns of reclassifying banks against the returns of a control group of non-reclassifying banks around

earnings announcements during the same time period, and document a negative association between abnormal stock returns and the reclassification choice. Yet, the negative association is attenuated for banks that achieve regulatory capital savings through reclassifications. These stock market reactions are most pronounced for a small subset of sample banks that announced their reclassification choice relatively early and, thus, were more likely to benefit from its retroactive application.

In the final part of our empirical analysis, we focus on bid-ask spreads of bank stocks as an established proxy for information asymmetry among equity investors to evaluate potential economic costs of the accounting choice. If market participants view reclassifications of financial assets (i.e., the switch from the recognition to the footnote disclosure of fair value information) as a decrease in bank transparency, we predict to observe a positive association between bid-ask spreads and the reclassification choice. Consistent with this prediction, we find that reclassifying banks experience a significant increase in bid-ask spreads relative to non-reclassifying banks around the introduction of the reclassification option. Additional tests reveal that the association largely stems from reclassifying banks for which reclassified assets are material and that do not fully comply with the accompanying IFRS 7 disclosure requirements. These findings suggest that fair value reclassifications mitigate financial statement transparency as perceived by capital market participants.

Our paper contributes to three different strands of the recent accounting literature. First and most obviously, we add to the evidence on determinants and economic consequences of banks' use of the IAS 39 reclassification option. Prior literature provides evidence on firm-level determinants of the reclassification choice (Paananen et al., 2012; Fiechter et al., 2017) as well as its association with capital market consequences (Paananen et al., 2012; Lim et al., 2013). We put fair value reclassification in the broader context of recapitalization measures. Despite the

potential regulatory relief, firms tend to avoid asset reclassifications if other and less visible accounting choices are available (e.g., deferred tax assets or loan loss provisions). At the same time, we disentangle the regulatory capital incentive from concurrent earnings management incentives by exploiting cross-country variation in prudential filters to explain the choice between the reclassifications of trading assets and AFS assets (see Acharya and Ryan, 2016, for a discussion of the benefits of this approach).

Second, we contribute to the literature that examines regulators' use of accounting rules to practice forbearance (Gallemore, 2019; Skinner, 2008). Our study highlights that regulators around the world used accounting regulation as a complement to other recapitalization measures during the 2008-09 financial crisis. It depends on country-specific prudential filters to what extent banks could use asset reclassifications for regulatory capital management; or more generally, the extent of forbearance was subject to a subtle interplay of supranational and country-specific features of the regulatory design. However, the use of accounting regulation for forbearance comes at the cost of potentially increased information asymmetry that banks tend to avoid if other recapitalization choices are available.

Third, we contribute to the academic discussion about the role of financial accounting and, more specifically, fair value accounting during the crisis (see, e.g., Ryan, 2008; Laux and Leuz, 2009, for an overview). Consistent with evidence from the U.S. environment (Laux and Leuz, 2010; Badertscher et al., 2012) and in contrast to theoretical predictions (Plantin et al., 2008) and allegations in the political debate, our findings suggest that the institutional subtleties of international accounting rules and bank regulation at the national level prevented fair value accounting from having accelerated the financial crisis.

2. Financial Accounting and Bank Recapitalization during the 2008-09 Crisis

2.1. The Choice of Recapitalization Measures

Until the end of the third quarter of 2008, international banks (just like their U.S. peers) experienced a substantial decline in equity with regulatory ratios getting closer to regulatory minimum thresholds. With the banking crisis having the potential to harm financial stability and give rise to a severe recession in the global economy (Reinhart and Rogoff, 2009), governments and regulators worldwide had clear incentives to intervene and, ultimately, avoid bank failures. In general, there are multiple options on how to avoid these bank failures.

The first option is a direct recapitalization of banks, either through the injection of new capital or a reduction in RWAs. Since markets dried up during the 2008 crisis and traditional funding sources were no longer available for banks, governments and central banks provided direct support in many different forms such as capital injections, guarantees, or asset purchases (BIS, 2009, and ECB, 2009, provide an overview of these measures in different countries). The effect of these recapitalization measures is ambiguous. On the one hand, government aid is associated with a subsequent increase in banks' risk-taking (Duchin and Sosyura, 2014). On the other hand, early policy interventions that are directed at restoring bank capital help avoid a spillover of the crisis from the financial sector to the real economy (Homar and van Wijnbergen, 2017) and foster economic growth in the long run (Laeven and Valencia, 2013).

The second option is regulators practicing forbearance, i.e., not imposing any sanctions on banks that are at risk of failing to meet regulatory requirements such as minimum capital ratios. These regulatory ratios are derived from financial reports. Banks' financial accounting choices are therefore closely associated with the willingness and ability of regulators to forbear (Gallemore, 2019; Skinner, 2008). Banks can exploit flexibility in accounting standards and

opportunistically manage equity ratios upwards, for example, by under-provisioning for future loan losses or by recognizing deferred tax assets. The resulting lack of transparency about the bank's economic fundamentals will provide regulators with leeway not to intervene. While prior evidence indeed suggests that a substantial part of bank recapitalization during the financial crisis came from retained earnings, i.e., reported net income rather than newly injected capital (Cohen and Scatigna, 2016), it is an open question whether these earnings signal new economic strength or result from opportunistic accounting choices.

Against this background, bank managers faced a trade-off between the different options to avoid costly regulatory sanctions up to a bank closure. In particular, bank managers had to decide whether to complement government support with accounting measures or whether discretionary accounting served as a substitute to government support. On the one hand, government support certainly reduced the urgency to engage in opportunistic earnings management. On the other hand, the support also came along with greater government involvement in bank monitoring (irrespective of state ownership). Prior literature shows that such a government involvement is associated with lower levels of transparency and efficiency (Bushman et al., 2004; Morck et al., 2011), which leads us to predict that discretionary accounting measures such as asset reclassifications are a potential complement to government support.

Bank managers have different alternatives in their choice of discretionary accounting measures aimed at bolstering the book value of equity (as an input into regulatory ratios). The introduction of the reclassification option in October 2008 is one of these options in that it provided banks with substantial discretion to forgo asset write-downs in the short run and, thus, manage the book value of their equity upwards. However, the option is different from other accounting choices because its use is accompanied by extensive disclosure requirements that

make the underlying discretion much more transparent than in, for example, under-provisioning for future loan losses or tax deferrals. Put differently, the use of the reclassification option is a much more visible accounting choice. Consistent with evidence on managers' preferences for more opaque earnings management (Kothari et al., 2016) and on opacity facilitating rescue measures by regulators and governments (Gallemore, 2019), we predict that managers tend to rely on less visible accounting discretion and only turn to asset reclassifications if these alternative choices are not easily available.

2.2. Institutional Background: The IAS 39 Reclassification Option

On October 13, 2008, the IASB issued amendments to IAS 39 and IFRS 7. The amendments allow companies reporting under IFRS to change the measurement basis of financial assets. Accounting for financial assets under IAS 39 uses three different measurement bases: fair value through profit and loss (P&L), fair value through other comprehensive income (OCI), and amortized cost (e.g., Spooner, 2007). The original IAS 39 only allowed the reclassification of AFS assets measured at fair value through OCI into the held-to-maturity (HTM) category measured at amortized cost. The amendments introduced four additional types of reclassifications 'in rare circumstances' (such as the 2008 financial crisis): firms could now reclassify trading assets measured at fair value through P&L (except for derivatives) into the AFS, HTM, or Loans & Receivables (L&R) category, and AFS assets (except for equity securities) into the L&R category.

For the five types of reclassifications, we can distinguish between three potential effects on the recognition of gains and losses and, correspondingly, the measurement of shareholders' equity in later periods (see Appendix I for an overview). First, reclassifications from the trading category into the HTM or L&R category potentially affect both future net income and

9

shareholders' equity. When the asset is reclassified, fair value gains and losses cease to be recognized in P&L and, thus, in equity, unless a fair value loss also triggers an impairment write-down. Second, reclassifications from the trading category into the AFS category potentially affect future net income and OCI but not shareholders' equity. After reclassification, fair value changes are reported in OCI rather than in P&L (again, unless the asset becomes impaired). Since accumulated OCI is part of shareholders' equity (typically separately reported as a revaluation reserve), these fair value changes continue to be included in equity. Third, reclassifications from the AFS category into the L&R or HTM category potentially affect future equity and OCI but not net income. After reclassification, fair value gains and losses will no longer be reported in OCI. Thus, any unrecognized fair value changes after the reclassification (i.e., those that do not trigger an impairment) will also no longer be included in accumulated OCI as part of shareholders' equity.

The overview indicates that the application of the IAS 39 impairment rules is critical for the magnitude of the reclassification effect on a firm's future income and equity. The IAS 39 impairment rules follow an incurred loss model that requires objective evidence relating to a specific loss event (e.g., an actual default or a significant change in the credit rating). A decrease in fair value does not lead to an impairment write-down if it is not accompanied by such a specific loss event. Generally speaking, impairment write-downs therefore show up in P&L later than fair value declines.

Until November 1, 2008, managers could reclassify financial assets retroactively, taking effect as of any chosen date between July 1, 2008 and October 31, 2008. The transitional rule enabled a bank whose reporting period (or interim period) ended before November 1, 2008, but that had not yet released its financial statement when the amendment became effective, to fully assess the reclassification effects on net income and equity during this period. In this situation, a

bank was able to make the reclassification decision with hindsight by comparing fair values of financial assets at the end of the reporting period with prior fair values going back to July 1, 2008. In later periods, such a perfect anticipation of the accounting effect was no longer possible.

The IASB made clear that it adopted the reclassification amendment to ensure the simultaneous introduction of disclosure requirements on reclassification details (House of Commons, 2008). These disclosure requirements are part of IFRS 7. If a reclassifying bank complies with the 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 decision is effectively a choice between disclosing fair value information in the footnotes versus recognizing changes in P&L or in OCI, provided the bank complies with the disclosure rules.

To the extent that prudential supervision is linked to financial reporting, the accounting measurement of equity also affects regulatory capital. Therefore, when reclassifications change shareholders' equity, they also potentially change the regulatory capital that banks report to the responsible supervisory authorities. The existence and magnitude of the impact depends on country-specific regulation that varies in the extent to which unrealized fair value changes can be included in regulatory capital (prudential filters).

3. The Role of Asset Reclassifications in Bank Recapitalization

3.1. Sample and Data

Our sample selection proceeds as follows: We identify 702 financial firms with publicly listed stocks that are classified as IFRS users for financial year 2008 in the databases BvD Bankscope, Worldscope (Industry Groups 102 and 127), and Compustat Global (Industry Groups

11

4310 and 4320).[1] We exclude 264 firms that are not covered by Thomson Reuters Datastream, our source for capital market data. We exclude another 112 firms 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. Finally, we exclude another 24 firms that do not publish a financial report in English, French, German, or Chinese on their websites. This procedure yields a final sample of 302 banks from 39 countries.

For this sample, we collect detailed information on country-specific capital regulation (see Appendix II), bank-specific recapitalization measures under the Basel II Framework (see Appendix III) as well as other bank-specific accounting and capital market data (see Table 2).

3.2. Recapitalization Measures

We gauge the economic significance of asset reclassifications by benchmarking the magnitude of realized capital savings against other recapitalization measures. Regulators have assessed the outcomes of some of these emergency measures during the 2008 crisis (e.g., BIS 2009, ECB, 2009, 2010).[2] Our analysis follows the spirit of these reviews and complements the evidence with the outcomes of accounting-based measures.

The key outcome from the perspective of prudential regulation are banks' capital ratios (the tier 1 ratio and the total capital ratio) which define the threshold for regulatory interventions. To

---

[1] We modify the coding of the accounting standards 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; 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 declared that FRS 139 and FRS 7, which are the equivalent standards to IAS 39 and IFRS 7, were not effective before 2010.

[2] The support measures taken by governments and central banks can be classified into (1) guarantees for bank liabilities, (2) recapitalization measures, and (3) measures to provide relief from legacy assets (asset support/insurance). While capital injections increase the capital base (nominator), asset guarantees/insurances as well as asset purchases lower RWAs (denominator) of regulatory capital ratios. See ECB (2010) for an overview of the amounts committed and extended under national schemes, as well as other ad hoc measures.

increase eligible capital in the nominator of these ratios, banks can raise additional capital, stop

capital outflows (e.g., by cutting dividends), or change the accounting measurement of the

position. To decrease RWAs in the denominator of these ratios, banks can sell assets with high

risk weights or shift portfolios to decrease risk weights. The different components of capital

under the Basel II framework are the starting point for our analysis of the different

recapitalization measures as Appendix III illustrates. We describe the data sources, the

methodology, and, if necessary, the underlying assumptions that we use to quantify a bank's

capital savings in 2008 and 2009. Our calculation also controls for country-specific filters that

exclude certain accounting choices from regulatory capital (i.e., unrealized gains and losses from

AFS assets and deferred tax assets, see Appendix II). We condense this information into the

eight methods that turned out to be most relevant for the protection of regulatory capital during

the 2008 crisis. These methods are either accounting-based or real capital measures.

We identify four real capital measures. First, banks can augment capital by the issuance of

equity instruments on public markets or by governmental capital injections (*Capital Injection*).

Depending on the characteristics of the instruments, capital injections can generally increase all

tiers of regulatory capital. However, tier 1 eligible instruments have shown to be the dominant

source of funding at this time (ECB, 2010). We include the sale of treasury shares into the

Capital Injection variable, although these transactions occurred very infrequently in 2008.

Second, banks can cut dividends to protect capital (*Dividend Cuts*). We identify dividend cuts by

benchmarking the 2008 dividend against the average dividend from the three previous periods.

Third, banks can realize gains by selectively selling assets that are not measured at fair value

through P&L. The realization of these hidden reserves through real economic transactions

increases retained earnings and, subsequently, tier 1 capital (*Cherry-Picking*; e.g., Dong and

Zhang, 2018). Again, we benchmark gains and losses from the sale of securities in 2008 against

the three previous periods. Fourth, banks can achieve the reduction of the denominator of the

capital ratio by reducing the asset base and by shifting assets from asset classes with high risk

weights to those with lower risk weights (*RWA Reduction*). During the crisis, central banks and

governments supported the reduction of RWAs with asset relief programs that gave banks the

option to transfer distressed or illiquid assets with high capital charges to separate institutions

("bad banks"). We therefore compare the average risk weight in 2008 with the average risk

weight for the pre-crisis period 2005 to 2007 to identify the banks in our sample that have

decreased the overall riskiness of their assets.

In terms of accounting-based measures, an extensive stream of literature examines whether

banks exercise their accounting discretion to manage regulatory capital (Beatty et al., 1995). We

focus on four accounting choices. First, loan loss provisions (LLP) have received particular

attention because they constitute a substantial portion of banks' total accruals and require a

significant amount of judgment. To calculate the resulting capital savings, we estimate abnormal

LLP by using standard regression techniques (i.e., the portion of LLP that is higher (or lower)

than the provision that we would expect from banks' aggregate provisioning behavior during the

sample period). A negative residual implies under-provisioning. The capital saving is calculated

as [Residual $\times$ Total Assets] $\times$ (1– Tax Rate) for tier 1 capital (*Lower LLP*). Second, we use the

total amount of deferred taxes recognized in the income statement. The recognition of deferred

tax assets arises from the prospects of converting current losses into future tax savings. IAS 12

restricts the recognition of these assets to circumstances where it is probable that future taxable

profit becomes available. In a period of severe crisis such as the one in 2008, the very existence

of deferred tax assets points to accounting discretion (Skinner, 2008). In assessing the impact of

deferred tax assets on regulatory capital, we have to take into account country-specific prudential

filters because some countries fully or partially exclude deferred tax assets from regulatory

capital (*Deferred Tax Assets*). Third, we observe banks' recognition of any non-recurring revenues, defined as revenues that are unlikely to recur in the near future (and thus, compared against a benchmark of zero), and that are discretionarily disclosed in extraordinary items under IFRS (*Non-Recurring Revenues*).

Fourth, we quantify capital savings from reclassifications (*Reclassifications*). The regulatory capital effect of IAS 39 reclassifications hinges on whether banks compute regulatory capital based on IFRS or local GAAP accounting rules. While most countries in our sample mandate the use of IFRS, three European countries were still relying on local GAAP in 2008 (Denmark, Hungary, and Norway) and two countries left the choice to the bank (Austria and Germany). In these latter cases, mandatory IAS 1 footnote disclosures make the choice observable. For banks that use local GAAP equity as the starting point, IAS 39 reclassifications do not play into regulatory capital at all. When IFRS group accounts are used to compute regulatory capital, the regulatory treatment of fair value changes is different across measurement categories (held for trading vs. AFS), asset types (loans vs. debt securities vs. equity securities), and the sign of the change (gains vs. losses). These differences manifest in (1) whether fair value changes are included in regulatory capital, and if so, (2) to what extent (filtered vs. unfiltered), and (3) where they are included (tier 1 vs. tier 2 capital). In all our sample countries, unrealized gains and losses from trading assets (net of deferred taxes) are fully reflected in tier 1 capital via retained earnings. The most substantial differences across countries arise from the treatment of unrealized gains and losses from AFS assets that are recognized in accumulated OCI (i.e., AFS revaluation reserves), provided that the fair value losses do not trigger an impairment write-down at the same time. There exist different rules for equity securities, debt securities, and loans. We use the rules for debt securities in our analyses because equity securities are not eligible for reclassification into amortized cost categories and the rules for loans do not vary considerably across countries

(i.e., all countries in our sample exclude unrealized fair value gains and losses of AFS loans entirely from regulatory capital). Appendix II presents a summary of the regulatory treatment in our sample countries.

3.3. Descriptive Evidence

Table 1, Panel A, presents the savings of tier 1 regulatory capital that we estimate for each of the eight methods accumulated over all sample banks.[3] In 2008, the aggregate recapitalization of our sample banks amounted to EUR 318.3bn. 82 of our 302 sample banks achieve capital savings through reclassifications.[4] We estimate the effect of these reclassifications on regulatory capital to be about EUR 19.1bn for financial year 2008 (6.0% of total). This outcome is relatively at par with the effects of other existing accounting-based measures such as banks' recognition of deferred tax assets (EUR 23.7bn, used by 104 banks) and the reporting of lower loan loss provisions (EUR 8.0bn, used by 33 banks). The recognition of gains from selling assets with hidden reserves (cherry picking, EUR 1.0bn) as well as the reporting of one-time effects (non-recurring revenues, EUR 3.6bn) contribute little, which is not surprising given the depressed level of asset prices during the crisis. The aggregate impact of reclassifications and the other accounting-based measures is relatively small when compared to the effects of real capital measures (e.g., capital injections of EUR 137.5bn, used by 145 banks; reduction in RWAs of EUR 75.5bn, used by 118 banks; dividend cuts of EUR 51.0bn, used by 131 banks). Taken

---

[3] These numbers are estimates based on the availability of public information and subject to the assumptions that we apply for each measure. In Table 1, we provide the number of banks for which we have sufficient data available to estimate the capital savings, and the number of banks that actually realized capital savings using a specific method (and for which we accumulate capital savings into our aggregate statistics).

[4] We note that a further 42 banks in our sample use the reclassification option without achieving any regulatory capital savings through this accounting choice. This observation suggests that accounting incentives other than regulatory capital management also play into the reclassification choice, most likely earnings management motivations.

together, the evidence suggests that accounting discretion can complement but in most situations not replace real measures to safeguard regulatory capital.

Panel A also shows the extent to which banks use the eight recapitalization measures in the following financial year 2009. The overall picture is relatively similar to 2008. Fair value reclassifications are the most notable exception. The impact of reclassification on regulatory capital drops to almost zero (EUR 0.46bn, 0.2% of total). Hence, in contrast to the other accounting-based and real capital measures, the reclassifications provide only for a one-time relief and are hardly used by any bank in later periods.[5] Since the 2009 accounting choice only differs in the lack of the retroactive option from the 2008 choice, we attribute the more widespread use of the option in 2008 to the benefits of forgoing fair value write-downs with hindsight (i.e., without the uncertainty of a reversal in asset values and potentially foregone gains).

While capital savings from reclassifications seem modest in aggregate, Panel B of Table 1 shows that these savings vary substantially across banks with a mean (median) of 0.24% (0.11%) of RWAs and with a few banks in the upper decile of the sample distribution achieving capital savings of more than 100 basis points. Hence, at least for a few banks, reclassifications apparently help realize an economically meaningful recapitalization. In contrast, average capital savings through lower loan loss provisions are relatively large at the bank-level (mean: 0.89%; median: 0.21%). These statistics in combination with the relatively low aggregate numbers for *Lower LLP* in Panel A illustrate that this method generates large capital savings for the few banks that were actually able to engage in under-provisioning during the downturn. Consistent with the

---

[5] We check the following years until 2012 and find no evidence of further usage of reclassifications.

aggregate numbers, the statistics for the accounting-based measures are smaller than those for real capital measures.

Panel C of Table 1 shows that these relations across recapitalization measures are similar for bank-level statistics on net income savings (for those measures that affect income). The average impact of reclassifications on income is modest with an increase of 8 (3) basis points in ROA at the mean (median). Again, a few banks realize a greater effect (e.g., 31 basis points at the 95th percentile) pointing to reclassifications as a potential tool not only for recapitalization but also for bolstering accounting earnings.

4. The Reclassification Choice and Interactions with other Recapitalization Measures

4.1. Research Design

We use multiple regressions to examine how banks' reclassification choice interacts with the other recapitalization measures described in the previous section. The analysis focuses on financial year 2008 (more precisely, the financial year ending between October 2008 and September 2009). We apply a two-stage approach to model the reclassification choice. At the first stage, we estimate the probability that a bank chooses to use the reclassification option. At the second stage, we model the probability that a bank chooses to reclassify AFS assets conditional on the bank's choice to use the reclassification option. The second stage is important as it allows us to disentangle the regulatory capital incentive from concurrent earnings management incentives by exploiting cross-country variation in prudential filters.

Step 1

We use the following cross-sectional probit model to estimate the probability that a bank chooses to use the reclassification option:

P $(Reclassification = 1 \mid X_1) =$

Φ ($\beta_0 + \beta_1$ *Regulatory Capital Restriction* + β_2 *Accounting-Based Capital Measures* +

β_3 *Real Capital Measures* + β_4 *Local GAAP Regulation* + $\Sigma \beta_j$ *Controls_j*)   (1)

where Φ (z) is the cumulative normal distribution function and X_1 is the set of explanatory

variables. The dependent variable *Reclassification* is an indicator variable equal to one if the

bank reclassifies trading or AFS assets in accordance with IAS 39 in financial year 2008, and

zero otherwise.

The independent variable *Regulatory Capital Restriction* is a proxy for the potential

regulatory benefits of reclassification. This variable is defined as the difference between the

minimum tier 1 capital ratio in the bank's home country and the bank's tier 1 capital ratio (before

reclassifications) at the end of financial year 2008 in percentage points. We adjust the bank's tier

1 capital ratio for reclassification effects by adding unrecognized fair value changes of

reclassified trading assets to the numerator. We also add the portion of the unrecognized fair

value changes of reclassified AFS assets that would not have been subject to a prudential filter

had they been recognized.[6] Since banks that are closer to violating the regulatory capital

restrictions are more likely to choose the reclassification option, we predict a positive association

between *Regulatory Capital Restriction* and the dependent variable *Reclassification* (i.e., $\beta_1 > 0$).

The next set of independent variables are proxies for recapitalization measures as described

in section 3.2. *Accounting Based Capital Measures* is an indicator variable equal to one if the

bank uses accounting-based capital measures (deferred tax assets, non-recurring revenues or

lower LLP) to increase its tier 1 capital in financial year 2008, and zero otherwise. *Real Capital*

Measures is an indicator variable equal to one if the bank uses real capital measures (cherry

---

[6]   This approach is slightly imprecise if reclassifications change the risk weight of the assets in the denominator of
      the capital ratio.

picking, dividend cuts, capital injections or reduction of RWAs) to increase its tier 1 capital in financial year 2008, and zero otherwise. In additional tests, we include separate indicators for each individual accounting-based and real capital measure. All variables are set to zero for banks with missing data. Consistent with our empirical predictions in section 2.1., we expect that real measures are a complement and other, less transparent accounting-based measures are substitute to the reclassification choice (i.e., $\beta_2 < 0$ and $\beta_3 > 0$).

The independent variable *Local GAAP Regulation* is an indicator equal to one if the bank's regulatory capital is determined based on local GAAP, and zero otherwise. Since using the reclassification option under IFRS has no direct impact on regulatory capital that is determined based on local GAAP, we predict a negative association between *Local GAAP Regulation* and the dependent variable *Reclassification* (i.e., $\beta_4 < 0$).

Earnings Quality is a proxy for the quality of the bank's financial statements before the introduction of the reclassification option in 2008. We measure this variable by the relative magnitude of accruals (e.g., Leuz et al., 2003; Daske et al., 2013). The magnitude of accruals is the bank's median ratio of yearly absolute accruals to absolute cash flows from operations over financial years 1990 to 2007. 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 the variable into ranks with higher ranks representing higher reporting quality and scale the ranks on a range of -1 and 0. We predict that the reclassification choice, and its potentially detrimental effect on the perceived quality of financial statements, is more costly for banks with higher reporting quality prior to financial year 2008. We therefore predict *Earnings Quality* to be negatively associated with the dependent variable *Reclassification*.

We include the variable *% FV Assets* to control for the proportion of financial assets that are eligible for reclassification. We calculate this variable as the sum of the book values of trading and AFS assets scaled by the book value of total assets at the end of financial year 2008. We adjust the variable for reclassification effects and add unrecognized fair value changes of reclassified trading and AFS assets to the numerator and the denominator of the ratio. Since a lack of eligible financial assets precludes a bank from reclassifying, we predict the variable *% FV Assets* to be positively associated with the dependent variable *Reclassification*.

We use the variable *Zero Earnings Threshold* to control for banks' incentive to use the reclassification option to avoid reporting a negative net income. *Zero Earnings Threshold* equals one if net income before reclassifications in financial year 2008 is negative, and zero otherwise. Net income before reclassifications is calculated as reported net income adjusted for the unrecognized fair value changes of the reclassified trading assets. We predict the variable to be positively associated with the dependent variable *Reclassification*.

Since the zero earnings threshold is of particular importance for attracting funding from private depositors (Goldberg and Hudgins, 2002; Shen and Chih, 2005; Spiegel and Yamori, 2007), banks that experience a decrease in deposits are more inclined to avoid reporting a loss. We control for this incentive by including the indicator variable *Zero Earnings Threshold * Δ Deposits* that is equal to one if (1) the bank experiences a change in customer deposits (scaled by total liabilities) between financial years 2007 and 2008 that is lower than the sample median, and (2) the indicator variable *Zero Earnings Threshold* has a value of one. Otherwise, the variable equals zero. We predict *Zero Earnings Threshold * Δ Deposits* to be positively associated with the dependent variable *Reclassification*.

IIF Membership equals one if a bank is a member of the International Institute of Finance (IIF), and zero otherwise. The variable controls for the possible influence of a bank's previous lobbying activities on the reclassification choice. Since the IIF had a leading role in lobbying for reclassifications, we predict this variable to be positively associated with the dependent variable *Reclassification*.

Step 2

At the second stage, we estimate the probability that a bank chooses to use the reclassification option for AFS assets by exploiting that the regulatory treatment of fair value gains and losses from these instruments varies across countries. This variation allows for a refined test of the link between regulatory capital requirements and the reclassification choice. We use the following cross-sectional probit model:

P (*AFS Reclassification* = 1 | *Reclassification* = 1, X_2) =

Φ (δ_0 + δ_1 *AFS Prudential Filter* + δ_2 *AFS Assets*) (2)

where Φ (z) is the cumulative normal distribution function and X_2 is the set of explanatory variables.

The dependent variable *AFS Reclassification* is an indicator variable that equals one if the bank reclassifies AFS assets to amortized cost categories in accordance with IAS 39 in financial year 2008, and zero otherwise.

The key independent variable in equation (2), *AFS Prudential Filter*, accounts for cross-country differences in the extent to which AFS reclassifications potentially affect a bank's regulatory capital. *AFS Prudential Filter* is an indicator variable equal to one if the bank is subject to a prudential filter for AFS assets, and zero otherwise. The prudential filter is defined

as the proportion of the revaluation reserves (accumulated unrealized gains and losses) from AFS

debt securities that is excluded from the determination of total regulatory capital. We measure

the variable at the country level (including tax adjustments). To account for bank-specific

circumstances, we make the following adjustments: First, we use the sign of the bank's

revaluation reserves to choose the relevant filter in countries where accumulated unrealized fair

value gains and losses are treated asymmetrically (see section 3.2. for details). Second, we set

the filter to 100% if the bank does not use IFRS in the calculation of its regulatory capital. Third,

in countries where the filter is determined instrument-by-instrument, we use the filter for

accumulated losses (see Appendix II for details). Since the amount of regulatory capital that a

reclassification of AFS assets can potentially safeguard against further fair value declines is

decreasing with the magnitude of the prudential filter, we predict a negative association between

the independent variable *AFS Prudential Filter* and the dependent variable *AFS Reclassification*

(i.e., $\delta_1 < 0$).

We include the variable *% AFS Assets* to control for the proportion of AFS financial assets

that are eligible for reclassification. We calculate this variable as the sum of the book values of

AFS assets scaled by the book value of total assets at the end of financial year 2008. We adjust

the variable for reclassification effects and add unrecognized fair value changes of reclassified

AFS assets to the numerator and the denominator of the ratio. Similar to equation (1), we predict

the variable *% FV Assets* to be positively associated with the dependent variable *AFS*

Reclassification because the use of the reclassification option requires a sufficient amount of

eligible financial assets (i.e., $\delta_2 > 0$).

We estimate the cross-sectional probit models in equations (1) and (2) jointly by maximum

likelihood where the probability that a bank chooses to reclassify AFS assets in equation (2) is

conditional on *Reclassification* being equal to one (Wooldridge, 2010: 570-571). To compute the

z-statistics, we estimate robust standard errors adjusted for heteroskedasticity and clustering by country.

4.2. Results

Table 3 shows descriptive statistics for the variables used in estimation of equations (1) and (2). The mean of the dependent variable *Reclassification* illustrates that 0.411 * 302 = 124 banks reclassify trading or AFS assets in accordance with IAS 39 in financial year 2008. 72 of these banks use the reclassification option for AFS assets (mean of *AFS Reclassification* = 0.581). Table 4 presents regression results on the determinants of these reclassification choices. The table reports marginal effects at the mean (median) of all continuous (binary) independent variables.

In the estimation of equation (1), the coefficient estimate on the independent variable, *Regulatory Capital Restriction,* has the predicted positive sign and is statistically significant in all three specifications. When we include separate indicators for each individual capital measure, the marginal effect is 0.008 indicating that, all else equal, a decrease of the tier 1 capital ratio by 1 percentage point is associated with an increase in the reclassification probability of 0.8 percentage points. Thus, all else equal, a decrease in the tier 1 capital ratio by 7.186 percentage points (i.e., one standard deviation of *Regulatory Capital Restriction*, see Table 3) is associated with an increase in the reclassification probability of 5.7 percentage points. The marginal effects are even higher in the other specifications. These statistics highlight that the association between the regulatory capital restriction and the reclassification choice is economically meaningful.

The second and third specification show that the use of the reclassification option is negatively associated with the recognition of higher deferred tax assets and non-recurring revenues. At the same time, reclassifying banks are more likely to sell "cherry picked" assets, cut

dividends, and resort to capital injections. These results are in line with our prediction that banks use fair value reclassifications as a substitute to less visible accounting-based capital measures and as a complement to real capital measures.

The coefficient estimate on *Local GAAP Regulation* has the predicted negative sign and is statistically significant in two of the three specifications. The coefficient estimates on the other control variables also have the predicted signs and are statistically significant in all specifications. For example, the coefficient estimate on *Zero Earnings Threshold * Δ Deposits* has the predicted positive sign suggesting that banks that experience a decrease in deposits are more likely to use fair value reclassifications to avoid reporting a loss.

In the estimation of equation (2), the coefficient estimate on *AFS Prudential Filter* is negative as predicted and statistically significant in all specifications. The marginal effect is -0.159 in the first specification indicating that, all else equal, the probability of reclassifying AFS assets of banks from countries with prudential filters is 15.9 percentage points lower relative to banks from countries without prudential filters (conditional on these banks using the reclassification option at all). This result corroborates our evidence on the link between regulatory capital requirements and the reclassification choice.

Taken together, the results in Table 4 are consistent with our predictions. In particular, we find evidence that reclassifying banks are at greater risk of violating regulatory capital restrictions suggesting that fair value reclassifications are being used for regulatory capital management. Our analysis also suggests that banks, when complementing real capital measures by accounting measures, tend to prefer accounting choices that require less visible disclosures than fair value

reclassifications. These findings are in line with the notion that reclassifications are associated with informational costs that banks weigh off against potential regulatory benefits.[7]

5. Stock Market Returns around Reclassification Announcements

5.1. Research Design

In the second part of our empirical analysis, we perform two sets of tests to examine how capital markets perceive the overall impact (direction) and magnitude (extent of reaction) of reclassifications (i.e., whether reclassification announcements are associated with any meaningful abnormal stock returns). The first set of tests analyzes stock price reactions to the regulatory announcement of the reclassification amendments. The second set of tests examines stock price reactions to banks' announcements of their actual reclassification choice subsequent to the introduction of the reclassification option.

Stock market reactions to reclassifications are likely to be driven by two opposing effects. On the one hand, abnormal stock returns can become negative if market participants view reclassifications as a signal that a bank is masking even more critical financial difficulties (e.g., André et al., 2009). On the other hand, reclassifications entail potential regulatory benefits that, if economically significant, stock prices will reflect (see section 4). Ultimately, it is an empirical question which effect prevails.

---

[7] In untabulated tests, we follow Fiechter et al. (2017) and examine whether European banks domiciled in countries with no fail history are less likely to use the reclassification option. Using a subsample of 171 European banks, 70 of which are from countries with no fail history, we do not find evidence in this regard. More importantly, our main results continue to hold suggesting that the too-important-to-fail status of our sample banks is not an alternative explanation for our findings.

Regulatory Announcement

The first set of tests comprises cross-sectional regressions with the following basic specification:

Abnormal Return (13/14 October 2008) =

β_0 + β_1 *Expected Reclassification* + β_2 *Regulatory Capital Restriction (Median Split)* +

β_3 *Expected Reclassification * Regulatory Capital Restriction (Median Split)* + ε (3)

The dependent variable is the abnormal stock return around the regulatory announcement introducing the reclassification option on October 13 and 14, 2008.[8] Specifically, the abnormal stock return is the coefficient estimate resulting from bank-specific time-series regressions of daily log-returns on the DJ STOXX 1800 market index[9] and event dummies for October 13 and 14, 2008. These regressions are estimated over the period October 1, 2008 to December 31, 2008.

We include the following independent variables: *Expected Reclassification* is a proxy for the unobservable market expectation of a bank's eventual reclassification choice. We use two different specifications for this proxy. In the first specification, *Expected Reclassification (Probit Model)* is an indicator variable equal to one if the fitted probability from the reclassification determinants model in Table 4 (based on the full sample and including aggregate recapitalization measures) is higher than 0.5, and zero otherwise. In the second specification, *Expected*

---

[8] 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 (East Asia, Australia) had already closed. We therefore use the cumulative abnormal return on October 13 and 14, 2008 to ensure that we take into account the stock market reaction in all sample countries.

[9] 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 index also includes banks, we cannot rule out that part of the return effect we aim to detect is picked up by the market index control variable. If at all, this impact is small as the DJ STOXX Global 1800 contains only 64 of our sample banks (as of December 2008).

Reclassification (Perfect Foresight) is an indicator variable equal to one if the bank eventually uses the reclassification option in financial year 2008, and zero otherwise. *Regulatory Capital Restriction (Median Split)* indicates banks with relatively strong incentives to manage their regulatory capital. This variable is equal to one if the difference between the minimum tier 1 capital in the bank's home country and the bank's tier 1 capital ratio at the end of financial year 2008 (adjusted for reclassification effects) is below the sample median, and zero otherwise.

We estimate equation (3) using the weighted portfolio approach by Sefcik and Thompson (1986) to account for cross-sectional heteroskedasticity and cross-correlation of the residuals.

Bank Announcements

In the second set of tests, we analyze cross-sectional determinants of stock returns around bank-specific announcements. We search Dow Jones Factiva, LexisNexis, and firm websites (especially the Investor Relations sections) to identify the first public announcement of the bank's reclassification choice after the adoption of the reclassification amendments. For reclassifying banks, we search for the first specific reclassification announcement prior to the publication of the annual financial statement. These announcements can take various forms (e.g., as part of a separate press release, an interim report, or a pre-earnings announcement). If information on a specific announcement is not available, we define the official filing date of the annual financial statement containing footnote disclosures on the reclassifications as the reclassification announcement date. For non-reclassifying banks, we use the first earnings announcement date following the reclassification amendment. The basic regression specification is as follows:

Abnormal Return (Bank Announcements) =

$$\beta_0 + \beta_1 \text{ } \textit{Reclassification} + \beta_2 \text{ } \textit{Regulatory Capital Effect} + \Sigma \text{ } \beta_j \text{ } \textit{Controls}_j + \varepsilon \quad\quad\quad (4)$$

The dependent variable is the abnormal stock return around the bank-specific announcement. We measure the abnormal stock return as the cumulative prediction error from the market model during the announcement window [0, +1], with day 0 being the day of the reclassification announcement (for reclassifying banks) or the corresponding earnings announcement (for non-reclassifying banks). We estimate the market model with daily log-returns for the intervals [-60, -11] and [+11, +60] relative to the announcement day 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).

We include the following independent variables. *Reclassification* is an indicator variable equal to one if the bank uses the reclassification option in financial year 2008, and zero otherwise. *Regulatory Capital Effect* measures the realized impact of reclassifications on regulatory capital. We measure this variable as the percentage point difference between the tier 1 capital ratio as reported and the tier 1 capital ratio excluding reclassification effects at the end of financial year 2008. The variable equals zero for non-reclassifying banks.

As a control variable, we include *Earnings Surprise* to capture the impact of unexpected earnings on stock prices. This indicator variable is equal to one if the announced earnings number is higher than the most recent average analyst forecast before the announcement, and zero otherwise. If the reclassification announcement does not coincide with an earnings announcement, the variable is equal to zero. We predict *Earnings Surprise* to be positively associated with the dependent variable.

We estimate equation (4) as a cross-sectional OLS regression. The t-statistics are based on robust standard errors adjusted for heteroskedasticity.

5.2. Results

Regulatory Announcement

Table 5 presents results from the estimation of equation (3) related to the cross-sectional

determinants of abnormal stock returns around the regulatory announcement on October 13 and

14, 2008. In both specifications, the coefficient estimate on *Expected Reclassification* is negative

and statistically significant. The perfect foresight model, for example, suggests that banks that

will eventually use the reclassification option experience an abnormal stock return around the

regulatory announcement that is 1.1 percentage points lower (β_1 = -0.011, t-statistic = -1.71)

compared to non-reclassifying banks. In the model that uses fitted probabilities from our

determinants analysis, the negative association between the abnormal stock return and *Expected*

Reclassification is even more pronounced (β_1 = -0.025, t-statistic = -2.82). The coefficient

estimate on the interaction term *Expected Reclassification * Regulatory Capital Restriction*

(Median Split) is positive but not statistically significant at conventional levels in both

specifications (e.g., β_3 = 0.010, t-statistic = 1.13 in the perfect foresight model). Hence, the

negative market reaction to the regulatory announcement is slightly less pronounced for banks

with relatively strong regulatory incentives (see also the additional test at the bottom of the table).

However, we acknowledge that our tests are confounded by other economic events that

coincided with the regulatory announcement of the reclassification amendment (see Acharya and

Ryan, 2016, for a detailed discussion). For example, on October 13, the Financial Times reported

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. These events are likely to be correlated with the probability of using the reclassification

option given our evidence in the previous section that reclassifications serve as a complement to real corrective actions such as capital injections.

Bank Announcements

Table 6 presents results from the estimation of equation (4) related to the cross-sectional determinants of abnormal stock returns around bank-specific announcements of the actual reclassification choice. Since these announcements are spread over the period October 2008 to June 2009, the analysis is less susceptible to confounding events. We use a slightly smaller sample of 117 reclassifying and 161 non-reclassifying banks in the first specification, because we cannot identify the relevant announcements for the remaining sample banks. In the second specification, we further reduce the sample by examining announcements made before February 13, 2009. This is the median announcement date for reclassifying banks yielding a subsample of 58 reclassifying banks and 121 non-reclassifying banks. In the third specification, we focus on announcements made before the option for a retroactive application of the reclassifications expired on October 31 (13 reclassifying and 79 non-reclassifying banks). We predict stock market reactions in the latter two specifications to be more pronounced because the retroactive option potentially increases the regulatory benefits from reclassifications. Furthermore, we run the same three specifications on the subset of reclassifying banks to address potential concerns that non-reclassifying banks are an inappropriate control group in this analysis.

The coefficient estimate on *Reclassification* (*Regulatory Capital Effect*) has the predicted negative (positive) sign and is statistically significant in the second and third specification, that is, when focusing on the early bank announcements. These estimates are also economically large. For example, the third specification suggests that banks with no regulatory benefits experience an abnormal stock return around the bank-specific announcement that is 6.5 percentage points lower

31

compared to non-reclassifying banks. The positive coefficient estimate on *Regulatory Capital Effect* shows that this negative association is attenuated for banks that achieve regulatory capital savings through reclassifications and that this attenuation increases with the magnitude of these savings. The last three specifications focus on reclassifying banks and confirm that abnormal stock returns around early bank announcements increase with the reclassification effect on regulatory capital. However, it is important to note that the significant results in Table 6 are driven by a small subset of sample banks that announced their reclassification choice relatively early and, thus, were most likely to benefit from the retroactive application.[10] The coefficient estimate on the control variable *Earnings Surprise* is positive in all specifications and close to statistical significance in most specifications.

Overall, our analysis of stock market reactions provides evidence of regulatory benefits offsetting the economic costs of the reclassification choice for a few banks.

6. Reclassification Disclosures and Bid-Ask Spreads

6.1. Research Design

In the final part of our empirical analysis, we examine whether and under which conditions reclassifying banks experience an increase in information asymmetry after their reclassification announcements. We follow related literature (e.g., Leuz and Verrecchia, 2000; Flannery et al., 2013) and use the bid-ask spread as a proxy for information asymmetry among equity investors. The basic regression specification is as follows:

---

[10] In additional but untabulated tests, we measure *Regulatory Capital Effect* with a median split indicator variable. This variable is equal to one if the continuous difference is higher than the sample median, and zero otherwise. The regressions do not yield statistically significant coefficient estimates on *Reclassification* or *Regulatory Capital Effect*. These results are also consistent with our interpretation that only a small subset of banks were able to draw economically meaningful regulatory benefits from the reclassification option.

Log(Bid-Ask Spread) =

$\beta_0 + \beta_1$ *Post-Reclassification* $+ \beta_2$ *Post-Reclassification * Complete Disclosure +*

$\Sigma \; \beta_j$ *Controls$_j$ +* ε (5)

In this specification, we measure all variables at the bank-week level. The estimation period is from July 1, 2008 to June 30, 2009 (i.e., we include each bank with a maximum of 52 weekly observations).

The dependent variable is the median of the daily closing bid-ask spread (i.e., the difference between the closing bid and closing ask price divided by the midpoint) over the respective bank-week. We use the natural logarithm of the bid-ask spread to adjust for the skewness of the raw values.

The independent variables are as follows: *Post-Reclassification* is an indicator variable equal to one for all weeks starting with the first week during which the respective bank announced a reclassification, and zero otherwise. For non-reclassifying banks, the indicator variable equals zero throughout the sample period. Consistent with the observation that capital market participants voiced strong concerns that financial statements of reclassifying banks would be less transparent (see introduction), we predict that reclassifying banks experience an increase in bid-ask spreads (i.e., $\beta_1 > 0$).

Complete Disclosure is a time-invariant indicator variable equal to one for reclassifying banks that are fully compliant with the corresponding IFRS 7 disclosure requirements for financial year 2008, and zero for reclassifying banks that are not fully compliant.[11] For non-

---

[11] We note that only 42 of the 124 reclassifying banks are fully compliant with the IFRS 7 disclosure requirements suggesting that the majority of reclassifying banks chooses not to be entirely transparent about their accounting choice.

reclassifying banks, *Complete Disclosure* equals zero throughout the sample period. To the

extent that stock investors interpret missing reclassification disclosures as an adverse signal (e.g.,

about the assets' quality, their eligibility for reclassification, or their non-impairment), we predict

the increase in bid-ask spreads to be muted for banks that provide complete disclosures about

their reclassification choice (i.e., $\beta_2 < 0$).

As control variables, we include *Share Turnover* (defined as the average daily share turnover

over the respective bank-week), *Market Value* (defined as the median of the daily closing market

value over the respective bank-week), and *Return Variability* (defined as the standard deviation

of daily stock returns over the respective bank-week). For all control variables, we use the

natural logarithm to adjust for the skewness of the raw values. We predict *Share Turnover* and

Market Value to be negatively associated, and *Return Variability* to be positively associated with

the dependent variable (e.g., Leuz and Verrecchia, 2000; Flannery et al., 2013).

In an additional test, we assess whether the association between bid-ask spreads and

reclassification choices varies with the materiality of the reclassifications. We enhance the basic

regression specification as follows:

Log(Bid-Ask Spread) =

β_0 + β_1 *Post-Reclassification*+ β_2 *Post-Reclassification * Complete Disclosure* +

β_3 *Post-Reclassification * Regulatory Capital Effect (Median Split)* +

β_4 *Post-Reclassification * Complete Disclosure * Regulatory Capital Effect (Median Split)* +

Σ β_j *Controls$_j$* + ε (6)

Regulatory Capital Effect (Median Split) is our proxy for the materiality of the

reclassification and defined as a time-invariant indicator variable. For reclassifying banks, the

variable equals one if the difference between tier 1 capital as reported and tier 1 capital excluding

reclassification effects is above the median across reclassifying banks in our sample at the end of

financial year 2008, and zero otherwise. For non-reclassifying banks, *Regulatory Capital Effect*

(Median Split) equals zero throughout the sample period. All other variables are the same as in

equation (5). We predict that (1) reclassifying banks experience a particularly large increase in

bid-ask spreads when reclassifications are material (i.e., $\beta_3 > 0$) and that (2) the association

between material reclassifications and bid-ask spreads is less pronounced for banks that provide

complete disclosures (i.e., $\beta_4 < 0$).

We estimate equations (5) and (6) as panel regressions with bank and week fixed effects. We

calculate robust standard errors adjusted for heteroskedasticity and clustering by bank.

6.2. Results

Table 7 presents results from the estimations of equations (5) and (6). The sample comprises

14,502 bank-weeks. In the estimation of equation (5), the coefficient estimate on *Post-*

Reclassification is positive ($\beta_1 = 0.220$) and statistically significant (t-statistic = 2.89). In

contrast, the coefficient estimate on *Post-Reclassification * Complete Disclosure* in the second

specification has a negative sign ($\beta_2 = -0.242$, t-statistic = -2.81). The additional test at the

bottom of the table reveals that the sum of the two coefficient estimates is statistically

insignificant ($\beta_1 + \beta_2 = -0.022$, t-statistic = -0.44). These results are in line with our expectation

that reclassifying banks experience an increase in bid-ask spreads relative to non-reclassifying

banks and that this increase is attenuated for banks that provide complete disclosures about their

reclassification choice. Figure 1 illustrates these trends by plotting weekly averages of bid-ask

spread residuals for non-reclassifying banks, reclassifying banks with complete disclosure and

reclassifying banks with incomplete disclosure, respectively. The estimation of equation (6)

shows that the increase in bid-ask spreads is particularly pronounced for – and actually confined

to – banks with material reclassifications and incomplete disclosure (see additional test at the bottom of the table: $\beta_1 + \beta_3 = 0.474$, t-statistic $= 3.66$). The coefficient estimates on the control variables *Log(Share Turnover)*, *Log(Market Value)* and *Log(Return Variability)* have the predicted signs and are statistically significant in all specifications.

Taken together, the results of the bid-ask spread analysis are consistent with the notion that fair value reclassifications mitigate financial statement transparency as perceived by capital market participants, unless banks provide additional disclosure about their reclassification choice.

7. Conclusion

This paper examines to what extent reclassifications of financial assets out of fair value categories provided banks with regulatory relief at the peak of the financial crisis in 2008. We show that stock markets react negatively to banks' reclassification announcements. Consistent with investors expecting some regulatory benefits, these reactions are muted if the reclassifications help a bank avoid regulatory capital reductions. We also find evidence for informational costs and document a positive association between banks' bid-ask spreads and the reclassification choice for those banks that do not provide complete disclosures about the unrecognized fair value changes.

Taken together, the evidence in this paper is consistent with the reclassification choice being a trade-off between regulatory benefits and informational costs. However, we also observe that several banks have used the reclassification option even in the absence of any regulatory benefits. The incentives for these banks likely stem from the increase in reported earnings and are less clear, especially because even less than perfect disclosures generally enable bank analysts to adjust earnings for any reclassification effect. Bank auditors indicated in private interviews that managers tended to use any opportunity to stop the downward spiral of bad news right at the peak

of the financial crisis. Fair value reclassifications have thus had the potential to be one of the circuit breakers that regulators at this time urgently attempted to set up.

Under this view, fair value reclassifications have been part of a broader strategy to calm financial markets and stabilize the financial system. In a downward spiral, it is inherently difficult, if not impossible, to assess ex ante which individual measure will eventually emerge as an effective circuit breaker. Therefore, politicians and regulators have almost simultaneously put in place multiple mechanisms and accounting regulation has been one of these mechanisms. This latter view, while hard to pin down, is at least consistent with our overall benchmarking of fair value reclassifications against other recapitalization measures. Here, we find that accounting measures, while being substantially smaller in the magnitude of their impact, tend to complement real corrective actions such as capital injections, RWA reductions, or dividend cuts.

History has seen other precedents where accounting regulation has been used as a means for regulatory forbearance (Skinner, 2008). However, despite its modest impact on the desired regulatory outcomes, our evidence implies that the change in accounting rules during the 2008 crisis came at some short-term cost of lower transparency for international banks. Our findings suggest that banks have anticipated these costs and only turned to fair value reclassifications when less transparent accounting options were not available. Such a pecking order of accounting options is also in line with the notion that managers have more pronounced transparency concerns in times of crisis (e.g., Lang et al., 2012). In an international environment, where non-compliance with disclosure requirements is much more critical than in the U.S. (e.g., Street and Gray, 2002; Mechelli, 2009; Glaum et al., 2013), the drawbacks of intervening into accounting regulation for purposes of prudential supervision are thus potentially substantial.

APPENDIX I

Reclassification Effects by Reclassification Type

Reclassification Effect on	Reclassification Type		
	Trading to HTM/L&R	Trading to AFS	AFS to HTM/L&R
Profit and Loss	Yes	Yes	No
Shareholder's Equity	Yes	No	Yes
Tier 1 Capital	Yes	Country-Specific Capital Regulation	Country-Specific Capital Regulation
Tier 2 Capital	No	Country-Specific Capital Regulation	Country-Specific Capital Regulation

This table illustrates how potential reclassification effects on profit and loss, shareholder's equity and regulatory capital vary by reclassification type. A prerequisite for these effects to materialize is that fair value losses after reclassification do not trigger an impairment. Appendix II provides details on capital regulation by country that determines how reclassifications from and to the AFS category affect regulatory capital.

APPENDIX II

Capital Regulation by Country

Country	Regulatory Authority	Minimum Tier 1 Capital Ratio	Minimum Total Capital Ratio	Regulatory Accounting Standard	Basis of Calculation	Prudential Filter for AFS Debt Securities (as of 2008)				Prudential Filter for Deferred Tax Assets (DTA)	Legal Source
						Gains		Losses			
						Capital	Post-Tax Filter	Capital	Post-Tax Filter		
Australia	Australian Prudential Regulation Authority	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 1	0.00 %	|DTA - DTL|	Prudential Standard APS 111
Austria	Financial Market Authority	4.00 %	8.00 %	IFRS/LGAAP	Portfolio	Tier 2	47.50 %	Tier 1	0.00 %	0.00 %	Austrian Banking Act
Bahrain	Central Bank	6.00 %	12.00 %	IFRS	Portfolio		100.00 %		100.00 %	0.00 %	Rulebook Vol. 1 Part A CA-2
Belgium	Banking, Finance and Insurance Commission	4.00 %	8.00 %	IFRS	Portfolio		100.00 %		100.00 %	Amount > 10% of Tier 1	CBFA Circular PPB-2007-1-CPB
PR China	China Banking Regulatory Commission	4.00 %	8.00 %	IFRS	Portfolio		100.00 %		100.00 %	0.00 %	Capital Adequacy Regulation
Cyprus	Central Bank	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	0.00 %	Tier 1	0.00 %	0.00 %	Directive 436/2006 & 328/2007
Denmark	Finanstilsynet (Danish FSA)	4.00 %	8.00 %	LGAAP	Portfolio		100.00 %		100.00 %	0.00 %	Financial Business Act
Finland	Financial Supervisory Authority	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	26.00 %	Tier 1	0.00 %	0.00 %	FIN-FSA Standard 4
France	Central Bank	4.00 %	8.00 %	IFRS	Portfolio		100.00 %		100.00 %	0.00 %	Regulation 90/02
Germany	Federal Financial Supervisory Authority	4.00 %	8.00 %	IFRS/LGAAP	Portfolio	Tier 2	55.00 %	Tier 1	0.00 %	0.00 %	Regulation KonÜV
Hong Kong	Hong Kong Monetary Authority	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 1	0.00 %	0.00 %	Banking (Capital) Rules
Hungary	Hungarian Financial Supervisory Authority	4.00 %	8.00 %	LGAAP	Portfolio	Tier 2	0.00 %	Tier 1	0.00 %	0.00 %	HFSA Regulation
Ireland	Irish Financial Regulator	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	15.50 %	Tier 1	0.00 %	0.00 %	Notice BSD S 2/00
Italy	Central Bank	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	63.75 %	Tier 1	0.00 %	0.00 %	Circular 263
Jordan	Central Bank	6.00 %	12.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 2	0.00 %	100.00 %	CBJ Instructions
Kazakhstan	Financial Supervision Agency	6.00 %	8.00 %	IFRS	Portfolio	Tier 2	20.00%	Tier 1	0.00%	0.00%	Kazakhstan Banking Law
Kuwait	Central Bank	6.00 %	12.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 2	55.00 %	0.00 %	Circular 2/BS/94/2002
Liechtenstein	Financial Market Authority	4.00 %	8.00 %	IFRS	Portfolio		100.00 %		100.00 %	0.00 %	Regulation ERV
Lithuania	Central Bank	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	32.00 %	Tier 1	0.00 %	0.00 %	Resolution No. 138
Netherlands	Central Bank	4.00 %	8.00 %	IFRS	Item-by-Item		100.00 %		100.00 %	0.00 %	Decree on Prudential Rules
Norway	Finanstilsynet (FSA of Norway)	4.00 %	8.00 %	LGAAP	Portfolio		100.00 %		100.00 %	100.00 %	Capital Adequacy Framework
Oman	Central Bank	6.00 %	10.00 %	IFRS	Portfolio		100.00 %		100.00 %	0.00 %	Capital Guidelines II.A
Philippines	Central Bank	6.00 %	10.00 %	IFRS	Portfolio		100.00 %		100.00 %	100.00 %	Circular 538/06
Poland	Polish Financial Supervision Authority	4.00 %	8.00 %	IFRS	Portfolio		100.00 %		100.00 %	0.00 %	KNF Resolutions
Portugal	Central Bank	4.00 %	8.00 %	IFRS	Item-by-Item	Tier 2	55.00 %	Tier 1	0.00 %	Amount > 10% of Tier 1	Notice 12/92
Qatar	Central Bank	6.00 %	10.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 2	0.00 %	100.00 %	QCB Instructions Part 7
Russian Federation	Central Bank	5.00 %	10.00 %	IFRS	Portfolio		100.00 %		100.00 %	0.00 %	Instruction on Bank Regulation
Saudi Arabia	Saudi Arabia Monetary Agency	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 1	0.00 %	0.00 %	SAMA Capital Requirements
Singapore	Monetary Authority of Singapore	6.00 %	10.00 %	IFRS	Portfolio		100.00 %		100.00 %	100.00 %	Notice 637
Slovakia	Central Bank	4.00 %	8.00 %	IFRS	Item-by-Item		100.00 %		100.00 %	0.00 %	Decree 4/2007
Slovenia	Central Bank	4.00 %	8.00 %	IFRS	Item-by-Item		100.00 %		100.00 %	0.00 %	Regulation OJ 135/06 & 104/07
South Africa	Central Bank	7.00 %	9.50 %	IFRS	Portfolio		100.00 %		100.00 %	100.00 %	Notice R3/2008
Spain	Central Bank	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	65.00 %	Tier 1	0.00 %	0.00 %	Circular 4/2004

(continued)

Country	Regulatory Authority	Minimum Tier 1 Capital Ratio	Minimum Total Capital Ratio	Regulatory Accounting Standard	Prudential Filter for AFS Debt Securities (as of 2008)					Prudential Filter for Deferred Tax Assets (DTA)	Legal Source
					Basis of Calculation	Gains		Losses			
						Capital	Post-Tax Filter	Capital	Post-Tax Filter		
Sweden	Swedish Finansinspektionen	4.00 %	8.00 %	IFRS	Portfolio		100.00 %		100.00 %	100.00 %	Regulation FFFS 2007:1
Switzerland	Financial Market Supervisory Authority FINMA	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 1	0.00 %	0.00 %	Circular 2008/34
Taiwan	Financial Supervisory Commission	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 1	0.00 %	100.00 %	Capital Adequacy Regulation
Turkey	Banking Regulation and Supervision Agency	4.00 %	8.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 2	0.00 %	Amount > 10% of Tier 1	Regulation OJ 26333/06
United Arab Emirates	Central Bank	8.00 %	8.00 %	IFRS	Portfolio	Tier 2	55.00 %	Tier 2	0.00 %	0.00 %	Circular 13/1993
United Kingdom	Financial Services Authority	4.00 %	8.00 %	IFRS	Portfolio		100.00 %		100.00 %	0.00 %	Handbook GENPRU 2.2.185

This table presents institutional details related to capital regulation by country. *Regulatory Authority* denotes the institution that is responsible for the capital regulation of commercial banks at the country level. *Minimum Total Capital Ratio* is the tier 1 capital ratio or the total capital ratio (tier 1 + tier 2) required for commercial banks by the responsible regulatory authority. *Regulatory Accounting Standard* indicates whether regulatory capital is determined based on IFRS, local GAAP (LGAAP) or whether banks can choose between IFRS and local GAAP. *Prudential Filter for AFS Debt Securities* is the proportion of accumulated unrealized gains or losses from AFS debt securities that is deducted from equity in the determination of tier 1 or tier 2 capital (including tax effects) as of financial year 2008. *Basis of Calculation* indicates whether the filter is determined on a portfolio basis or instrument-by-instrument). *Prudential Filter for deferred tax assets (DTA)* is the proportion of deferred income tax recognized in profit and loss that is deducted from equity in the determination of tier 1 or tier 2 capital (including tax effects) as of financial year 2008. *Legal Source* provides the primary source of our information about the capital regulation variables. We enhance this information with data from the World Bank dataset by Čihák et al. (2012), from the CEBS (2007) report and from an own survey of bank regulators in each sample country.

APPENDIX III

Identifying Recapitalization Measures under the Basel II Framework

Capital	Component	Capital Protection Method	External Data Source (if not included in Appendix I)	Methodology
Tier 1	Core Capital / Equity Capital	Inject Capital	SNL Financial: Share Capital (SNLxl KeyField 243626) Share Premium (SNLxl KeyField 224983) Equity Hybrid Securities (SNLxl KeyField 224974)	We calculate the Tier 1 Capital saving as the sum of the year-on-year changes of the balance sheet items share capital, share premium, equity hybrid securities (assuming that all equity hybrid securites are elegible for Tier 1 Capital): $\text{Tier 1 Cap. Saving}_{CI} = \Delta_{2007\text{-}2008} \text{ Share Capital} + \Delta_{2007\text{-}2008} \text{ Share Premium} + \Delta_{2007\text{-}2008} \text{ Equity Hybrid Securities}$
	Disclosed Reserves	Cut Dividends	SNL Financial: Dividends attributable per Common Share (SNLxl KeyField 233325) Common Shares Outstanding (SNLxl KeyField 132884)	We identify dividend cuts by benchmarking the 2008 dividend per share against the average dividend per share during the period 2005 to 2007. We calculate the Tier 1 Capital saving as the difference between the 2008 dividend per share and the benchmark dividend per share multiplied by the number of common shares outstanding: $\text{Tier 1 Cap. Saving}_{Div.\ Cuts} = (\text{Avg. Dividend per Share}_{2005\text{-}2007} - \text{Dividend per Share}_{2008}) \times \text{Common Shares Outstanding}_{2008}$
	Net Income of the Current Financial Year	Sell Assets with Unrealized Gains, "Cherry Picking"	SNL Financial: Realized Gains on Securities (SNLxl KeyField 132569) Available for Sale Securities (SNLxl KeyField 225015) Debt Instruments Available for Sale (SNLxl KeyField 225012) Equity Instruments Available for Sale (SNLxl KeyField 225013) Other Instruments Available for Sale (SNLxl KeyField 225014)	1. Realized gains on securities (RGS) include gains, net of losses, on the sale of AFS and HTM securities and are scaled by AFS Securities a) Given the tainting rule of IAS 39.52 for HTM securities, we assume that those gains relate to the sale of AFS instruments. b) RGS are scaled by AFS securities to control for potential increases in the total amount of securities. c) We ignore sales of loans in the L&R category because, by definition of the L&R category, these loans are not tradable. 2. We benchmark the 2008 ratio of RGS against the average ratio for the period 2005 to 2007 3. We calculate the Tier 1 Capital saving as the difference between $_{2008}$ and the average from $_{2005\ to\ 2007}$, multiplied by total AFS securities and the tax rate: $\text{Tier 1 Capital Saving}_{RGS} = (\text{RGS}_{2008} - \text{RGS}_{2005\text{-}2007}) \times (\text{AFS Securities}_{2008}) \times (1 - \text{Tax Rate})$
		Recognize lower LLP	Bankscope: Total Assets (data11350) Loan Loss Provisions (data2095) Loan Loss Reserves (data2045) Net Charge-Offs (data30090) Non Performing Loans (data4004) Worldscope and SNL Financial: Loan Loss Reserves (WS 02275) Tax rate (SNLxl KeyFields 131961 and 132721)	We estimate the abnormal LLP using the following regression: $\text{LLP/TA} = \beta_0 + \beta_1 \times \text{LLR}_{t\text{-}1}/\text{TA} + \beta_2 \text{ NCO/TA} + \beta_3 \times \Delta \text{ NPL}_{t;t\text{-}1} + \beta_4 \times \text{Ln (TA)} + \varepsilon$ We calculate the Tier 1 Capital saving as the increase in current period's net income due to residual LLPs recognized in the income statement: $\text{Tier 1 Cap. Saving}_{LLP} = \text{Residual}_{Regression} \times \text{TA} \times (1 - \text{Tax Rate})$
		Recognize DTA	Worldscope and SNL Financial: Deferred Domestic Income Tax (WS 18188) Deferred Foreign Income Tax (WS 18189) Tax rate (SNLxl KeyFields 131961 and 132721)	The Tier 1 Capital saving equals the total amount of deferred income tax recognized in profit or loss during 2008, adjusted for the prudential filter set by the national regulator (see Appendix I): $\text{Tier 1 Cap. Saving}_{DTA} = (\text{DTA Domestic}_{2008} + \text{DTA Foreign}_{2008}) \times \text{Prudential Filter}$
		Report Non-Recurring Revenues	SNL Financial: Non-Recurring Revenues (SNLxl KeyField 132604) Tax rate (SNLxl KeyFields 131961 and 132721)	The Tier 1 Capital saving equals the total (post-tax) amount of non-recurring revenues recognized in 2008: $\text{Tier 1 Cap. Saving}_{NRR} = \text{Non-Recurring Revenue}_{2008} \times (1 - \text{Tax Rate})$
		Reclassify Financial Assets	SNL Financial: Net Unrealized Gains (SNLxl KeyField 132393) Tax rate (SNLxl KeyFields 131961 and 132721) Annual Reports: Information on reclassifications disclosed under IFRS 7.12A was handcollectded from the annual reports	1. HFT to HTM or L&R: The Tier 1 capital saving equals the (post-tax) fair value loss that would have been recognized in the income statement had the reclassification not been made: $\text{Tier 1 Cap. Saving}_{NI2Cost} = \text{FV Loss not recognized in NI}_{2008} \times (1 - \text{Tax Rate})$ 2. HFT to AFS: The capital saving is the difference between the (post-tax) fair value loss that would have been recognized in the income statement (without reclassification) and the amount that is recognized in OCI as revaluation reserves adjusted for the applicable prudential filter (which differs between Tier 1 and Tier 2 in some countries, see Appendix I): $\text{Tier 1 Cap. Saving}_{NI2OCI} = \text{FV Loss not recognized in NI}_{2008} \times (1 - \text{Tax Rate}) - \text{FV Loss recognized in OCI}_{2008} \times (1 - \text{Prudential Filter})$ $\text{Total Cap. Saving}_{NI2OCI} = \text{FV Loss not recognized in NI}_{2008} \times (1 - \text{Tax Rate}) - \text{FV Loss recognized in OCI}_{2008} \times (1 - \text{Prudential Filter})$ 3. AFS to HTM or L&R: The capital saving is the fair value loss that would have been recognized in OCI as revaluation reserves had the reclassification not been made, multiplied by the applicable prudential filter (see Appendix I): $\text{Tier 1 Cap. Saving}_{OCI2Cost} = \text{FV Loss not recognized in OCI}_{2008} \times (1 - \text{Prudential Filter})$ $\text{Total Cap. Saving}_{OCI2Cost} = \text{FV Loss not recognized in OCI}_{2008} \times (1 - \text{Prudential Filter})$

(continued)

APPENDIX III (continued)

Capital	Component	Capital Protection Method	External Data Source (if not included in Appendix I)	Methodology
Deductions	Own Shares	Re-issue Treasury Shares	SNL Financial: Treasury Stock (SNLxl KeyField 243630)	We derive the Tier 1 Capital saving from the year-on-year change of the balance sheet item treasury shares: Tier 1 Cap. Saving $_{TS}$ = $\Delta_{2007-2008}$ Treasury Shares
	Goodwill		Worldscope: Goodwill (data11300)	n/a
	Equity resulting from Securitization Exposure		n/a	n/a
	Unconsolidated Investments in Subsidiaries (50% Tier 1 / Tier 2)		n/a	n/a
Tier 2	Undisclosed Reserves		n/a	n/a
	Revaluation reserves	Sell Assets with Unrealized Gains, "Cherry Picking"	SNL Financial: Realized Gains on Securities (SNLxl KeyField 132569) Available for Sale Securities (SNLxl KeyField 225015) Debt Instruments Available for Sale (SNLxl KeyField 225012) Equity Instruments Available for Sale (SNLxl KeyField 225013) Other Instruments Available for Sale (SNLxl KeyField 225014) Net Unrealized Gains (SNLxl KeyField 132393)	The Tier 1 Capital saving from RGS (see above, Tier 1) is potentially offset by a Tier 2 effect when the unrealized gains had previously been included in Tier 2 capital. The Tier 2 effect depends on the national prudential filter for the revaluation reserves (see Appendix I). We use the following assumptions when calculating the Tier 2 effect: (i) RGS are entirely attributable to the sale of AFS debt securities and, thus, the prudential filter for debt securities is used; (ii) when the filter is determined on an item-by-item basis, the filter for accumulated gains is applied, otherwise the sign of the revaluation reserves determines the prudential filter; (iii) RGS are identical to the amount recycled from the OCI revaluation reserves when the asset is sold. Total Cap Saving $_{RGS}$ = Tier 1 Capital Saving $_{RGS}$ - (RGS $_{2008}$ - RGS $_{2005-2007}$) $\times$ AFS Securities $_{2008}$ $\times$ (1 - Prudential Filter)
	General Provisions / General Loan-Loss Reserves	Recognize lower LLP	Bankscope: Total Assets (data11350) Loan Loss Provisions (data2095) Loan Loss Reserves (data2045) Net Charge-Offs (data30090) Non Performing Loans (data4004) Worldscope and SNL Financial: Loan Loss Reserves (WS 02275) Tax rate (SNLxl KeyFields 131961 and 132721)	Total Capital saving from abnormally low LLPs is: a) Tier 1 effect (see above, Tier 1) b) Tier 2 effect: The total amount of LLR that can be added-back to regulatory capital as Tier 2 capital. However, LLR can only be included in Tier 2 capital up to the regulatory threshold of 1.25 % of RWA (standardized approach) or 0.6 percentage point of the difference between total eligible provisions and the total expected loss amount (IRB-approach). We assume that every bank uses the SA only. If LLR exceed the threshold, the latter are substracted from Tier 2 capital. Total Cap. Saving $_{LLP}$ = Tier 1 Cap. Savings - ResidualRegression $\times$ TA [up to the regulatory threshold] Regulatory threshold for Tier 2 effect = 1.25% * RWA
	Hybrid Debt Capital Instruments / Subordinated Term Debt	Inject Capital	SNL Financial: Total Subordinated Debt (SNLxl KeyField 134231)	We calculate the Total Capital saving as the sum of the year-on-year changes of the balance sheet items share capital, share premium, equity hybrid securities and total subordinated debt (assuming that all subordinated debt is eligible for Total Capital): Total Cap. Saving $_{CI}$ = Tier 1 Cap. Saving CI + $\Delta_{2007-2008}$ Total Subordinated Debt
Tier 3	Short-term Subordinated Debt covering Market Risk	Inject Capital	n/a (subsumed in Total Subordinated Debt (SNLxl KeyField 134231))	see Tier 2, Hybrid Debt Capital Instruments (assuming that all subordinated debt in SNLxl KeyField 134231 are Tier 2 eligible)
Regulatory Measure of Risk	Credit Risk, Market Risk, Operational Risk	Restructure RWA-Portfolio	SNL Financial: Total Risk-Weighted Assets (SNLxl KeyField 133174) Total Assets (SNLxl KeyField 131929)	We calculate the average risk-weight of a bank's portfolio by dividing RWA by total assets (TA). We benchmark the average risk-weight of 2008 against the average risk-weight for the pre-crisis period 2005 to 2007. When the average risk-weight in 2008 is lower than the benchmark, the bank has decreased the overall riskiness of its portfolio. We compute the resulting capital savings as follows (see Appendix I for the minimum capital ratios in the sample countries): Tier 1 Cap. Saving $_{RWA}$ = Avg. RW $_{2008}$ $\times$ TA $_{2008}$ * Min. Tier 1 Cap. Ratio – Avg. RW $_{2005-2007}$ $\times$ TA $_{2008}$ $\times$ Min. Tier 1 Cap. Ratio Total Cap. Saving $_{RWA}$ = Avg. RW $_{2008}$ $\times$ TA $_{2008}$ * Min. Total Cap. Ratio – Avg. RW $_{2005-2007}$ $\times$ TA $_{2008}$ $\times$ Min. Total Cap. Ratio

References

Acharya, V., Drechsler, I., Schnabl, P. 2014. A Pyrrhic Victory? Bank Bailouts and Sovereign Credit Risk. The Journal of Finance 69, 2689-2739.

Acharya, V. V., Ryan, S. G., 2016. Banks' Financial Reporting and Financial System Stability. Journal of Accounting Research 54, 277-340.

Altamuro, J., Beatty, A., 2010. How does internal control regulation affect financial reporting? Journal of Accounting and Economics 49, 58-74.

André, P., Cazavan-Jeny, A., Dick, W., Richard, C., Walton, P., 2009. Fair value accounting and the banking crisis in 2008: Shooting the messenger. Accounting in Europe 6, 3-24.

Armstrong, C. S., Barth, M. E., Jagolinzer, A. D., Riedl, E. J., 2010. Market Reaction to the Adoption of IFRS in Europe. The Accounting Review 85, 31-61.

Badertscher, B. A., Burks, J. J., Easton, P. D., 2012. A Convenient Scapegoat: Fair Value Accounting by Commercial Banks during the Financial Crisis. The Accounting Review 87, 59-90.

Bank for International Settlements (BIS), 2009. An Assessment of Financial Sector Rescue Programmes. Availabe at http://www.bis.org/publ/bppdf/bispap48.pdf.

Beatty, A. L., Chamberlain, S. L., Magliolo, J., 1995. Managing financial reports of commercial banks: The influence of taxes, regulatory capital and earnings. Journal of Accounting Research 33, 231-261.

Bushman, R. M., Piotroski, J. D., Smith, A. J., 2004. What determines corporate transparency? Journal of Accounting Research 42, 207-252.

CEBS, 2007. Analytical Report on Prudential Filters for Regulatory Capital. London.

CESR, 2009. Application of and disclosures related to the reclassification of financial instruments. Available at http://www.esma.europa.eu/system/files/09_575_CESR_statement_disclosures_reclassification_Chairs.pdf.

Čihák, M., Demirgüç-Kunt, A., Martínez Pería, M.S., Mohseni-Cheraghlou, A., 2012. Bank Regulation and Supervision around the World. Policy Research Working Paper 6286, The World Bank.

Cohen, B.H., Scatigna, M., 2016. Banks and capital requirements: Channels of adjustment. Journal of Banking & Finance 69, S56-S69.

Daske, H., Hail, L., Leuz, C., Verdi, R., 2013. Adopting a Label: Heterogeneity in the Economic Consequences around Voluntary IAS Adoptions. Journal of Accounting Research 51, 495-547.

Dong M., Zhang X.-J. 2018. Selective Trading of Available-for-Sale Securities: Evidence from U.S. Commercial Banks. European Accounting Review 27, 467-493.

Duchin, R., Sosyura, D., 2014. Safer ratios, riskier portfolios: banks' response to government aid. Journal of Financial Economics 113, 1-28.

European Central Bank (ECB), 2009. Financial Stability Review December 2009. Available at https://www.ecb.europa.eu/pub/pdf/other/financialstabilityreview200912en.pdf.

European Central Bank, 2010. The Great Financial Crisis. Lessons for Financial Stability and Monetary Policy. Available at http://www.ecb.europa.eu/pub/pdf/other/greatfinancialcrisisecb colloquiumpapademos201203en.pdf.

Fiechter, P., 2011. Reclassification of Financial Assets under IAS 39: Impact on European Banks' Financial Statements. Accounting in Europe 8, 49-67.

Fiechter, P., Landsman, W. R., Peasnell, K., Renders, A., 2017. The IFRS option to reclassify financial assets out of fair value in 2008: the roles played by regulatory capital and too-important-to-fail status. Review of Accounting Studies 22, 1698-1731.

Financial Times, October 20th 2008, Changes threaten confidence in accounts.

Flannery, M. J., Kwan, S. H., Nimalendran, M. 2013. The 2007-2009 financial crisis and bank opaqueness. Journal of Financial Intermediation 22, 55-84.

Gallemore, J., 2019. Bank Financial Reporting Opacity and Regulatory Intervention. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2838541.

Glaum M., Schmidt, P., Street, D. L., Vogel, S. 2013. Compliance with IFRS 3- and IAS 36-required disclosures across 17 European countries: company- and country-level determinants. Accounting and Business Research 43, 163-204.

Goldberg, L. G., Hudgins, S. C., 2002. Depositor discipline and changing strategies for regulating thrift institutions. Journal of Financial Economics 63, 263-274.

Homar, T., van Wijnbergen, S. J. G., 2017. Bank recapitalization and economic recovery after financial crises. Journal of Financial Intermediation 32, 16-28.

House of Commons, 2008. Banking Crisis: Oral Evidence by Sir David Tweedie, Paul Boyle and Michael Izza taken before the Treasury Committee on Tuesday, November 11. London, HC 144–I.

Howieson, B., 2011. GFC or KFC?: How Standard Setters were Battered and Fried. Australian Accounting Review 21, 3–13.

Hryckiewicz, A. 2014. What do we know about the impact of government interventions in the banking sector? An assessment of various bailout programs on bank behavior. Journal of Banking & Finance 46, 246-265.

International Accounting Standards Board (IASB), 2008. Reclassification of Financial Assets (Amendments to IAS 39 Financial Instruments: Recognition and Measurement and IFRS 7 Financial Instruments: Disclosures), London.

Kothari, S. P., Mizik, N., Roychowdhury, S., 2016. Managing for the Moment: The Role of Earnings Management via Real Activities versus Accruals in SEO Valuation. The Accounting Review 91, 559-586.

Laeven, L., Valencia, F., 2013. The Real Effects of Financial Sector Interventions during Crises. Journal of Money, Credit and Banking 45, 147-177.

Lang, M., Lins, K. V., Maffett, M. 2012. Transparency, Liquidity, and Valuation: International Evidence on When Transparency Matters Most. Journal of Accounting Research 50, 729-774.

Laux, C., Leuz, C., 2009. The crisis of fair-value accounting: Making sense of the recent debate. Accounting, Organizations and Society 34, 826-834.

Laux, C., Leuz, C., 2010. Did Fair-Value Accounting Contribute to the Financial Crisis? Journal of Economic Perspectives 24, 93-118.

Leuz, C., Nanda, D., Wysocki, P., 2003. Earnings management and investor protection: An international comparison. Journal of Financial Economics 69, 505-527.

Leuz, C., Verrecchia, R. E., 2000. The Economic Consequences of Increased Disclosure. Journal of Accounting Research 38, 91-124.

Lim, C. Y., Lim, C. Y., Lobo, G. J., 2013. IAS 39 reclassification choice and analyst earnings forecast properties. Journal of Accounting and Public Policy 32, 342-356.

Maynes, E., Rumsey, J., 1993. Conducting event studies with thinly traded stocks. Journal of Banking & Finance 17, 145-157.

Mechelli, A. 2009. Accounting Harmonization and Compliance in Applying IASB Standards: An Empirical Survey about the First Time Adoption of IAS 7 by Italian Listed Groups. Accounting in Europe 6, 231-270.

Morck, R., Yavuz, M. D., Yeung, B. 2011. Banking system control, capital allocation, and economy performance. Journal of Financial Economics 100, 264-283.

Paananen, M., Renders, A., Shima, K. M., 2012. The Amendments of IAS 39: Determinants of Reclassification Behavior and Capital Market Consequences. Journal of Accounting, Auditing & Finance 27, 208-235.

Plantin, G., Sapra, H., Shin, H. S., 2008. Marking-to-Market: Panacea or Pandora's Box? Journal of Accounting Research 46, 435-460.

Reinhart, C. M., Rogoff, K. S., 2009. The aftermath of the financial crisis. American Economic Review 99, 466-472.

Ryan, S. G., 2008. Accounting in and for the Subprime Crisis. The Accounting Review 83, 1605-1638.

Sefcik, S. E., Thompson, R., 1986. An approach to statistical inference in cross-sectional models with security abnormal returns as dependent variable. Journal of Accounting Research 24, 316-334.

Shen, C.-H., Chih, H.-L., 2005. Investor Protection, Prospect Theory, and Earnings Management: An International Comparison of the Banking Industry. Journal of Banking & Finance 29, 2675-2697.

Skinner, D., 2008. The rise of deferred tax assets in Japan: The role of deferred tax accounting in the Japanese banking crisis. Journal of Accounting and Economics 46, 218-239.

Spiegel, M. M., Yamori, N., 2007. Market price accounting and depositor discipline: The case of Japanese regional banks. Journal of Banking & Finance 31, 769-786.

Spooner, A., 2007. Fair Value and Financial Instruments, in: Walton, P. (Ed.), The Routledge Companion to Fair Value and Financial Reporting. Routledge, London, 370-384.

Street, D. L., Gray, S. J. 2002. Factors influencing the extent of corporate compliance with International Accounting Standards: summary of a research monograph. Journal of International Accounting, Auditing and Taxation 11, 51-76.

Veall, M. R., Zimmermann, K. F., 1996. Pseudo-R^2 measures for some common limited dependent variable models. Journal of Economic Surveys 10, 241-259.

Wooldridge, J. M. 2010. Econometric Analysis of Cross Section and Panel Data, second ed. MIT Press, Cambridge, MA.

TABLE 1

Regulatory Capital Savings

Panel A: Aggregate Statistics

Capital Protection Method	Financial Year 2008				Financial Year 2009			
	Number of Banks		Regulatory Capital Savings		Number of Banks		Regulatory Capital Savings	
	with Data	with Capital Savings	in EUR (000)	Share of Aggregated Savings	with Data	with Capital Savings	in EUR (000)	Share of Aggregated Savings
Reclassification	302	82	19,124,043	6.01%	302	8	460,602	0.17%
Accounting-Based Capital Measures								
Deferred Tax Assets	300	104	23,699,594	7.45%	300	106	14,649,918	5.36%
Non-Recurring Revenues	231	53	3,565,216	1.12%	224	51	14,068,031	5.15%
Lower LLP	222	33	7,952,950	2.50%	194	40	41,024,096	15.01%
Real Capital Measures								
Cherry Picking	184	37	1,029,900	0.32%	184	49	3,397,841	1.24%
Dividend Cuts	188	131	50,976,087	16.01%	186	58	37,904,726	13.87%
Capital Injection	234	145	137,453,836	43.18%	234	139	147,737,505	54.05%
RWA Reduction	216	118	74,515,167	23.41%	220	140	14,068,077	5.15%
Total	302	239	318,316,794	100.00%	302	233	273,310,796	100.00%

TABLE 1 (continued)

Panel B: Bank-Level Statistics - Regulatory Capital Savings

Capital Protection Method	Number of Banks	Regulatory Capital Savings (Financial Year 2008)				
		Mean	Std. Dev.	P5	Median	P95
Reclassification	82	0.2402	0.3749	0.0049	0.1053	1.3088
Accounting-Based Capital Measures						
Deferred Tax Assets	104	0.1832	0.2965	0.0067	0.0818	0.6563
Non-Recurring Revenues	53	0.0982	0.2325	0.0003	0.0136	0.5944
Lower LLP	33	0.8882	3.5185	0.0064	0.2083	1.0579
Real Capital Measures						
Cherry Picking	37	0.1814	0.3697	0.0024	0.0479	1.4870
Dividend Cuts	131	0.5139	0.4898	0.0115	0.3660	1.3690
Capital Injection	145	1.1587	1.5260	0.0011	0.5393	4.6526
RWA Reduction	118	0.6564	1.2007	0.0331	0.3429	2.0129

Panel C: Bank-Level Statistics - Net Income Savings

Capital Protection Method	Number of Banks	Net Income Savings (Financial Year 2008)				
		Mean	Std. Dev.	P5	Median	P95
Reclassification	82	0.0816	0.1247	0.0000	0.0327	0.3127
Accounting-Based Capital Measures						
Deferred Tax Assets	104	0.1434	0.2730	0.0056	0.0747	0.5635
Non-Recurring Revenues	53	0.0709	0.2112	0.0002	0.0082	0.3621
Lower LLP	33	0.9025	3.2060	0.0044	0.1516	5.6907
Real Capital Measures						
Cherry Picking	37	0.1149	0.2198	0.0013	0.0284	0.5003

Table 1 presents descriptive statistics on savings of tier 1 regulatory capital through various recapitalization measures. For details on these measures, see Appendix II. The sample comprises 302 banks from 39 countries. Panel A reports aggregate statistics for financial years 2008 and 2009, respectively. Panel B presents bank-level statistics on regulatory capital savings as a percentage of risk-weighted assets (RWA) for financial year 2008. Panel C presents bank-level statistics on net income savings as a percentage of total assets for financial year 2008.

TABLE 2

Variable Definitions

Panel A: Variables in Determinants Analysis (Table 4)

Variable	Definition
Reclassification	Indicator variable equal to one if the bank reclassifies trading or AFS assets in accordance with IAS 39 in financial year 2008, and zero otherwise. Source: financial statements of sample banks
Regulatory Capital Restriction	Difference between the minimum tier 1 capital ratio in the bank's home country and the bank's tier 1 capital ratio at the end of financial year 2008 (adjusted for reclassification effects) in percentage points. Source: financial statements of sample banks, country-level data in Appendix I
Accounting-Based Capital Measures	Indicator variable equal to one if the bank uses accounting-based measures (deferred tax assets, non-recurring revenues or lower LLP) to increase its tier 1 capital in financial year 2008, and zero otherwise. The variable is equal to zero for banks with missing data. Source: see Appendix II
Deferred Tax Assets	Indicator variable equal to one if the bank recognizes deferred tax assets to increase its tier 1 capital in financial year 2008, and zero otherwise. The variable is equal to zero for banks with missing data. Source: see Appendix II
Non-Recurring Revenues	Indicator variable equal to one if the bank recognizes non-recurring revenues to increase its tier 1 capital in financial year 2008, and zero otherwise. The variable is equal to zero for banks with missing data. Source: see Appendix II
Lower LLP	Indicator variable equal to one if the bank recognizes lower loan loss provisions (LLP) to increase its tier 1 capital in financial year 2008, and zero otherwise. The variable is equal to zero for banks with missing data. Source: see Appendix II
Real Capital Measures	Indicator variable equal to one if the bank uses real capital measures (cherry picking, dividend cuts, capital injections or RWA reductions) to increase its tier 1 capital in financial year 2008, and zero otherwise. The variable is equal to zero for banks with missing data. Source: see Appendix II
Cherry Picking	Indicator variable equal to one if the bank sells "cherry picked" assets with unrealized gains to increase its tier 1 capital in financial year 2008, and zero otherwise. The variable is equal to zero for banks with missing data. Source: see Appendix II
Dividend Cuts	Indicator variable equal to one if the bank cuts dividend payments to increase its tier 1 capital in financial year 2008, and zero otherwise. The variable is equal to zero for banks with missing data. Source: see Appendix II
Capital Injections	Indicator variable equal to one if the bank uses capital injections to increase its tier 1 capital in financial year 2008, and zero otherwise. The variable is equal to zero for banks with missing data. Source: see Appendix II
RWA Reduction	Indicator variable equal to one if the bank reduces its risk-weighted assets (RWA) to increase its tier 1 capital ratio in financial year 2008, and zero otherwise. The variable is equal to zero for banks with missing data. Source: see Appendix II
Local GAAP Regulation	Indicator variable equal to one if the bank's regulatory capital is determined based on local GAAP, and zero otherwise. Source: financial statements and IR departments of sample banks

% FV Assets	Proportion of financial assets that are eligible for reclassification calculated as the sum of the book values of trading and AFS assets scaled by the book value of total assets at the end of financial year 2008 (adjusted for reclassification effects).
	Source: financial statements of sample banks
Earnings Quality	Relative magnitude of accruals calculated as the bank's median ratio of yearly absolute accruals to absolute cash flows from operations over financial years 1990 to 2007. We use pre-tax income before loan loss provisions as a bank-specific proxy for cash flows from operations. We convert the variable into ranks with higher ranks representing higher reporting quality and scale the ranks on a range of -1 and 0.
	Source: BvD BankScope
Zero Earnings Threshold	Indicator variable equal to one if net income before reclassifications in financial year 2008 is negative, and zero otherwise.
	Source: financial statements of sample banks
Δ Customer Deposits	Indicator variable equal to one if the change in the bank's customer deposits (scaled by total liabilities) between financial years 2007 and 2008 is lower than the sample median, and zero otherwise.
	Source: BvD Bankscope
IIF Membership	Indicator variable equal to one if the bank is a member of the International Institute of Finance, and zero otherwise.
	Source: IIF
AFS Reclassification	Indicator variable equal to one if the bank reclassifies available-for-sale (AFS) assets in accordance with IAS 39 in financial year 2008, and zero otherwise.
	Source: financial statements of sample banks
AFS Prudential Filter	Indicator variable equal to one if the bank is subject to a prudential filter for available-for-sale (AFS) assets, and zero otherwise.
	The prudential filter is defined as the proportion of the revaluation reserves (accumulated unrealized gains and losses) from AFS debt securities that is excluded from the determination of total regulatory capital. The variable is measured at the country level (including tax adjustments).
	We make the following adjustments to account for bank-specific circumstances:
	(1) We use the sign of the bank's revaluation reserves to choose the relevant filter in countries where accumulated unrealized fair value gains and losses are treated asymmetrically. (2) We set the filter to 100% if the bank does not use IFRS in the calculation of its regulatory capital. (3) In countries where the filter is determined instrument-by-instrument, we use the filter for accumulated losses.
	Source: see Appendix I
% AFS Assets	Proportion of available-for-sale (AFS) assets that are eligible for reclassification calculated as the sum of the book values of AFS assets scaled by the book value of total assets at the end of financial year 2008 (adjusted for reclassification effects).
	Source: financial statements of sample banks

Panel B: Variables in Return Analysis (Tables 5 and 6)

Variable	Definition
Abnormal Return – 13/14 October 2008	Coefficient estimate resulting from bank-specific time-series regressions of daily log-returns on the DJ STOXX 1800 market index and event dummies for October 13 and 14, 2008. The regressions are estimated over the period October 1, 2008 to December 31, 2008. Source: Thomson Reuters Datastream
Expected Reclassification (Probit Model)	Indicator variable equal to one if the fitted probability of the reclassification determinants model in Table 4 (based on the full sample and including aggregate proxies for recapitalization measures, i.e. the third specification) is higher than 0.5, and zero otherwise. Source: own calculations
Expected Reclassification (Perfect Foresight)	Indicator variable equal to one if the bank reclassifies trading or AFS assets in accordance with IAS 39 in financial year 2008, and zero otherwise. Source: financial statements of sample banks
Regulatory Capital Restriction (Median Split)	Indicator variable equal to one if the difference between the minimum tier 1 capital ratio in the bank's home country and the bank's tier 1 capital ratio at the end of financial year 2008 (adjusted for reclassification effects)) is above the sample median, and zero otherwise. Source: financial statements of sample banks, country-level data in Appendix I
Abnormal Return – Bank Announcements	Cumulative prediction error from the market model over the announcement window $[0, +1]$, For reclassifying banks, day 0 is zero is day of the reclassification announcement. For non-reclassifying banks, day 0 is the day of the first earnings announcement following the official announcement of the amendment to IAS 39 in October 2008. The market model is estimated with daily log-returns for the intervals $[-60, -11]$ and $[+11, +60]$ relative to day 0 using the DJ STOXX 1800 as the market index Source: Thomson Reuters Datastream
Reclassification	Indicator variable equal to one if the bank reclassifies trading or AFS assets in accordance with IAS 39 in financial year 2008, and zero otherwise. Source: financial statements of sample banks
Regulatory Capital Effect	Percentage point difference between the tier 1 capital ratio as reported and the tier 1 capital ratio excluding reclassification effects at the end of financial year 2008. This variable is equal to zero for non-reclassifying banks Source: financial statements of sample banks
Earnings Surprise	Indicator variable equal to one if the announced earnings number is higher than the most recent average analyst forecast before the announcement, and zero otherwise. If the reclassification announcement does not coincide with an earnings announcement, the variable is equal to zero Source: I/B/E/S

Panel C: Variables in Spread Analysis (Table 7)

Variable	Definition
Log(Bid-Ask Spread)	Natural logarithm of the median of the daily closing bid-ask spreads over the respective bank-week. Source: Thomson Reuters Datastream
Post-Reclassification	Indicator variable measured at the bank-week level: For reclassifying banks, the variable is equal to one for all reclassification weeks starting with the first week during which the respective bank announced reclassifications, and zero otherwise. For non-reclassifying banks, the variable is equal to zero throughout the sample period. Source: financial statements of sample banks
Complete Disclosure	Time-invariant indicator variable for each individual bank: For reclassifying banks, the variable is equal to one if the bank discloses all six items (a) to (f) required by IFRS 7 (para. 12A) in the footnotes to its financial statements for financial year 2008, and zero otherwise. For non-reclassifying banks, the variable is equal to zero throughout the sample period. Source: financial statements of sample banks
Regulatory Capital Effect (Median Split)	Time-invariant indicator variable for each individual bank: For reclassifying banks, the variable is equal to one if the difference between tier 1 capital as reported and tier 1 capital excluding reclassification effects is above the median across reclassifying banks in our sample at the end of financial year 2008, and zero otherwise. For non-reclassifying banks, the variable is equal to zero throughout the sample period. Source: financial statements of sample banks
Log(Share Turnover)	Natural logarithm of the average daily share turnover (i.e., trading volume in units divided by the number of outstanding shares) over the respective bank-week. Source: Thomson Reuters Datastream
Log(Market Value)	Natural logarithm of the median of the daily closing market value of outstanding equity in million Euros over the respective bank-week. Source: Thomson Reuters Datastream
Log(Return Variability)	Natural logarithm of the standard deviation of daily stock returns over the respective bank-week. Source: Thomson Reuters Datastream

TABLE 3

Descriptive Statistics

Variables	Number of Obs.	Mean	Std. Dev.	P5	Median	P95
Variables in Determinants Analysis (Table 4)						
Reclassification	302	0.411				
Regulatory Capital Restriction	302	-7.986	7.186	-19.130	-6.159	-2.560
Accounting-Based Capital Measures	302	0.467				
Deferred Tax Assets	302	0.344				
Non-Recurring Revenues	302	0.175				
Lower LLP	302	0.109				
Real Capital Measures	302	0.719				
Cherry Picking	302	0.123				
Dividend Cuts	302	0.434				
Capital Injection	302	0.480				
RWA Reduction	302	0.391				
Local GAAP Regulation	302	0.116				
% FV Assets	302	0.109	0.096	0.003	0.083	0.272
Earnings Quality	302	-0.502	0.289	-0.950	-0.502	-0.053
Zero Earnings Threshold	302	0.149				
Zero Earnings Threshold * Δ Deposits	302	0.083				
IIF Membership	302	0.308				
AFS Reclassification	124	0.581	0.495	0.000	1.000	1.000
AFS Prudential Filter	124	0.734	0.444	0.000	1.000	1.000
% AFS Assets	124	0.097	0.087	0.000	0.075	0.246
Variables in Return Analysis (Tables 5 and 6)						
Abnormal Return 13/14 October 2008	302	0.028	0.045	-0.033	0.027	0.098
Expected Reclassification (Probit Model)	302	0.381				
Expected Reclassification (Perf. Foresight)	302	0.411				
Regulatory Capital Restriction (Median Split)	302	0.500				
Expected Reclassification (Probit Model) * Regulatory Capital Restriction (Median Split)	302	0.262				
Expected Reclassification (Perf. Foresight) * Regulatory Capital Restriction (Median Split)	302	0.265				
Abnormal Return Bank Announcements	278	0.002	0.069	-0.127	0.001	0.113
Reclassification	278	0.421				
Regulatory Capital Effect	278	0.070	0.234	0.000	0.000	0.368
Earnings Surprise	278	0.126				

(continued)

TABLE 3 (continued)

Variables	Number of Obs.	Mean	Std. Dev.	P5	Median	P95
Variables in Spread Analysis (Table 7)						
Log(Bid-Ask Spread)	14,502	-4.760	1.275	-6.858	-4.696	-2.740
Post-Reclassification	14,502	0.179				
Post-Reclassification * Complete Disclosure	14,502	0.055				
Post-Reclassification * Regulatory Capital Effect (Median Split)	14,502	0.093				
Post-Reclassification * Complete Disclosure * Regulatory Capital Effect (Median Split)	14,502	0.035				
Log(Share Turnover)	14,502	-7.309	2.117	-11.380	-7.044	-4.499
Log(Market Value)	14,502	7.012	1.866	3.911	7.048	10.072
Log(Return Variability)	14,502	-3.709	0.773	-4.984	-3.658	-2.588

Table 3 presents descriptive statistics for the variables used in Tables 4 to 7. We provide definitions for all variables in Table 2. For indicator variables, we only report the arithmetic mean.

TABLE 4

Determinants of Reclassification Choice

Indepedent Variables	Expected Sign	Dependent Variable: Reclassification		
Stage 1 Model: Reclassification				
Regulatory Capital Restriction	+	0.016 ***	0.008 *	0.009 **
		(3.58)	(1.88)	(2.18)
Accounting-Based Capital Measures	-			-0.196 ***
				(-3.17)
Deferred Tax Assets			-0.100 *	
			(-1.71)	
Non-Recurring Revenues			-0.056	
			(-1.19)	
Lower LLP			0.020	
			(0.26)	
Real Capital Measures	+			0.394 ***
				(4.79)
Cherry Picking			0.161 **	
			(2.54)	
Dividend Cuts			0.187 ***	
			(4.34)	
Capital Injection			0.251 ***	
			(5.53)	
RWA Reduction			-0.107 *	
			(-1.82)	
Local GAAP Regulation	-	-0.116	-0.132 ***	-0.260 ***
		(-1.42)	(-3.03)	(-3.59)
% FV Assets	+	1.599 ***	1.366 ***	1.337 ***
		(5.69)	(5.53)	(4.47)
Earnings Quality	-	-0.249 **	-0.265 ***	-0.194 *
		(-2.34)	(-3.28)	(-1.95)
Zero Earnings Threshold	+	0.051	0.061	0.079
		(0.58)	(0.85)	(0.91)
Zero Earnings Threshold * Δ Deposits	+	0.226 ***	0.204 ***	0.188 ***
		(2.78)	(2.99)	(2.97)
IIF Membership	+	0.158 ***	0.136 ***	0.143 **
		(2.65)	(3.56)	(2.48)
Number of Observations		302 (124)	302 (124)	302 (124)
% Correct Predictions		74.17%	80.46%	77.81%

(continued)

TABLE 4 (continued)

Indepedent Variables	Expected Sign	Dependent Variable: Reclassification		
Stage 2 Model: AFS Reclassification (conditional on Reclassification = 1)				
AFS Prudential Filter	-	-0.159 **	-0.176 ***	-0.174 ***
		(-2.33)	(-2.67)	(-2.58)
% AFS Assets	+	2.313 ***	2.571 ***	2.553 ***
		(4.60)	(6.02)	(5.74)
Number of Observations		124 (72)	124 (72)	124 (72)
% Correct Predictions		77.42%	75.00%	75.00%

Table 4 presents the results from cross-sectional probit regressions that examine the determinants of the reclassification choice (equation (1) in section 4.1) and the determinants of the AFS reclassification choice (equation (2) in section 4.1). We estimate these regressions jointly by maximum likelihood. In the first stage, the sample comprises 124 reclassifying and 178 non-reclassifying banks. The second stage focuses on the subset of reclassifying banks and comprises 72 (52) banks that (do not) reclassify AFS assets. For details on the variables, see Table 2 (variable definitions) and Table 3 (descriptive statistics). The table reports marginal effects at the mean (median) of all continuous (indicator) independent variables and z-statistics (in parentheses). The z-statistics are based on robust standard errors adjusted for heteroscedasticity and clustering by country. The proportion of correct predictions is scaled according to Veall and Zimmermann (1996). ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 5

Stock Market Reaction to Regulatory Announcement

Independent Variables	Expected Sign	Dependent Variable: Abnormal Return (13/14 October 2008)	
		Expected Reclassification	
		Probit Model	Perfect Foresight
[1] Expected Reclassification	-	-0.025 ***	-0.011 *
		(-2.82)	(-1.71)
[2] Regulatory Capital Restriction (Median Split)	+ / -	-0.001	-0.001
		(-0.17)	(-0.19)
Expected Reclassification * Regulatory Capital Restriction (Median Split)	+	0.018	0.010
		(1.48)	(1.13)
Intercept		0.034 ***	0.031 ***
		(3.00)	(2.80)
Number of Observations		302	302
Additional Tests			
[1] + [2] + Interaction	+ / -	-0.007	-0.002
		(-0.80)	(-0.23)

Table 5 presents results from cross-sectional regressions that examine the determinants of abnormal stock returns following the IASB's official announcement of the amendment to IAS 39 on October 13, 2008 (equation (3) in section 5.1). The event window covers two days because the amendment was announced in the late afternoon of October 13, 2008 (GMT) when the stock exchanges in many sample countries had already closed. For details on the variables, see Table 2 (variable definitions) and Table 3 (descriptive statistics). The sample comprises 124 reclassifying and 178 non-reclassifying banks. The table reports OLS coefficient estimates and t-statistics (in parentheses). The t-statistics are based on the weighted portfolio approach by Sefcik and Thompson (1986). ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 6

Stock Market Reaction to Bank Announcements

Independent Variables	Expected Sign	Dependent Variable: Abnormal Return (Bank Announcements)					
		Sample: All Banks			Sample: Reclassifying Banks		
		All Announcements	Before Feb 13, 2019	Before Nov 1, 2008	All Announcements	Before Feb 13, 2019	Before Nov 1, 2008
Reclassification	-	-0.015	-0.027 **	-0.065 *			
		(-1.63)	(-2.04)	(-1.79)			
Regulatory Capital Effect	+	0.009	0.043 **	0.079 **	0.010	0.044 **	0.079 **
		(0.48)	(2.04)	(2.43)	(0.51)	(2.03)	(2.29)
Earnings Surprise	+	0.022 *	0.037 **	0.036	0.029	0.047	
		(1.80)	(1.99)	(1.05)	(1.52)	(1.26)	
Intercept		0.004	0.003	-0.002	-0.011	-0.025 **	-0.067 *
		(0.76)	(0.44)	(-0.19)	(-1.43)	(-2.04)	(-1.80)
Number of Observations		278	179	92	117	58	13
R-squared		0.02	0.05	0.08	0.02	0.06	0.16

Table 6 presents results from cross-sectional regressions that examine the determinants of abnormal stock returns to bank-specific reclassification announcements (equation (4) in section 5.1). For details on the variables, see Table 2 (variable definitions) and Table 3 (descriptive statistics). 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 regressions are based on a reduced sample of at most 117 reclassifying and 161 non-reclassifying banks. The first three specifications include both reclassifying and non-reclassifying banks, the last three specifications focus on reclassifying banks. While the first and fourth specification use all announcements, the other specifications examine subsets of earlier announcements (i.e., those made before February 13, 2009, or those made in October 2008). The table reports OLS coefficient estimates and t-statistics (in parentheses). The t-statistics are based on robust standard errors adjusted for heteroskedasticity. ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 7

Reclassification Disclosures and Bid-Ask Spreads

Independent Variables	Expected Sign	Dependent Variable: Log(Bid-Ask Spread)		
[1] Post-Reclassification	+	0.142 ** (2.49)	0.220 *** (2.89)	-0.001 (-0.01)
[2] Post-Reclassification * Complete Disclosure	-		-0.242 *** (-2.81)	0.018 (0.18)
[3] Post-Reclassification * Regulatory Capital Effect (Median Split)	+			0.475 *** (3.36)
[4] Post-Reclassification * Complete Disclosure * Regulatory Capital Effect (Median Split)	-			-0.539 *** (-3.12)
Log(Share Turnover)	-	-0.120 *** (-12.40)	-0.121 *** (-12.56)	-0.121 *** (-12.42)
Log(Market Value)	-	-0.293 *** (-5.03)	-0.292 *** (-5.03)	-0.295 *** (-4.95)
Log(Return Variability)	+	0.149 *** (9.59)	0.149 *** (9.60)	0.150 *** (9.64)
Fixed Effects		Bank, Week	Bank, Week	Bank, Week
Number of Observations		14,502	14,502	14,502
R-squared		0.84	0.84	0.84
Additional Tests				
[1] + [2]	+ / -		-0.022 (-0.44)	0.017 (0.21)
[1] + [3]	+			0.474 *** (3.66)
[1] + [2] + [3] + [4]	+ / -			-0.047 (-0.81)

Table 7 presents results from panel regressions that relate bid-ask spreads to the reclassification choice and to the reclassification disclosure strategy (equations (5) and (6) in section 6.1). The variables are measured at the bank-week level. For details on the variables, see Table 2 (variable definitions) and Table 3 (descriptive statistics). The estimation period is July 1, 2008 to June 30, 2009 (i.e., we include each bank with a maximum of 52 weekly observations in the panel regression). The sample comprises 14,502 bank-week observations from 124 reclassifying and 178 non-reclassifying banks. The table reports OLS coefficient estimates and t-statistics (in parentheses). The t-statistics are based on robust standard errors adjusted for heteroskedasticity and clustering by bank. ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

FIGURE 1

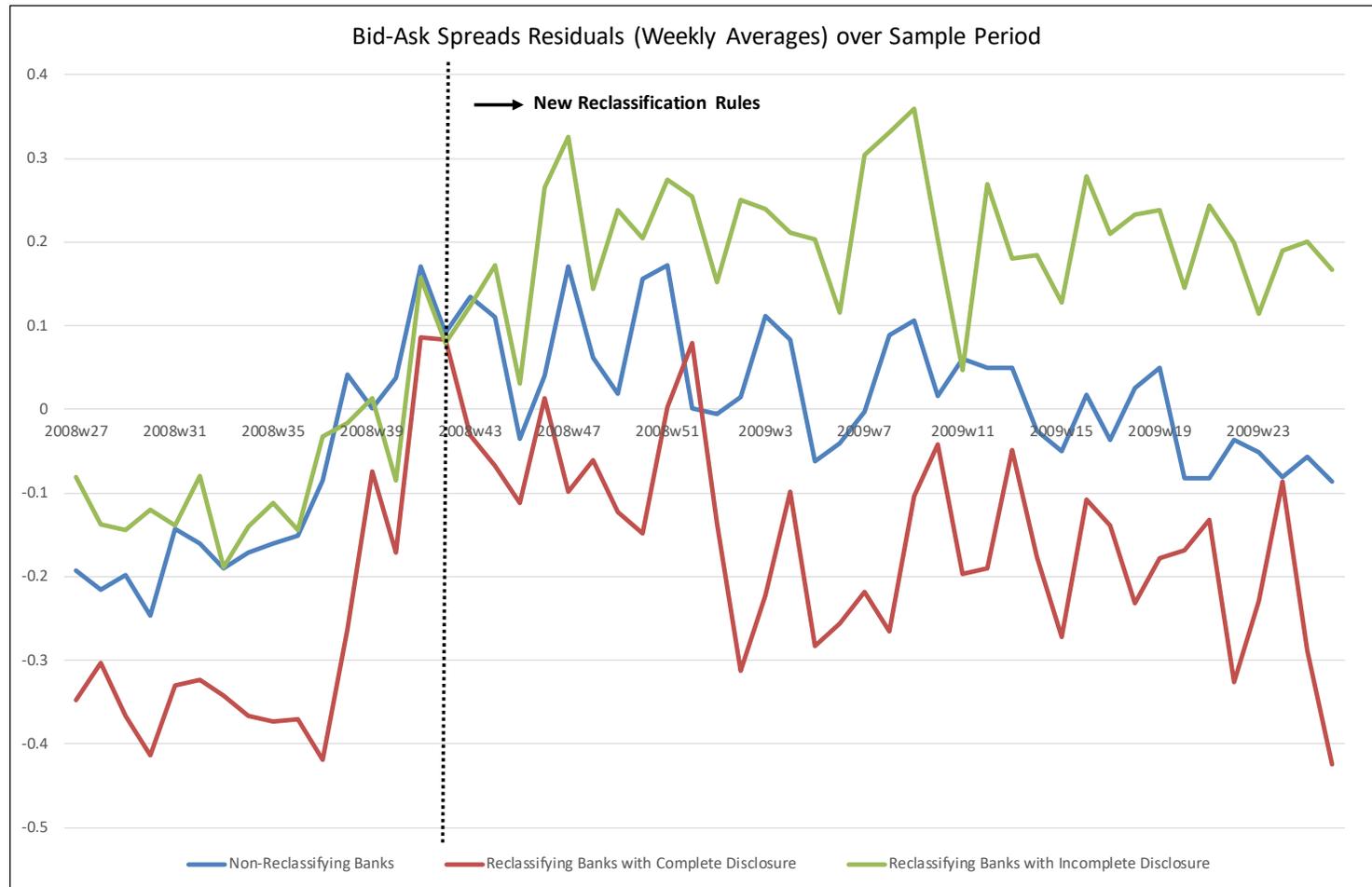*Reclassification Disclosures and Bid-Ask Spreads*

Figure 1 plots weekly averages of bid-ask spread residuals for three groups of banks: non-reclassifying banks, reclassifying banks with complete disclosure and reclassifying banks with incomplete disclosure. The residuals are based on a regression that uses *Log(Bid-Ask Spread)* as dependent variable and *Log(Share Turnover)*, *Log(Market Value)* and *Log(Return Variability)* as independent variables. For details on the variables, see Table 2 (variable definitions) and Table 3 (descriptive statistics). The sample and the estimation period are the same as in Table 7.