Market Reaction to the Expected Loss Model in Banks

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Abstract

We investigate how investors perceive the adoption of new expected-loss model (ELM) for impairment incorporated in the IFRS 9. Using a sample of European listed banks covering the period of standard setting process of IFRS 9, we provide several important contributions to the academic and policy debate. First, we document a positive market reaction to the ELM adoption events. Second, we find that investors perceive that the potential benefits of ELM will be more pronounced for larger banks, banks with lower profitability and higher systemic risk and for those that received a public bailout or that are located in a country with high sovereign debt risk. Finally, we provide evidence that banks with more positively skewed returns, which proxies for a tendency to delay bad news, and banks that use advanced internal-based ratings models react more positively to the regulation. These results are robust to a variety of specifications, and suggest that ELM may lead to greater bank transparency and more effective market discipline, which are fundamental for improving financial stability.

Keywords: *Expected loss model; impairment; IFRS 9; loan loss provisions; stock market reaction.*

"The shift from an incurred loss approach to an ECL approach for measuring impairment allowances is the most important change introduced by IFRS 9."

European Systemic Risk Board (ESRB), 17 July 2017

1. Introduction

Accounting for loan loss provisioning is a critical issue for banks, because of its implications for financial reporting transparency, regulatory capital and financial stability (Bushman and Williams 2012; Bushman, 2016).

In this paper we offer an empirical investigation of how stock markets respond to the new rules for impairment incorporated in the standard setting process of the International Financial Reporting Standard (IFRS) 9, which replaces the International Accounting Standard (IAS) 39 and is effective for fiscal years beginning on January 1, 2018. We focus on this fundamental overhaul of accounting regulation, which is a key component of IFRS 9 framework, due to the recent vocal concerns arising from the complying with new requirements for the banking industry, as the following quote illustrates:

"[…] from the outreach activities performed, the EBA understands that the main impact of IFRS 9 for banks will most likely be due to the new impairment requirements rather than the requirements on classification and measurement or general hedging. As mentioned above, we understand that the new impairment model should lead to an earlier recognition of credit losses, affecting more financial assets and at a higher amount than the current IAS 39.".

Andrea Enria,
Chairman of European Banking Authority, 26 June 2015

There is robust evidence that accounting rules for loan loss provisions may affect the macroeconomy and bank risk-taking (Laeven and Majnoni, 2003; Bouvatier and Lepetit, 2008; Beatty and Liao, 2011; Bushman and Williams, 2012 and 2015; Cohen et al., 2014; Agénor and Zilberman, 2015; Krüger et al., 2018), but the empirical evidence on the market reaction to the IFRS 9 is still scant (Onali and Ginesti, 2017).

This is of fundamental importance because, as reported in the Deloitte's fifth Global IFRS Banking Survey on May 2015, most of the global banks and financial institutions estimate that these new rules will have a substantial impact in terms of losses recognition, capital requirements and bank account

transparency. Additionally, accounting rules for loan loss provision can impinge on bank loan prices, especially during financial crises: for example, Lim et al. (2014) provide evidence that delayed loss recognition can affect bank loan pricing during the crisis.

Most of the existing literature has focused on the ILM under IAS 39 (among others, Gebhardt & Novotny-Farkas, 2011; O'Hanlon, 2013), and only Armstrong et al. (2010) investigate IAS 39 from a "capital markets" perspective, considering announcements concerning the adoption of IAS 39 and IAS 32.

Recent research has so far failed to establish whether the ELM had a significant impact on banks' shareholders wealth (Onali and Ginesti, 2015), and changes in financial reporting rules may have only second-order effects on firm value (Zimmerman, 2013). For this reason, it is important to understand the mechanism through which the ELM rules have an impact on the price of bank stocks. Therefore, an examination of investors' perception about the new approach for loan-loss impairment is crucial to inform the academic and policy debate. We fill this important gap in the literature.

Our main contribution to the literature is to improve our understanding on the capital market effects of IFRS, by providing further empirical evidence with particular reference to new ELM, in the European banking industry. Because of the alleged role of ELM in improving transparency, we focus on a "monitoring" channel and expect that shareholders of riskier banks should benefit from the ELM because of it enhances market discipline. A higher degree of transparency improves the ability of investors to obtain information about banks' safety and soundness (Acharya and Ryan 2016), meaning that the switch to ELM may lead to a reduction in monitoring costs. This hypothesis is confirmed by our results, which show a positive reaction to the ELM announcements: for the 13 announcements related to ELM, the average 5-day Cumulative Abnormal Return (CAR) ranges between 1.8% and 2.5%, depending on the specification used.

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We find that the price reaction is stronger for banks with lower profitability, and for banks with higher levels of systemic risk (proxied by either bank size or Marginal Expected Shortfall) or banks that received a bailout. We also find evidence that banks located in countries with higher sovereign debt risk react more positively to the ELM announcements. This latter finding suggests that IFRS 9 may benefit banks in countries where there is a feedback effect between sovereign debt risk and the risk of the domestic financial sector (Acharya et al., 2014). In addition, we provide evidence that banks whose stock returns are more positively skewed experience a stronger positive price reaction. Since positive skewness in stock returns can proxy for the tendency to delay bad news, this result is consistent with the view that shareholders of banks that are more likely to delay loss recognition react more positively to ELM announcements. Finally, our results suggest that banks that use advanced internal-based ratings credit models react more positively to the new regulation. This finding supports the view that IFRS 9 credit models are very data-intensive and therefore compliance costs may be substantial for banks that employ standard or foundation internal-based ratings approaches.

Our results are robust to the inclusion of control variables based on corporate governance characteristics of the banks in our sample, suggesting that our results not driven by omitted variable bias related to corporate governance quality.

The rest of the paper is structured as follows. Section 2 reports the institutional background and develops the hypotheses. Section 3 describes the sample and reports the events under examination. Section 4 describes the methodology. Section 5 discusses the results. Section 6 concludes the paper.

2. Institutional background and hypotheses development

2.1 IFRS and the capital markets

The debate about the potential implications of IFRS adoption for capital markets has mainly focused on nonfinancial companies (Daske et al., 2008 and 2013; Ahmed et al., 2013; Brüggemann et al., 2013; Ramanna and Sletten, 2014; Christensen et al., 2015; Ball et al., 2015). Although a vast

literature suggests that IFRS are a source of benefits for capital markets, there are also scholars claiming caution in the interpretation of these outcomes (De George et al., 2016), and some literature argues that the impact of IFRS adoption on capital markets may not be as important as previously thought (Christensen, 2012; Christensen et al., 2013; Daske et al., 2013).

Recent empirical studies have found evidence of positive capital markets effects resulting from the implementation of IFRS (Daske et al., 2013; Horton et al., 2013) and during the events leading up to IFRS adoption (Armstrong et al., 2010; Leung and Joss 2013; Prather-Kinsey and Tanyi, 2014; Onali and Ginesti, 2014; Onali et al., 2017; Chen et al., 2017). The main channel through which IFRS should bring about benefits to international investors is the level of information quality of financial statements (Ball, 2006): IFRS should decrease the degree of asymmetric information and improve comparability across countries. This should, in turn, improve market efficiency (Daske et al., 2008), analyst predictions (Byard et al., 2011), and cross-border investment (Gordon et al., 2012). Because asymmetric information also leads to higher monitoring costs (Acharya and Ryan, 2016), IFRS is also likely to reduce the cost of capital. Consistent with this hypothesis, Li (2010) provides evidence that the mandatory adoption of IFRS in the EU reduced the cost of capital of firms, but only for countries with strong legal enforcement.

2.2 A comparison between IAS 39 and IFRS 9

The recognition of expected losses under IFRS 9 is substantially different from the IAS 39 provisioning rules. Table 1 reports the main differences in the impairment models according to IFRS 9 and IAS 39.

[Insert Table 1 here]

The main innovation of IFRS 9 is the 'three-stage' ELM model based on the deterioration in credit quality of financial assets since initial recognition (Novotny-Farkas, 2016): banks are required to estimate periodically expected credit losses and adjust loan loss provisions accordingly. Such innovation was necessary because, as emphasized by IASB (2014a) in a press release (24 July 2014):

"During the financial crisis, the delayed recognition of credit losses on loans (and other financial instruments) was identified as a weakness in existing accounting standards".

Financial instruments are classified into three categories. Financial instruments that have not suffered from a significant deterioration in credit risk since initial recognition, or that have low credit risk,[1] are classified as "*Stage 1*" instruments. For *Stage 1* assets, banks need to recognize the 12-month expected credit loss and the interest revenue on these assets (estimated using the effective interest rate method) is based on their gross carrying amount. *Stage 2* includes financial assets that have had a significant deterioration in credit risk since initial recognition, even in the absence of objective evidence of impairment. For this category, the lifetime expected credit losses should be recognized, and the effective interest rate method should be applied to the gross carrying amount, similar to *Stage 1* assets. Finally, assets classified under the *Stage 3* category are those for which there is objective evidence of impairment at the reporting date. For these assets, lifetime expected credit losses should be recognized, and the effective interest rate method should be applied to the net carrying amount (PwC, 2014; Deloitte, 2016).

Gebhardt and Novotny-Farkas (2011) argue that the ILM under the IAS 39 restricts earnings smoothing because of the need of an objective evidence of impairment. On the other hand, IFRS 9 requires managers to use greater discretion in estimating the effects of changes in credit risks, on the basis of both backward-looking and forward-looking information. This discretion is deemed necessary to ensure that banks accumulate enough reserves during periods of growth to absorb losses in periods where more credit losses are anticipated (Gomaa et al., 2018). The use of forward-looking information is important because the backward-looking nature of the ILM has been an important factor contributing to the deterioration of transparency of banks' financial statements in the run-up and during the financial crisis (Laux and Leuz, 2010; Beatty & Liao, 2011; Laux, 2012).

[1] An 'investment grade' rating may be considered to be a justification for a "low credit risk" judgement (Deloitte, 2016).

2.3 Aggregate market reaction to ELM announcements

The IASB and international policymakers have emphasized the key role of ELM in improving investor confidence in banks' balance sheets (IASB, 2014b) and expect the ELM to have a major impact on the European banking system. Because of the potential negative externalities of financial instability, the application of the ELM is likely to affect the European economy as a whole (European Securities and Markets Authority, 2015).

The introduction of the ELM approach aims to ensure that the reported expected loan losses reflect the economic value of the financial instruments held by a bank (Krüger et al., 2018). As reported in Table 1, the ELM is based on a three-stage approach which influences banks' timing choices in the recognition of impairment. Financial instruments can be classified at *Stage 1* if there are expected loan losses which may occur in a 12-month window after the reporting date, even in the absence of "objective evidence of impairment" (the triggering event for IAS 39). Thus, recognition of expected losses should happen earlier than when using IAS 39. The consideration of forward-looking information for the estimation of the Probability of Default (PD) and other important parameters is essential under both IFRS 9 and Basel III rules.

A timely recognition of forthcoming losses is supposed to enhance information transparency, leading to more effective market discipline (Bushman and Williams, 2015; Novotny-Farkas, 2016; European Systemic Risk Board, 2017). Thus, to the extent that the timely recognition of impairment losses into financial statements improve the ability of investors to better evaluate bank fundamentals (facilitating market discipline), share prices may respond positively to this new regulation (Bushman and Williams, 2015).

Given these arguments, we predict an overall positive market reaction to the new ELM promoted by the adoption of IFRS 9 and hypothesize the following:

H1: *ELM announcements lead to a positive price reaction for European bank stocks.*

We test for the validity of ***H1*** by estimating the reaction of a portfolio (both market-weighted and equal weighted) of banks in 15 Western European countries, using as a benchmark the DJ STOXX Global 1800 Index Ex Europe. The constituents of this index are the 1,800 world largest international firms excluding the European firms in the index. Using this index allows us to avoid including large European banks in our benchmark.

2.4 ELM announcements and bank profitability

The price reaction to ELM announcements may depend on bank profitability. In particular, market participants perceive the benefits of IFRS 9 as more pronounced for banks with worse performance, because they may be more likely to engage in risk-shifting activities in the absence of market discipline (Bushman and Williams 2012). Since the shift from the ILM to the ELM should improve market discipline and reduce risk-shifting, banks with poor profitability should react better than banks with better profitability to ELM announcements:

H2: *A higher profitability has a negative impact on the price reaction to ELM.*

We test this hypothesis using ROA (returns on total assets) as a proxy for bank performance.

2.5 ELM announcements and bank systemic risk

We expect that the net benefits of IFRS 9 would more pronounced for banks with higher degree of systemic risk (Bushman and Williams, 2015). In fact, there is some evidence that higher level of bank riskiness might create some incentives for managers to engage in income-decreasing accounting choices (Doyle et al., 2007; Leventis et al., 2011). Therefore, our third hypothesis is as follows:

H3: *A higher degree of systemic risk has a positive impact on the price reaction to ELM.*

We proxy for systemic risk using several variables. First, we use *Size*, defined as the log of total assets (Bayazitova and Shivdasani, 2012). This is also consistent with the literature that larger banks banks are more exposed to political and regulatory scrutiny, so they are more likely to engage in earnings management activities (Watts and Zimmerman, 1990; Duru et al., 2018). Second, we use

Marginal Expected Shortfall (hereafter, *MES*). Moreover, we consider a dummy variable equal to one if the bank receives a public bailout and zero otherwise (*Public Bailout*).

The risk of the financial sector can also be related to sovereign debt risk, and there could be a feedback effect between the sovereign debt risk and the risk of the financial sector in a country (Acharya et al., 2014). In line with ***H3***, we argue that there should be a positive relationship between sovereign debt risk and the price reaction of banks in certain country:

H4: *A higher degree sovereign debt risk has a positive impact on the price reaction to ELM.*

To capture the effect of sovereign debt risk during the Eurozone crisis (which lasted throughout our sample period), we add a dummy variable (*GIIPS*) identifying countries which during the Eurozone crisis may have had particularly unstable banking systems: Greece, Ireland, Italy, Portugal, and Spain (Bruno et al. 2018).

2.6 ELM announcements, credit risk and delayed loss recognition

Regulators argue that ILM of IAS 39 contributes to pro-cyclicality by increasing the tendency of banks to increase (decrease) LLP during recessionary (expansionary) periods (Financial Stability Forum, 2009; Financial Crisis Advisory Group, 2009). Recognition of loan losses under the ILM is essentially postponed until borrowers default, and therefore the ILM may amplify the impact of negative shocks and exacerbate the pro-cyclicality effect during recent financial turmoil (Beatty and Liao, 2011 and 2014; Laux, 2012; Agénor and Zilberman, 2015; Financial Stability Forum, 2009; Basel Committee on Banking Supervision, 2009).

Bushman and Williams (2015) claim that delayed recognition of expected loan losses has multiple implications for bank risk and financial stability: it may conceal a bank's portfolio risk attributes; it may hinder identification of the actual amount of capital available to buffer unexpected losses; it may create expected loss overhangs, leading to lower future bank profitability and capital ratios.

Bushman and Williams (2012 and 2015) suggest that a forward-looking approach, typical of ELM, is able to capture future deteriorations in bank loan portfolios, decreasing bank opacity and enhancing the ability of investors to assess a bank risk, leading to stronger market discipline (Duru et al., 2018).

These arguments suggest that the ELM may reduce the likelihood of opportunistic build-ups of loss overhangs and the overstatement of regulatory capital, enhancing transparency and supporting more active external monitoring on the bank managers lending strategies (Vyas, 2011; European Banking Authority, 2015; Novotny-Farkas, 2016).

We expect that, because the new ELM is likely to reduce the probability that banks delay the recognition of credit losses, banks with a higher probability of delayed loss recognition should benefit to a greater extent from the switch to ELM.

H5: *A higher degree delayed loss recognition has a positive impact on the price reaction to ELM.*

We use as a proxy the monthly skewness of daily stock returns (*Skewness*). *Skewness* tends to be positive for firms that delay the release of bad news (Bae et al., 2006). The release of bad news is likely to be positively associated with delayed releases of loan losses, and thus a larger positive *Skewness* may indicate a less timely recognition of loan losses.

2.7 ELM announcements and credit risk models

Basel III rules require banks to measure credit risk to calculate regulatory capital. Banks that adopt the standardized approach are likely to lack the data to fulfil the IFRS 9 requirements, because they rely on external credit assessments to measure credit risk. On the other hand, banks that use advanced Internal Rating Based (IRB) approaches are likely to be able to leverage the data used for Basel III compliance to meet IFRS 9 requirements (Temim, 2016), although the models need to be adjusted (Miu and Ozdemir, 2016).

Banks that employ advanced IRB models should therefore be subject to lower compliance costs relative to banks the employ the standardized approach, leading to a better price reaction to ELM announcements.

H6: *The use of advanced IRB approaches has a positive impact on the price reaction to ELM.*

To test this hypothesis, we construct two dummy variables: *F-IRB*, which is equal to one if foundation models are used, and zero otherwise; and *A-IRB*, which is equal to one if advanced IRB models are used, and zero otherwise.

3 Data and event dates

3.1 Sample

We merge and collect information from different data sources. We collect information on bank-specific variables (financial statements data and ownership structure data) from Bankscope, apart from *MES*, for which we collect from V-Stern Lab's website.[2] Second, we collect information on public bailouts on European banks from Mediobanca.[3] Finally, we collect information on corporate governance characteristics and the use of foundation and advanced IRB from bank annual reports.

We start our sample selection by choosing from Bankscope all listed banks from 15 European countries (Chen et al., 2013).[4] This selection criterion leads to 353 banks, but for 19 of these banks even basic financial data, such as total assets and net income, are missing. For the remaining 334 banks, we collect closing daily stock prices from Datastream for the period 2009-2014. Next, we exclude banks for which data on regulatory capital ratios are not available (resulting in 201 banks). Then, in line with Onali et al. (2016), we assume the presence of at least one annual report available from bank's institutional website for the period 2009-2014 (this step is necessary to collect data on corporate governance variables). These criteria result in a final sample of 115 banks. However, in the

[2] https://vlab.stern.nyu.edu/analysis/RISK.WORLDFIN-MR.GMES?selectedDate=2018-03-02.
[3] https://www.mbres.it/sites/default/files/resources/download_it/rs_Piani%20di%20stabilizzazione%20finanziaria.pdf.
[4] To avoid sample selection bias due to attrition, we include banks that were delisted over the sample period.

regressions to examine the determinants of the CARs the sample is further reduced, in some specifications, due to data availability.

To prevent the Subprime Mortgage Crisis which ended in June 2009 from affecting the estimation of the price reactions, our sample period goes from July 3, 2007 to December 31, 2014.[5,6]

[Insert Table 2 here]

Table 3 reports descriptive statistics (mean, standard deviation, minimum and maximum) of the variables we use in our tests.

[Insert Table 3 here]

3.2 Event dates

We identify 13 events over the period 2009-2014 that relate to the standard-setting process for the ELM introduced by IFRS 9. We consider as events public announcements related to news and press releases from the IASB and European Financial Reporting Advisory Group (EFRAG). These announcements are strictly related to the standard-setting process of IFRS 9 for Europe, because under EU accounting regulation each IFRS has to be approved through a specific procedure called "endorsement mechanism", which requires that EFRAG provide recommendations to the European Commission for the endorsement of IFRS in Europe.

In Table 4, we report the events associated with IFRS 9 that refer to the adoption of new impairment accounting rules.

[Insert Table 4 here]

To understand whether the events were of interest to the investors, we examine the extent to which the Google Search Volume Index (SVI) for the keyword "IFRS 9" is higher in the weeks

[5] Duca, John V. (Federal Reserve Bank of Dallas) (2014). "Subprime Mortgage Crisis". Federal Reserve History. https://www.federalreservehistory.org/essays/subprime_mortgage_crisis
[6] https://www.nber.org/cycles/

corresponding to the 13 events reported in Table 4. The literature has employed the Google SVI as a proxy for investor attention (Da et al., 2011; Drake et al., 2012). We run a two-sample t-test for the period from 3 May 2009 to 6 September 2014, as well as a Wilcoxon rank-sum test. Consistent with expectations, the SVI is significantly larger in weeks around IFRS 9 adoption events, with an average SVI equal to 55.30 for the events-weeks and 44.83 for the non-events weeks (p-values are: 0.0115 for the t-test and 0.0479 for the Wilcoxon rank-sum test). These results confirm that the events we have considered attracted investor attention, supporting the view that any significant price reaction around those dates is indeed related to IFRS 9 announcements.

4. Methodology

This section describes the methodology used to run the even study (Section 4.1) and for the subsequent analysis of the cross-sectional determinants of Cumulative Abnormal Returns (CARs) (Section 4.2).

4.1 Event study

The empirical literature on stock price reactions to announcements on IFRS adoption is quickly growing, and it covers both IFRS as a whole and specific accounting standards (Armstrong et al., 2010; Leung and Joss 2013; Prather-Kinsey and Tanyi, 2014; Onali and Ginesti, 2014). Recent contributions in the banking literature have employed event study methodology in the areas of banking regulation (Bruno et al., 2018) and monetary policy (Aït-Sahalia et al., 2012).

Despite the large amount of literature using event studies, there is no consensus on the choice of the method for estimating stock price reactions (Bruno et al., 2018). An important issue is, for example, the length of the event window. While Aït-Sahalia et al. (2012) stress that limiting the event window in running event studies allows reducing both the influence of confounding events and the influence of the turn of announcements/events in a relatively short period, according to Brown and Warner (1980) short event windows do not necessarily lead to better estimates of abnormal returns.

Similarly, there is no consensus in the literature regarding the length of the estimation window. For this reason, we provide a series of robustness tests, with respect to the length of both the event window and the estimation window, and we also explore the possibility that confounding events might affect the results.

To ensure that our results are robust to the length of the event window, for each of the 13 events we estimate the abnormal returns (ARs) for a five-day (-2,2) and a three-day (-1,1) event window (for robustness and consistency with Bruno et al., 2018). In our main tests, we assume both an estimation window of 120 trading days and 90 trading days in order to allow for potential parameter instability during the sample period. We decide to use shorter estimation windows than in other recent papers (for example, Bruno et al., 2018) to mitigate the impact of the 2007-2009 crisis on our analysis.

We compute the ARs using the market model based on daily log returns of each bank including day-of-the-week dummy variables (Kaplanski and Levy, 2010):

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t} + \sum_{d=2}^{5} \lambda_d D_d) \quad (1)$$

where D_d=1 if d=2 for Tuesdays, d=3 for Wednesdays, d=4 for Thursdays, d=5 for Fridays and D_d=0 otherwise.

Then, we estimate the corresponding CARs for the four event windows:[7]

$$CAR_{i,t} = \sum_{t=t1}^{t2} AR_{i,t} \quad (2)$$

We employ the DJ STOXX Global 1800 Index Ex as a proxy for the market portfolio. This proxy captures global macroeconomic events which are likely to have affected large European listed banks.

To test the hypothesis that market reactions to the announcements about the IFRS 9 are significantly different from zero, we use equal weighted and market-weighted portfolios for the bank

[7] Because we run our tests using four different event windows for our regressions, t_1 and t_2 can take different values. For instance, when we rely on 3-day estimation window (-1,1), t_1 indicates the trading day before the event while t_2 is the trading day after the event.

stocks in our sample. Specifically, we calculate the aggregate effect of the announcements referring to IFRS 9 by considering the sample-average CARs over all 13 events.

Importantly, we multiply by minus one the CAR for events with a negative effect on the likelihood of IFRS 9 adoption and implementation as proposed originally by IASB (Armstrong et al., 2010; Onali and Ginesti, 2014; Bruno et al., 2018). These events occur respectively on April 8, 2011 (event #5), and August 4, 2011 (event #6).

For event #5, EFRAG issued a comment letter[8] where it expressed concerns regarding the proposal to set a "floor" for credit losses expected to occur within the foreseeable future, adding that "if the IASB were to retain a floor in the model, EFRAG suggests that it would not be based on the notion of some indeterminate 'foreseeable future'" (EFRAG, p. 3). Moreover, EFRAG pointed out that "the IASB will need to consider the entire repackage of proposals before finalising the resulting standard" (EFRAG, p. 5).

Event #6 refers to an exposure draft issued by IASB (ED/2011/3 Amendments to IFRS 9 (2009) and IFRS 9 (2010): Mandatory Effective Date), which proposes to postpone the mandatory effective date from 1 January 2013 to 1 January 2015.

After multiplying the CARs for event #5 and event #6 by minus one, we then sum the CARs for all events to measure the market-wide reaction to the ELM announcements. Because computing the significance of CARs based on the assumption of normality may be inappropriate,[9] we employ bootstrap simulations to better evaluate the significance of the cumulative effect of all thirteen events (Armstrong et al., 2010; Bruno et al., 2018).

In our analysis of the aggregate reaction to ELM announcements, we also present the results for the total and average CAR after excluding event #12. This event is related to a statement by Mario Draghi (the president of the European Central Bank) which prompts the EU to swiftly progress with

[8] The document title is: "EFRAG"s position on the IASB Supplementary Document Financial Instruments: Impairment".
[9] The violation of the Normality assumption may lead to unreliable t-statistics.

the introduction of IFRS 9. This statement can be interpreted as a sign that the IFRS 9 will be introduced soon, but it could also suggest uncertainty about the overall progress of the IFRS 9 standard setting process (which may have prompted Mario Draghi to make the announcement). Additionally, this announcement occurred during a period of uncertainty about the convergence between IASB and FASB approaches, as suggested by a sentence in the same press release "Efforts between the global standard setter the IASB, and US counterpart FASB, to create a converged financial instruments standard ended earlier".[10]

We implement a two-step procedure to perform the bootstrap simulations. First, we exclude days, which fall in our event windows for the thirteen events, to consider only non-event trading days. Second, we randomly identify thirteen non-overlapping placebo events for the period of analysis. This step is repeated 1,000 times. Third, we compute the sum of the CARs for the thirteen events for each of the 1,000 samples of placebo tests (Bruno et al., 2018).

Finally, we compute the p-values by considering the number of cases for which a particular CAR is larger than the estimated value based on 2 tail-tests.

4.2 Cross-sectional determinants of CARs

In the second stage of our analysis we investigate the cross-sectional determinants of CARs. The baseline specifications are based on the following model:

$$CAR_{i,t} = \alpha + \beta X_{i,t-1} + \varepsilon_{i,t-1} \qquad (3)$$

Where X is one of the proxies related to our hypotheses (*ROA*,[11] *Size*, *MES*, *Bailout*, *GIIPS*, *Skewness*, *F-IRB* and *A-IRB*). All variables related to financial accounts data are lagged by one year to reduce simultaneity concerns (Bruno et al., 2018), and because we want to be sure that when the announcement is released to the public, information about X is already available. If this were not the

[10] https://www.accountancyage.com/aa/news/2354602/draghi-tells-eu-to-progress-swiftly-in-adopting-ifrs-9
[11] When we use net income to equity (ROE) instead of ROA the results remain unaltered.

case, it would be inappropriate to relate the heterogeneity of the price reactions to the values of the variables on the right hand side of the regression.

We run regressions with robust standard errors clustered at the bank level (Petersen, 2009) in order to adjust for the serial correlation within bank. Furthermore, we run separately the model for each of our main explanatory variables, to reduce the potential effect of multicollinearity.

In Appendix A we provide a more detailed description of the variables used in our empirical analysis.

5. Results

In Section 5.1 we provide the results for the aggregate effects of market reactions to announcements related to ELM. In section 5.2, we present the results of the cross-sectional determinants of the CARs.

5.1 Aggregate effects

Table 5 reports the first set of our results for the aggregate market reaction. We compute the total and average CARs for all thirteen events. In our estimations, we use both an equal-weighted and a market-weighted portfolio comprising the stocks of our sample banks. We use two estimation windows: one of 120 trading days and one of 90 trading days. To assess the statistical significance of the CARs, we compute bootstrapped p-values for the average CARs, based on 1,000 simulations.

[Insert Table 5 here]

The average CARs are positive and statistically significant at the 5% level or 1% level for the equal-weighted portfolio and market-weighted portfolio of sample banks. The same results hold when we use an event window (-1,1). The results remain very similar after excluding event #12. Importantly, the price reaction is stronger for the market-weighted portfolio than for the equal-weighted portfolio, suggesting that bigger banks react more positively to the introduction of the new

account rule than smaller banks. This result is consistent with the results for *Size* reported in section 5.2.

To check the sensitivity of our results to data availability for the variable *MES* (for which data is available only for around 60 banks), we repeat the analysis considering only observations for which there is a value for *MES*. The results are very similar to those reported in Table 5 and they are reported in Appendix B.

5.2 Cross-sectional determinants of CARs

Table 6 reports the results for the cross-sectional determinants of the market reactions for the event window (-2,2).[12]

[Insert Table 6 here]

We cluster standard errors at the bank level, to allow for the possibility that observations for a given bank may not be independent over time (Chhaochharia and Laeven, 2009). In Panel A we report the results for all the observations available, while in Panel B we report the results after excluding bank-year observations for which there may be confounding events. The results are very similar across the two panels.

We use the LEXIS/NEXIS database to search for concurrent news on event-dates for each bank in our sample. We re-estimate our main regressions after removing the bank-event observations for which there are confounding events (around 70 observations).

The coefficient on *ROA* is negative and statistically significant in Column (1). These results support ***H2***. *Size* enters the regressions with a positive and statistically significant coefficient, similar to the other proxies for systemic risk, *MES* and *Public Bailout*. Similarly, the coefficients on *GIIPS* are positive and significant, suggesting that banks in countries with higher sovereign debt risk react better than those in other countries. Therefore, these results support ***H3*** and ***H4***. The results for

[12] We obtain similar results when we use the event window (-1,1), although the results for *F-IRB* and *A-IRB* tend to become insignificant.

Skewness suggest that banks that tend to delay loss recognition react better to ELM announcements, consistent with ***H5***. The results for *F-IRB* and *A-IRB* provide some evidence consistent with ***H6***, because the coefficient on *F-IRB* is insignificant, but the coefficient on *A-IRB* is positive and significant at the 5% level. These results suggest that banks that adopt advanced IRB models may have lower compliance costs, while banks adopting foundation IRB models may have compliance costs similar to those using a standardized approach.

These results are robust to the exclusion of bank-year observations for which there may be confounding events, as reported in Panel B of Table 6.[13]

5.3. Robustness checks

According to our "monitoring" channel hypothesis, shareholders of riskier banks should benefit from the ELM because it enhances market discipline. However, since internal monitoring mechanisms may affect banks' loan portfolio choice, it may be argued that there may be an omitted variable bias problem in our analysis. In particular, previous literature provides evidence that board characteristics and managerial ownership may affect the probability of earnings management (Ng and Stoeckenius, 1979; Larcker et al., 2007; Barth et al., 2008; Dechow et al., 2010).

For this reason, it is important that we investigate whether corporate governance variables may help to explain the variation in CARs. We perform additional regressions considering variables related to: board size and independence, managerial entrenchment, and CEO gender.

We proxy for the size of the board of directors with the log of total members of bank's boards, *Board Size (ln)* (Vallascas et al., 2017) and for *Board Independence* with the fraction of independent directors. Following Onali et al. (2016), we introduce two measures of CEO entrenchment: *CEO*

[13] To improve robustness, we run the same regressions used for Table 6, Panel A, after excluding Systemically Important Financial Institutions (SIFIs), as listed in the document available at: http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/574406/IPOL_BRI(2016)574406_EN.pdf.
We obtain virtually the same results as in Table 6, Panel A, although the coefficient on *Skewness* is statistically statistically significant at the 10% level. These results are reported in Appendix C, Panel A. When we also exclude observations pertaining to event #12 the results remain unaltered, as shown in Appendix C, Panel B. When we remove the confounding events from our sample, the coefficient on *Skewness* is statistically significant at the 10% level.

Ownership and *CEO Tenure*.[14] Finally, we also consider a measure of board members' entrenchment, *Board Ownership*, which is defined as the percentage of board members' share ownership.

Furthermore, we also investigate whether gender differences may explain the variation in CARs, following previous literature documenting that CFO gender affects financial reporting choices (Francis et al., 2015). We include a dummy variable, which takes on the value of one if the bank has female CEO and zero otherwise (*CEO Female*).

[Insert Table 7 here]

The coefficients on *Widely Held*, *Board Independence*, *Board Ownership*, and *Female CEO* are statistically insignificant. However, the coefficient on *CEO Ownership* and *CEO Tenure* are negative and significant at the 5% level, while the coefficient on *Board Size* is positive and statistically significant at the 10% level. Onali et al. (2016) interpret *CEO Ownership* and *CEO Tenure* as proxies for CEO entrenchment. Therefore, these results might indicate that entrenched CEOs may exploit the higher degree of managerial discretion incorporated in the ELM to engage in opportunistic behaviour. However, once we include all the variables used in Table 6 as controls, none of the corporate governance characteristics considered in Panel A seems to bear any effect on the price reaction.

In Table 8 we report the results for robustness tests based on Table 6. In Table 8 Panel A we control for the ownership structure and corporate governance characteristics used in Table 7 Panel A (*Widely Held*, *Board Independence*, *Board Size*, *CEO Ownership*, *Board Ownership*, *Female CEO*, and *CEO Tenure (ln)*). The results remain very similar, although the coefficient on *GIIPS* becomes insignificant. In Panel B we report the results after removing event #12, similar to what we did for the aggregate analysis reported in section 4.1. When we remove the observations related to potentially

[14] Onali et al (2016) define *CEO Ownership* and *CEO Tenure* respectively as CEO equity stake in the bank and the log of the number of years for which CEO has been in charge.

confounding events, the coefficient on *GIIPS* becomes significant again (at 1% level). For the other variables, the results remain virtually the same as those reported in Table 6.[15]

[Insert Table 8 here]

6. Conclusions

This study is the first attempt to understand whether changes in international accounting standards for loan loss provisions is an appropriate "cure" to restore confidence in banks' balance sheets among international investors.

We employ event study methodology to investigate whether the ELM has been perceived by international investors as value-enhancing. We test this hypothesis on a sample of European listed banks domiciled in countries where IFRS are mandatory, encompassing 13 announcements related to the standard-setting process of IFRS 9.

Our findings suggest that there is an overall positive reaction to the ELM announcements. Moreover, we examine the cross-sectional determinants of the CARs and provide evidence that banks with lower profitability, higher systemic risk, higher sovereign debt risk, and higher skewness in stock returns (which proxies for the tendency to delay bad news) tend to react more positively to ELM announcements. Banks that adopt advanced IRB models also tend to react better than those using the standardized approach or a foundation IRB approach. These results are robust to a battery of robustness checks: different lengths of the estimation window, the exclusion of SIFIs from the sample, the exclusion of observations for which there are potentially confounding events, and the inclusion of corporate governance variables in the regressions.

[15] To further improve the robustness of our results, we employ AR(1)-GARCH(1,1) models to estimate the regressions (Bruno et al., 2018). Our results remain very similar to those reported in Table 5.

Our results are consistent with the view that the shift from ILM to ELM may improve market discipline, leading to more stable banking systems, but for banks that do not employ advanced IRB models the compliance costs may be substantial.

Finally, our paper is subject to the limitations of event studies: our findings are valid to the extent that market perceptions about the ELM, as measured by the estimated price reaction to ELM announcements, are correct. Future work in this area should aim at developing this strand of research further by assessing the impact of ELM at a later stage, when its long-term consequences unfold. However, this type of empirical analysis will only be possible years after the implementation of ELM.

References

Acharya, V. V., Drechsler, I., & Schnabl, P. (2014). A Pyrrhic Victory? - Bank Bailouts and Sovereign Credit Risk. *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*(2), 277-340.

Agénor, P. R., & Zilberman, R. (2015). Loan loss provisioning rules, procyclicality, and financial volatility. *Journal of Banking & Finance*, *61*, 301-315.

Ahmed, A. S., Neel, M., & Wang, D. (2013). Does mandatory adoption of IFRS improve accounting quality? Preliminary evidence. *Contemporary Accounting Research*, *30*(4), 1344-1372.

Ait-Sahalia, Y., Andritzky, J., Jobst, A., Nowak, S., & Tamirisa, N. (2012). Market response to policy initiatives during the global financial crisis. *Journal of International Economics*, *87*(1), 162-177.

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*(1), 31-61.

Bae, K. H., Lim, C., & Wei, K. J. (2006). Corporate governance and conditional skewness in the world's stock markets. *The Journal of Business*, *79*(6), 2999-3028.

Ball, R. (2006). International Financial Reporting Standards (IFRS): pros and cons for investors. *Accounting and Business Research*, *36*(sup1), 5-27.

Ball, R., Li, X., & Shivakumar, L. (2015). Contractibility and transparency of financial statement information prepared under IFRS: Evidence from debt contracts around IFRS adoption. *Journal of Accounting Research*, *53*(5), 915-963.

Barth, M. E., Landsman, W. R., & Lang, M. H. (2008). International accounting standards and accounting quality. *Journal of Accounting Research*, *46*(3), 467-498.

Basel Committee on Banking Supervisor (BCBS) (2009). *Guiding principles for the replacement of IAS 39*, press release.

Bayazitova, D., & Shivdasani, A. (2012). Assessing TARP. *The Review of Financial Studies*, 377-407.

Beatty, A., & Liao, S. (2011). Do delays in expected loss recognition affect banks' willingness to lend? *Journal of Accounting and Economics*, *52*(1), 1-20.

Beatty, A., & Liao, S. (2014). Financial accounting in the banking industry: A review of the empirical literature. *Journal of Accounting and Economics*, *58*(2-3), 339-383.

Bouvatier, V., & Lepetit, L. (2008). Banks' procyclical behavior: Does provisioning matter?. *Journal of International Financial Markets, Institutions and Money*, *18*(5), 513-526.

Brüggemann, U., Hitz, J. M., & Sellhorn, T. (2013). Intended and unintended consequences of mandatory IFRS adoption: A review of extant evidence and suggestions for future research. *European Accounting Review*, *22*(1), 1-37.

Bruno, B., Onali, E., & Schaeck, K. (2018). Market Reaction to Bank Liquidity Regulation. *Journal of Financial and Quantitative Analysis*, 1-37.

Bushman, R. M. (2016). Transparency, Accounting Discretion, and Bank Stability. *Federal Reserve Bank of New York Economic Policy Review*, *22*(1), 129.

Bushman, R. M., & Williams, C. D. (2012). Accounting discretion, loan loss provisioning, and discipline of banks' risk-taking. *Journal of Accounting and Economics*, *54*(1), 1-18.

Bushman, R. M., & Williams, C. D. (2015). Delayed expected loss recognition and the risk profile of banks. *Journal of Accounting Research*, *53*(3), 511-553.

Byard, D., Li, Y., & Yu, Y. (2011). The effect of mandatory IFRS adoption on financial analysts' information environment. *Journal of Accounting Research*, *49*(1), 69-96.

Chen, C., Young, D., & Zhuang, Z. (2013). Externalities of mandatory IFRS adoption: Evidence from cross-border spillover effects of financial information on investment efficiency. *The Accounting Review*, *88*(3), 881-914.

Chen, C., Lee, E., Lobo, G. J., & Zhu, J. (2017). Who Benefits From IFRS Convergence in China?. Journal of Accounting, Auditing & Finance, *Forthcoming*.

Chhaochharia, V., & Laeven, L. (2009). Corporate governance norms and practices. *Journal of Financial Intermediation*, *18*(3), 405-431.

Christensen, H. B. (2012). Why do firms rarely adopt IFRS voluntarily? Academics find significant benefits and the costs appear to be low. *Review of Accounting Studies*, *17*(3), 518-525.

Christensen, H. B., Hail, L., & Leuz, C. (2013). Mandatory IFRS reporting and changes in enforcement. *Journal of Accounting and Economics*, *56*(2-3), 147-177.

Christensen, H. B., Lee, E., Walker, M., & Zeng, C. (2015). Incentives or standards: What determines accounting quality changes around IFRS adoption? *European Accounting Review*, *24*(1), 31-61.

Cohen, L. J., Cornett, M. M., Marcus, A. J., & Tehranian, H. (2014). Bank earnings management and tail risk during the financial crisis. *Journal of Money, Credit and Banking*, *46*(1), 171-197.

Da, Z., Engelberg, J., & Gao, P. (2011). In Search of Attention. *The Journal of Finance*, *66*(5), 1461-1499.

Daske, H., Hail, L., Leuz, C., & Verdi, R. (2008). Mandatory IFRS reporting around the world: Early evidence on the economic consequences. *Journal of Accounting Research*, *46*(5), 1085-1142.

Daske, H., Hail, L., Leuz, C., & Verdi, R. (2013). Adopting a label: Heterogeneity in the economic consequences around IAS/IFRS adoptions. *Journal of Accounting Research*, *51*(3), 495-547.

De George, E. T., Li, X., & Shivakumar, L. (2016). A review of the IFRS adoption literature. *Review of Accounting Studies*, *21*(3), 898-1004.

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, *50*(2-3), 344-401.

Deloitte (2016). IFRS 9: Financial Instruments – high level summary. Available at: https://www2.deloitte.com/ru/en/pages/audit/articles/2016/ifrs-9-financial-instruments.html

Doyle, J. T., Ge, W., & McVay, S. (2007). Accruals quality and internal control over financial reporting. *The Accounting Review*, *82*(5), 1141-1170.

Drake, M. S., Roulstone, D. T., & Thornock, J. R. (2012.) Investor Information Demand: Evidence from Google Searches Around Earnings Announcements. *Journal of Accounting Research*, *50*(4), 1001-1040.

Duru, A., Hasan, I., Song, L., & Zhao, Y. (2018). Bank accounting regulations, enforcement mechanisms, and financial statement informativeness: cross-country evidence. *Accounting and Business Research*, 1-35.

European Banking Authority (EBA) 2015. The EBA's views on the adoption of IFRS 9 Financial Instruments (IFRS 9), June 2015. Available at https://www.eba.europa.eu/documents/10180/943157/Letter+to+EFRAG+Board+on+IFRS+9+endorsement.pdf

European Securities and Markets Authority (ESMA) (2015). EFRAG draft endorsement advice on adoption IFRS 9 financial instruments. Available at https://www.esma.europa.eu.

European Systemic Risk Board (ESRB) (2017). Report title:" Financial stability implications of IFRS 9". Available at https://www.esrb.europa.eu.

Financial Crisis Advisory Group (FCAG). 2009. *Report of the Financial Crisis Advisory Group*, July 28.

Financial Stability Forum (FSF) (2009). *Report of the Financial Stability Forum on addressing procyclicality in the financial system*, 2 April.

Francis, B., Hasan, I., Park, J. C., & Wu, Q. (2015). Gender differences in financial reporting decision making: Evidence from accounting conservatism. *Contemporary Accounting Research*, *32*(3), 1285-1318.

Gebhardt, G. U., & Novotny-Farkas, Z. (2011). Mandatory IFRS adoption and accounting quality of European banks. *Journal of Business Finance & Accounting*, *38*(3-4), 289-333.

Gomaa, M., Kanagaretnam, K., Mestelman, S., & Shehata, M. (2018). Testing the Efficacy of Replacing the Incurred Credit Loss Model with the Expected Credit Loss Model. *European Accounting Review, forthcoming.*

Gordon, L. A., Loeb, M. P., & Zhu, W. (2012). The impact of IFRS adoption on foreign direct investment. *Journal of Accounting and Public Policy*, *31*(4), 374-398.

Horton, J., Serafeim, G., & Serafeim, I. (2013). Does mandatory IFRS adoption improve the information environment? *Contemporary Accounting Research*, *30*(1), 388-423.

IASB, (2014a). IASB completes reform of financial instruments accounting. *Press release*, available at https://www.ifrs.org/news-and-events/2014/07/iasb-completes-reform-of-financial-instruments-accounting/

IASB, (2014b). IFRS 9: A Complete Package for Investors.

IASB (2014c). IFRS 9 Financial Instruments - project summary. Available at https://www.ifrs.org/-/media/project/financial-instruments/project-summaries/ifrs-9-project-summary-july-2014.pdf.

Kaplanski, G., & Levy, H. (2010). Sentiment and stock prices: The case of aviation disasters. *Journal of Financial Economics*, *95*(2), 174-201.

Krüger, S., Rösch, D., & Scheule, H. (2018). The impact of loan loss provisioning on bank capital requirements. *Journal of Financial Stability*, forthcoming.

Laeven, L., & Majnoni, G. (2003). Loan loss provisioning and economic slowdowns: too much, too late? *Journal of Financial Intermediation*, *12*(2), 178-197.

Larcker, D. F., Richardson, S. A., & Tuna, I. (2007). Corporate governance, accounting outcomes, and organizational performance. *The Accounting Review*, *82*(4), 963-1008.

Laux, C. (2012). Financial instruments, financial reporting, and financial stability. *Accounting and Business Research*, *42*(3), 239-260.

Laux, C., & Leuz, C. (2010). Did fair-value accounting contribute to the financial crisis?. *Journal of Economic Perspectives*, *24*(1), 93-118.

Leung, P. Y. E., & Joos, P. P. M. (2013). Investor perceptions of potential IFRS adoption in the United States. *The Accounting Review*, *88*(2), 577-609.

Leventis, S., Dimitropoulos, P. E., & Anandarajan, A. (2011). Loan loss provisions, earnings management and capital management under IFRS: The case of EU commercial banks. *Journal of Financial Services Research*, 40(1-2), 103-122.

Li, S. (2010). Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital? *The Accounting Review*, *85*(2), 607-636.

Lim, C. Y., Lee, E., Kausar, A., & Walker, M. (2014). Bank accounting conservatism and bank loan pricing. *Journal of Accounting and Public Policy*, 33(3), 260-278.

Miu, P., & Ozdemir, B. (2016). Adapting Basel's A-IRB Model for IFRS 9 Purposes. *Working paper*, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2819101

Ng, D. S., & Stoeckenius, J. (1979). Auditing: Incentives and truthful reporting. *Journal of Accounting Research*, 1-24.

Novotny-Farkas, Z. (2016). The interaction of the IFRS 9 expected loss approach with supervisory rules and implications for financial stability. *Accounting in Europe*, *13*(2), 197-227.

O'Hanlon, J. (2013). Did loan-loss provisioning by UK banks become less timely after implementation of IAS 39? *Accounting and Business Research, 43*(3), 225-258.

Onali, E., Galiakhmetova, R., Molyneux, P., & Torluccio, G. (2016). CEO power, government monitoring, and bank dividends. *Journal of Financial Intermediation, 27*, 89-117.

Onali, E., & Ginesti, G. (2014). Pre-adoption market reaction to IFRS 9: A cross-country event-study. *Journal of Accounting and Public Policy, 33*(6), 628-637.

Onali, E., & Ginesti, G. (2015). New Accounting Rules for Loan Loss Provisions in Europe: Much Ado about Nothing? *Mimeo*, available at:
https://mpra.ub.uni-muenchen.de/64266/1/MPRA_paper_64266.pdf

Onali, E., Ginesti, G., & Ballestra, L. V. (2017). Investor reaction to IFRS for financial instruments in Europe: The role of firm-specific factors. *Finance Research Letters*, 21, 72-77.

Prather-Kinsey, J. J., & Tanyi, P. N. (2014). The market reaction to SEC IFRS-related announcements: The case of American Depository Receipt (ADR) firms in the US. *Accounting Horizons, 28*(3), 579-603.

PwC (2014). In depth – A look at current financial reporting issues. Available at:
https://www.pwc.com/sg/en/insurance/assets/ifrs17-current-financial-reporting.pdf

Ramanna, K., & Sletten, E. (2014). Network effects in countries' adoption of IFRS. *The Accounting Review, 89*(4), 1517-1543.

Temim, J. (2016). The IFRS 9 Impairment Model and its Interaction with the Basel Framework. In Moody's Analytics Risk Perspectives: The Convergence of Risk, Finance, and Accounting: CECL. *Volume VIII*.

Vallascas, F., Mollah, S., & Keasey, K. (2017). Does the impact of board independence on large bank risks change after the global financial crisis? *Journal of Corporate Finance, 44*, 149-166.

Vyas, D. (2011). The Timeliness of Accounting Write-Downs by US Financial Institutions During the Financial Crisis of 2007–2008. *Journal of Accounting Research, 49*(3), 823-860.

Watts, R. L., & Zimmerman, J. L. (1990). Positive accounting theory: a ten year perspective. *Accounting Review*, 131-156.

Zimmerman, J. L. (2013). Myth: External financial reporting quality has a first-order effect on firm value. *Accounting Horizons, 27*(4), 887-894.

Table 1
IFRS 9, IAS 39 and Basel III rules: main features.

IFRS 9	IAS 39	Basel III
Impairment model:	**Impairment model:**	**Credit risk model:**
Stage 1. Financial assets with high credit quality with a significant increase in credit risk since initial recognition, or with low credit risk at reporting date. Impairment provision: based on 12-month expected loss.	Need for "objective evidence of impairment", with a clearly observable loss event. "Trigger events" as indicators of objective evidence are provided by the standard (non-exclusive list).	
Stage 2. Financial assets with a significant increase in credit risk since the initial recognition. Impairment provision determined based on lifetime expected loss.		
Stage 3. Financial assets with objective evidence of impairment at the reporting date.		
Probability of Default (PD) estimation:		*Probability of Default (PD) estimation:*
Estimation of PD considers different time horizons, depending on whether the instrument is classified in Stage 1 (next 12 months) or Stage 2-3 (remaining life).		Estimation of PD is based on average default in 12 months.

Sources: IASB (2014c). IFRS 9 Financial Instruments – project summary; Onali and Ginesti (2015); Temim (2016).

Table 2
Sample composition

Code	*Country*	*Number of Banks*
AT	Austria	6
BE	Belgium	3
DE	Germany	14
DK	Denmark	21
ES	Spain	7
FI	Finland	2
FR	France	18
GR	Greece	6
IE	Ireland	2
IT	Italy	18
LU	Luxembourg	1
NL	Netherlands	3
PT	Portugal	3
SE	Sweden	4
UK	United Kingdom	7
	Total	*115*

Table 3

Descriptive statistics

Notes: mean (Mean), standard deviation (Std. Dev), the minimum (Min.) and the maximum (Max.).

Main independent variables					
	Obs.	*Mean*	*SD*	*Min*	*Max*
ROA	1440	0.0014	0.0145	-0.0903	0.0290
Size	1440	17.1703	2.3889	12.3156	21.4155
MES	806	3.4270	1.3129	0.7900	8.3600
Public Bailout	1471	0.1108	0.3140	0.0000	1.0000
Skewness	1469	0.1202	0.8741	-3.2134	2.6569
GIIPS	1471	0.3018	0.4592	0.0000	1.0000
IRB	934	0.3907	0.4882	0.0000	1.0000
A-IRB	934	0.3553	0.4790	0.0000	1.0000
Ownership structure and corporate governance variables					
	Obs.	*Mean*	*SD*	*Min*	*Max*
Widely Held	934	0.2827	0.4505	0.0000	1.0000
Board Independence	933	0.5220	0.2688	0.0000	1.0000
Board Size	933	2.6471	0.3491	1.7918	3.2189
CEO Ownership	923	1.0834	6.7554	0.0000	53.7000
CEO tenure	934	1.4540	0.8534	0.0000	3.3673
Board Ownership	923	3.9058	12.6507	0.0000	75.1827
Female CEO	934	0.0396	0.1952	0.0000	1.0000

Table 4

Event dates

The table shows the ELM adoption announcements from 2009 to 2014. Panel A reports the date and the description of each event. Panel B reports the number of the events for each year. [a] Event for which the likelihood of adoption and implementation of IFRS 9 according to original schedule proposed by IASB has decreased.

Panel A: Event dates and Description of the Events

Number	*Date*	*Event*	*Probability of IFRS 9 adoption*
1	12 November 2009	IASB issues the first phase of the development of IFRS 9 emphasizing the benefits for investors of the new approach for the impairment.	*Increase*
2	13 January 2011	IASB and FASB announce the intention to publish a joint proposal on credit impairment of loans and other financial assets.	*Increase*
3	31 January 2011	IASB and FASB publish a joint proposal on accounting for impairment of financial assets.	*Increase*
4	4 March 2011	EFRAG recognizes the tentative decisions of FASB and IASB to adopt a common expected-loss model for impairment and calls the two board to develop a high-quality converged standard.	*Increase*
5[a]	08 April 2011	EFRAG releases the final comment letter to IASB in response to Supplementary Document Financial Instruments: Impairment issued on 31 January 2011.	**Decrease**
6[a]	04 August 2011	IASB proposes adjustments to the effective date of IFRS 9 from 1 January 2013 to 1 January 2015.	**Decrease**
7	16 December 2011	IASB releases amendments deferring the mandatory effective date from 1 January 2013 to 1 January 2015.	*Increase*
8	27 January 2012	IASB and FASB announce their intention to continue developing a common approach on the impairment model.	*Increase*
9	7 March 2013	IASB publishes revised proposal for loan-loss provisioning.	*Increase*
10	9 July 2013	IASB publishes its comment letter in response to IASB ED- Financial Instruments: Expected Credit Losses.	*Increase*
11	22 July 2013	EFRAG reports the findings of a field test on IASB ED- Financial Instruments: Expected Credit Losses. The field-test serves also as an input to the European Commission's endorsement process.	*Increase*
12	10 July 2014	The president of the ECB urges policymakers in Europe to progress in the adoption of IFRS 9 during the IFRS Foundation Trustees' meeting in London.	*Increase*
13	24 July 2014	IASB issues the final version of IFRS 9.	*Increase*

Panel B: Events Distribution

Year	*Number of Event(s)*
2009	1
2010	None
2011	6
2012	1
2013	3
2014	2

Table 5

Market reaction to ELM announcements.

Table 5 presents event study results for ELM announcements based on equal-weighted (EW) and market-weighted (MW) portfolios of our sample banks using an estimation window of either 120 days (EW(120) and MW(120)) or 90 days (EW(90) and MW(90)). We present CARs for the event windows: (-2;2) – in Section 1 of the table (on the left) – and (-1;1) – in Section 2 of the table (on the right). Panel A reports the CARs for each event. Panel B reports the estimates of the Total CAR and Average CAR for all 13 events, while Panel C reports the estimates of the Total CAR and Average CAR excluding event #12. We use DJ STOXX Global 1800 Ex Europe as proxy for the market portfolio. The CARs are estimated according to Equations (1) and (2). BS p-value is the *p-value* for the average CAR calculated according to 1,000 bootstrap simulations for the period Jul. 3, 2009 – Aug. 5, 2014. For each simulation, we estimate the average CAR for 13 (Panel B) or 12 (Panel C) placebo events, using randomly selected trading days. The *p-values* are computed on the basis of the number of cases for which the CARs for the placebo events is larger or smaller than the estimated value (2-tail tests). ***, **, and * indicate significance at 1%, 5%, and 10% respectively.

	Section 1 – Event window: (-2, 2)				**Section 2 – Event window: (-1, 1)**			
Event #	EW(120)	MW(120)	EW(90)	MW(90)	EW(120)	MW(120)	EW(90)	MW(90)
Panel A: Results for each of the 13 events								
1	-0.0155	0.0106	-0.0237	0.0011	-0.0050	0.0043	-0.0093	-0.0010
2	0.0469	0.0911	0.0464	0.0912	0.0422	0.0880	0.0376	0.0811
3	0.0238	0.0343	0.0216	0.0336	0.0168	0.0157	0.0166	0.0173
4	-0.0081	-0.0103	-0.0088	-0.0126	-0.0016	-0.0095	-0.0025	-0.0115
5	-0.0115	-0.0269	-0.0102	-0.0231	-0.0051	-0.0142	-0.0038	-0.0118
6	0.0873	0.1083	0.0980	0.1260	0.0450	0.0753	0.0454	0.0790
7	0.0180	0.0194	0.0189	0.0203	0.0232	0.0357	0.0263	0.0401
8	0.0502	0.0041	0.0458	-0.0052	0.0296	0.0076	0.0257	-0.0009
9	0.0102	0.0284	0.0089	0.0254	0.0033	0.0123	0.0027	0.0105
10	-0.0075	0.0098	-0.0084	0.0103	-0.0031	0.0133	-0.0036	0.0127
11	0.0376	0.0428	0.0371	0.0436	0.0119	0.0029	0.0136	0.0049
12	-0.0209	-0.0245	-0.0207	-0.0242	-0.0083	-0.0105	-0.0079	-0.0109
13	0.0227	0.0383	0.0250	0.0395	0.0207	0.0292	0.0202	0.0276
Panel B: Cumulative results for all 13 events								
Total CAR	0.2335	0.3253	0.2299	0.3259	0.1697	0.2499	0.1610	0.2370
Average CAR	0.0180***	0.0250***	0.0177***	0.0251***	0.0131**	0.0192**	0.0124**	0.0182**
Bootstrapped p-value	0.0060	0.0080	0.0060	0.0100	0.0240	0.0200	0.0320	0.0220
Panel C: Cumulative results excluding event #12								
Total CAR	0.2544	0.3498	0.2506	0.3501	0.1779	0.2604	0.1689	0.2479
Average CAR	0.0212***	0.0291***	0.0209***	0.0292***	0.0148***	0.0217***	0.0141***	0.0207***
Bootstrapped p-value	0.0040	0.0020	0.0060	0.0040	0.0040	0.0080	0.0060	0.0060

Table 6

Main Results: Determinants of CARs

Table 6 reports the results of regressions estimated according to Equation (3), where the CARs are the dependent variable and are estimated according to Equations (1) and (2). The table uses the DJ STOXX Global 1800 Index Ex Europe as a proxy for the market portfolio. In Panel A, we consider all observations. In Panel B, we exclude observations for which there are potential confounding events. *ROA* is calculated as net income scaled by total assets. *Size* is the log of total assets. *MES* is the marginal expected shortfall of a bank stock given that the market return is below its 5th percentile. *Public Bailout* is an indicator equal one if a bank receives a public bailout - *Capital Injections*, *Credit Lines*, and *Guarantees* – in a certain year during the period 2007-2013 and zero otherwise. *GIIPS* is a dummy variable equal to one for banks whose headquarters are located in Greece, Ireland, Italy, Portugal or Spain. *Skewness* is calculated as the monthly skewness of daily stock returns. Constant included but not reported. *F-IRB* is a dummy variable equal to one for banks adopt foundation IRB and zero otherwise. *A-IRB* is a dummy variable equal to one for banks adopt advanced IRB and zero otherwise. All variables are winsorized at the 1% level. T-statistics are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: All observations

Variables	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)
ROA	-0.5578***							
	(-3.1357)							
Size		0.0040***						
		(7.3499)						
MES			0.0099***					
			(7.6722)					
Public Bailout				0.0133***				
				(3.6600)				
GIIPS					0.0144***			
					(4.3064)			
Skewness						0.0036**		
						(1.9784)		
F-IRB							0.0044	
							(0.9525)	
A-IRB								0.0098**
								(2.2154)
Observations	1,440	1,440	806	1,471	1,471	1,469	785	785
Banks	115	115	63	115	115	115	73	73
Cluster S.E.	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank

Panel B: No confounding events

Variables	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)
ROA	-0.5610***							
	(-3.1240)							
Size		0.0039***						
		(7.2144)						
MES			0.0097***					
			(7.2878)					
Public Bailout				0.0133***				
				(3.5066)				
GIIPS					0.0150***			
					(4.2887)			
Skewness						0.0038**		
						(2.0912)		
F-IRB							0.0046	
							(0.9705)	
A-F-IRB								0.0082*
								(1.7370)
Observations	1,405	1,405	772	1,436	1,436	1,434	753	753
Banks	115	115	63	115	115	115	73	73
Cluster S.E.	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank

Table 7

Corporate governance variables and CARs

Table 7 reports the results of regressions where the CARs are the dependent variable (estimated according to Equations (1) and (2)) and the independent variables are related to ownership structure and the corporate governance characteristics of the bank. The table uses the DJ STOXX Global 1800 Index Ex Europe as a proxy for the market portfolio. In Panel A, we do not include controls. In Panel B, we include controls as in Table 6. *ROA* is calculated as net income scaled by total assets. *Size* is the log of total assets. *MES* is the marginal expected shortfall of a bank stock given that the market return is below its 5th percentile. *Public Bailout* is an indicator equal one if a bank receives a public bailout - *Capital Injections*, *Credit Lines*, and *Guarantees* – in a certain year during the period 2007-2013 and zero otherwise. *GIIPS* is a dummy variable equal to one for banks whose headquarters are located in Greece, Ireland, Italy, Portugal or Spain. *Skewness* is calculated as the monthly skewness of daily stock returns. Constant included but not reported. All variables are winsorized at the 1% level. T-statistics are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: No controls							
Variables	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)
Widely Held	0.0043						
	(0.8746)						
Board Independence		-0.0092					
		(-1.1607)					
Board Size			0.0106*				
			(1.9346)				
CEO Ownership				-0.0005***			
				(-9.6547)			
Board Ownership					-0.0001		
					(-0.4014)		
Female CEO						0.0052	
						(0.6098)	
CEO Tenure (ln)							-0.0050**
							(-2.0708)
Controls	No	No	No	No	No	No	No
Observations	934	933	933	923	923	934	934
Number of banks	73	73	73	73	73	73	73
Cluster S.E.	Bank	Bank	Bank	Bank	Bank	Bank	Bank
Panel B: With controls							
Variables	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)
Widely Held	-0.0060						
	(-1.5109)						
Board Independence		-0.0121					
		(-1.4599)					
Board Size			-0.0034				
			(-0.7740)				
CEO Ownership				-0.0138			
				(-1.0571)			
Board Ownership					0.0000		
					(0.1147)		
Female CEO						0.0060	
						(0.9073)	
CEO Tenure (ln)							-0.0012
							(-0.5651)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	800	799	799	793	793	800	800
Number of banks	63	63	63	63	63	63	63
Cluster S.E.	Bank	Bank	Bank	Bank	Bank	Bank	Bank

Table 8

Determinants of CARs and corporate governance variables.

Table 8 reports the results of regressions where the CARs are the dependent variable (estimated according to Equations (1) and (2)) and the independent variables are related to ownership structure and the corporate governance characteristics of the bank. The table uses the DJ STOXX Global 1800 Index Ex Europe as a proxy for the market portfolio. We include the following corporate governance and ownership structure variables: *Widely Held*, *Board Independence*, *Board Size*, *CEO Ownership*, *Board Ownership*, *Female CEO*, and *CEO Tenure (ln)*. Constant included but not reported. All variables are winsorized at the 1% level. T-statistics are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: Controlling for corporate governance mechanisms

Variables	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)
ROA	-0.4492**							
	(-2.3994)							
Size		0.0049***						
		(5.0000)						
MES			0.0100***					
			(7.9677)					
Public Bailout				0.0083*				
				(1.9357)				
GIIPS					0.0079			
					(1.6425)			
Skewness						0.0057**		
						(2.4971)		
F-IRB							0.0019	
							(0.4112)	
A-IRB								0.0102**
								(2.0018)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	915	915	797	922	922	920	762	915
Banks	73	73	63	73	73	73	73	73
Cluster S.E.	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank

Panel B: Excluding event # 12

Variables	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)
ROA	-0.5911***							
	(-3.1912)							
Size		0.0045***						
		(8.0101)						
MES			0.0098***					
			(6.7813)					
Public Bailout				0.0160***				
				(4.2475)				
GIIPS					0.0190***			
					(5.3495)			
Skewness						0.0041**		
						(2.1646)		
F-IRB							0.0044	
							(0.9525)	
A-IRB								0.0098**
								(2.2154)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,329	1,329	743	1,356	1,356	1,355	785	785
Banks	115	115	63	115	115	115	73	73
Cluster S.E.	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank

Appendix A

Definition of variables and data sources.

Variables	*Definition(s)*	*Sources*
Variables to test our main hypothesis		
NPLs (ln)	Log of the ratio: total non-performing loans divided by total loans	Bankscope
Size	Log of total Assets	Bankscope
MES	*MES* is the marginal expected shortfall of a stock given that the market return is below its 5th percentile	V-Stern Lab
Public Bailout	Dummy variable: 1 if the bank i's receives any kind of public bailout at time *t*, 0 otherwise	Mediobanca
F-IRB	Dummy variable: 1 if the bank i's adopts a foundation IRB model, 0 otherwise	Annual reports
A-IRB	Dummy variable: 1 if the bank i's adopts an advanced IRB model, 0 otherwise	Annual reports
Bank-specific control variables		
Tobin's Q	Market value of equity plus face value of debt scaled by book value of equity plus face value of debt	Authors' calculation
ROA	Returns on Total Assets	Bankscope
MTB Ratio	Market value of equity divided by book value of equity	Authors' calculation
Debt to Assets	Total debt to total Assets	Bankscope
Total Capital Ratio	Sum of tier 1 plus tier 2 scaled by total assets	Bankscope
Skewness	Monthly skewness of stock returns	Authors' calculation
Widely Held	Dummy variable: 1 if there is no owner with more than 10% of bank share rights and 0 otherwise	Annual reports
GIIPS	Dummy variable: 1 if the bank HQ are located in Greece, Ireland, Italy, Portugal or Spain	Bankscope
Corporate governance mechanisms		
Board Size	Number of board members.	Annual reports
Board Size (ln)	Log of total number of board members.	Authors' calculation
Board Independence	Fraction of independent directors in bank's boards	Annual reports
Female CEO	Dummy variable: 1 if the bank CEO is female, 0 otherwise.	Annual reports
CEO ownership	CEO equity stake in the bank	Annual reports
Board Ownership	Percentage of board members' equity stake in the bank.	Annual reports

Appendix B

Market reaction to ELM announcements – Only banks for which MES data is available.

This table presents event study results for banks for which MES data is available. We consider equal-weighted (EW) and market-weighted (MW) portfolios of our sample banks with MES data using an estimation window of either 120 days (EW (120) and MW (120)) or 90 days (EW(90) and MW(90)). We present CARs for the event windows: (-2;2) – in Section 1 of the table (on the left) – and (-1;1) – in Section 2 of the table (on the right). Panel A reports the CARs for each event. Panel B reports the estimates of the Total CAR and Average CAR for all 13 events. We use DJ STOXX Global 1800 Ex Europe as proxy for the market portfolio. The CARs are estimated according to Equations (1) and (2). BS p-value is the *p-value* for the average CAR calculated according to 1,000 bootstrap simulations for the period Jul. 3, 2009 – Aug. 5, 2014. For each simulation, we estimate the average CAR for 13 placebo events, using randomly selected trading days. The *p-values* are computed on the basis of the number of cases for which the CARs for the placebo events is larger or smaller than the estimated value (2-tail tests). ***, **, and * indicate significance at 1%, 5%, and 10% respectively.

	Section 1 – Event window: (-2, 2)				**Section 2 – Event window: (-1, 1)**			
Event #	EW(120)	MW(120)	EW(90)	MW(90)	EW(120)	MW(120)	EW(90)	MW(90)
Panel A: Results for each of the 13 events								
1	-0.0197	0.0116	-0.0305	0.0019	-0.0048	0.0049	-0.0103	-0.0004
2	0.0784	0.0933	0.0781	0.0935	0.0701	0.0904	0.0639	0.0834
3	0.0371	0.0328	0.0349	0.0321	0.0226	0.0138	0.0232	0.0154
4	-0.0168	-0.0101	-0.0181	-0.0125	-0.0061	-0.0095	-0.0073	-0.0116
5	-0.0145	-0.0268	-0.0120	-0.0229	-0.0049	-0.0143	-0.0031	-0.0119
6	0.1048	0.1097	0.1171	0.1274	0.0536	0.0773	0.0531	0.0810
7	0.0333	0.0181	0.0360	0.0193	0.0375	0.0352	0.0426	0.0400
8	0.0468	0.0033	0.0397	-0.0064	0.0225	0.0075	0.0166	-0.0014
9	0.0263	0.0303	0.0244	0.0273	0.0103	0.0133	0.0093	0.0115
10	0.0061	0.0102	0.0049	0.0102	0.0156	0.0134	0.0142	0.0124
11	0.0500	0.0411	0.0495	0.0417	0.0164	0.0019	0.0188	0.0037
12	-0.0286	-0.0243	-0.0277	-0.0241	-0.0102	-0.0108	-0.0092	-0.0112
13	0.0361	0.0382	0.0389	0.0394	0.0310	0.0286	0.0305	0.0271
Panel B: Cumulative results for all 13 events								
Total CAR	0.3392	0.3273	0.3351	0.3269	0.2536	0.2517	0.2425	0.2380
Average CAR	0.0261***	0.0252**	0.0258***	0.0251***	0.0195**	0.0194**	0.0187**	0.0183**
Bootstrapped p-value	0.0020	0.0120	0.0080	0.0100	0.0140	0.0240	0.0160	0.0260

Appendix C

Determinants of CARs excluding SIFI institutions.

This table reports the results of regressions estimated according to Equation (3) excluding SIFI institutions from our sample. The CARs are the dependent variable and are estimated according to Equations (1) and (2). The table uses the DJ STOXX Global 1800 Index Ex Europe as a proxy for the market portfolio. In Panel A, we consider all observations. In Panel B, we exclude observations for which there are potential confounding events. *ROA* is calculated as net income scaled by total assets. *Size* is the log of total assets. *MES* is the marginal expected shortfall of a bank stock given that the market return is below its 5th percentile. *Public Bailout* is an indicator equal one if a bank receives a public bailout - *Capital Injections*, *Credit Lines*, and *Guarantees* – in a certain year during the period 2007-2013 and zero otherwise. *GIIPS* is a dummy variable equal to one for banks whose headquarters are located in Greece, Ireland, Italy, Portugal or Spain. *Skewness* is calculated as the monthly skewness of daily stock returns. *F-IRB* is a dummy variable equal to one for banks adopt foundation IRB and zero otherwise. *A-IRB* is a dummy variable equal to one for banks adopt advanced IRB and zero otherwise. Constant included but not reported. All variables are winsorized at the 1% level. T-statistics are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: All observations								
Variables	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)
ROA	-0.5811***							
	(-3.2126)							
Size		0.0045***						
		(6.3392)						
MES			0.0106***					
			(7.4697)					
Public Bailout				0.0137***				
				(3.4126)				
GIIPS					0.0147***			
					(4.0819)			
Skewness						0.0033*		
						(1.7965)		
F-IRB							0.0036	
							(0.7104)	
A-IRB								0.0108**
								(2.0992)
Observations	1,297	1,297	663	1,328	1,328	1,326	664	664
Banks	104	104	52	104	104	104	62	62
Cluster S.E.	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank
Panel B: Excluding event #12								
Variables	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)	CAR (-2,2)
ROA	-0.6083***							
	(-3.2540)							
Size		0.0052***						
		(7.3387)						
MES			0.0106***					
			(6.7368)					
Public Bailout				0.0165***				
				(3.9762)				
GIIPS					0.0195***			
					(5.1021)			
Skewness						0.0037*		
						(1.9235)		
F-IRB							0.0036	
							(0.7104)	
A-IRB								0.0108**
								(2.0992)
Observations	1,197	1,197	611	1,224	1,224	1,223	664	664
Banks	104	104	52	104	104	104	62	62
Cluster S.E.	Bank	Bank	Bank	Bank	Bank	Bank	Bank	Bank