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Audit Fees and IAS/IFRS Adoption: Evidence from the Banking Industry

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ABSTRACT

The adoption of IAS/IFRS has two opposite effects on audit fees: on the one hand, greater effort is required from auditors, which is likely to be reflected by higher fees; on the other hand, if IAS/IFRS improve the quality of financial reporting, expected liability costs could decrease and lower fees may be demanded. We consider a large sample of Italian banks and we examine the effect of IAS/IFRS adoption on audit fees. The results show that higher fees (19.29% in real terms) are paid after the switch to the new standards. Using a standard earnings management model, we do not find support for the idea that financial reporting quality is affected by the adoption of IAS/IFRS. The observed increase in fees is positively associated with the presence of financial derivatives held for hedging purposes. This paper extends the findings of prior research on the effect of IAS/IFRS adoption on audit fees; contrary to prior contributions, our analysis concentrates on the banking industry. Furthermore, unlike prior works, we consider both listed and non-listed firms.

KEYWORDS: audit fees, banking industry, IAS/IFRS adoption, IFRS transition, financial derivatives, hedge accounting.

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1. INTRODUCTION

Auditing activity is a critical aspect of the switch to new accounting standards, and audit fees represent a part of the related implementation costs. In this paper we investigate how the introduction of the international accounting standards (IAS/IFRS) influences auditors' fee determination in the Italian banking industry. We argue that IAS/IFRS adoption has two opposite effects on fees. On the one hand, the use of IAS/IFRS – which are principle-based and fair value oriented standards, as opposed to previous Italian regulation – implies greater effort for auditors; this is likely to be reflected by higher fees. On the other hand, if IAS/IFRS improve the quality of financial reporting, the expected liability costs for auditors decrease, which may, therefore, lead to lower fees.

The effect of the adoption of IAS/IFRS on fees paid to auditors is at the centre of a debate among practitioners. The professional press reports an increase in audit fees paid in Europe in 2005 due to the adoption of IAS/IFRS (Accountancy Magazine, 2005). Some anecdotal evidence based on UK FTSE 100 audit fees confirms this view (Accountancy Magazine 2005; Accountancy Magazine, 2006), while an ICAEW (Institute of Chartered Accountants in England and Wales) survey conducted among investors, preparers, and auditors across 23 EU countries shows that “the costs of auditing IFRS implementation were significant, ranking as the second highest cost for companies with turnover below €500m and the third highest for larger companies” (ICAEW, 2007: p.61). According to the same source, 67% of the auditors said that “their audit fee for the first set of IFRS financial statements was higher as a direct consequence of IFRS” (ICAEW, 2007: p.72). It has also been argued that the demand for auditing work is expected to increase with the adoption of IFRS in the US (Accountancy Age, 2008).

Only a few academic works are concerned with the change in audit fees after IAS/IFRS adoption. Griffin *et al.* (2009) find an audit fee increase associated with the adoption of IAS/IFRS and the concurrent introduction of new corporate governance rules in New Zealand. Vieru and Schadewitz (2010) investigate fee determination in the transition year to the IAS/IFRS for small and medium-sized Finnish companies. Kim *et al.* (2012) develop an analytical audit model to examine the effect of IAS/IFRS adoption on fees through audit complexity and financial reporting quality; they test the predictions of the model using data from 14 European countries and excluding the financial industry. The aforementioned studies generally find an increase in fees after IAS/IFRS adoption. The sample of all the analyses is limited to listed firms.

We extend the findings of prior research on IAS/IFRS adoption and audit fees as we concentrate on the banking industry. Furthermore, unlike previous works, we consider both listed

and non-listed firms.

The relationship between auditors and banks is a critical regulatory issue. The recent credit derivatives market turmoil highlighted the importance of internal and external control mechanisms in the banking industry. As argued by previous empirical studies on the divergence of opinions among market participants and analysts (Morgan, 2002, Flannery *et al.*, 2004), banks' financial statements are more opaque than those of non-financial firms. The bottom line is that intermediation risk and, specifically, loans and financial assets are hard to monitor from the outside; as a consequence, in such an opaque environment, auditing activity plays a particularly important role in mitigating information asymmetries.

Our analysis focuses on the Italian banking industry. One benefit of using data from a single industry is that our analysis does not suffer from the industry effect problem (Carson, 2009; Francis, 2011; Reichelt and Wang, 2010).ⁱ We argue that Italy is a suitable setting for our study for at least three reasons. Firstly, according to Italian regulation (see section 2), all Italian banks are obliged to use IAS/IFRS in their annual accounts. This allows us to examine the impact of adopting IAS/IFRS in a dataset which also includes non-listed firms. A further interesting specificity of the Italian setting is that audit firms cannot deliver general non-audit services. They may only provide services limited to the accounting organisation of the firms, as well as auditing services. Italian data show that auditing activities account for about 90% of total revenues of Big Audit Firms (Cameran, 2007). Thus, in general, the extent of audit fees paid is not significantly influenced by the possibility of obtaining or maintaining the engagement for other services. Finally, the Italian environment is a typical example of a stakeholder-oriented accounting system (like France, Germany, Belgium, and Spain). As emphasised by previous works (Bartov *et al.*, 2005; Hung and Subramanyam, 2007), IAS/IFRS are influenced by a shareholder-oriented model; consequently, we consider a market where the effect of the transition to the new standards is likely to be particularly marked.ⁱⁱ Notice that the level of accounting disclosure requirements before IAS/IFRS adoption in the EU is generally similar to the Italian one (Wingate, 1997). Moreover, the risk – due to the level of litigiousness – of doing business as an auditor in Italy is similar to the other, more often studied, European countries (Wingate, 1997).ⁱⁱⁱ

We consider a large sample of Italian banks from 1999 to 2006, basing our analysis on a panel model relating fees to firm-specific determinants. We obtain audit fee data through questionnaires because Italian non-listed firms are not required to disclose audit fees in their financial statements. Using specific indicators for the banking industry, we relate fees paid to the size and the risk of the auditee. We find that higher fees are paid after IAS/IFRS are first adopted, consistent with the view that the adoption of IAS/IFRS does, indeed, make the auditor's task more

complex. Investigated in the context of a standard earnings management model, our findings do not support the conjecture that IAS/IFRS improve banks' financial reporting quality. We further analyse the determinants of increased audit effort and find that the increase in fees after the adoption of the new standards is associated with the presence of financial derivatives held for hedging purposes. The results are robust to a battery of sensitivity tests.

The structure of the paper is as follows: section 2 concentrates on the IAS/IFRS implementation in Italy, section 3 deals with the hypothesis development, sections 4 and 5 describe the model and the dataset used; section 6 presents the empirical analysis; section 7 concludes.

2. IAS/IFRS IMPLEMENTATION IN ITALY

With a view to harmonising financial information presented by the companies, the European Commission issued Regulation No. 1606 (July 19, 2002), according to which companies listed in regulated European markets had to adopt international accounting and financial reporting standards for preparing their consolidated financial statements for balance date from January 1, 2005 (REGULATION (EC) No. 1606/2002). Article 5 of the cited Regulation left Member States some options, however. They might permit or require listed companies to prepare their single entity (individual) accounts in accordance with the international accounting standards. In addition, non-publicly held companies might be allowed or required to prepare their consolidated accounts and/or their individual accounts according to these standards. In Italy the options were set by legislative decree 58/2005 (February 25, 2005).

To sum up, since 2005, Italian listed companies have prepared their consolidated financial statements in accordance with international accounting standards. For the year 2005 only they were able to choose either to prepare their individual financial statements in accordance with IAS/IFRS or to use Italian GAAP. Since 2006, listed companies have had to prepare consolidated and individual accounts according to IAS/IFRS. The same is true for companies with securities widely distributed among the public, regulated financial institutions and banks (a slightly different regulation is in force for insurance companies). Companies that are included in the consolidated accounts of subjects obliged to use IAS/IFRS (listed companies, companies with financial instruments widely distributed among public, regulated financial companies, banks) are allowed to use international accounting standards in their consolidated or individual accounts. The same rule is active for all other companies that prepare consolidated accounts. Also other categories of companies that do not draw up consolidated accounts can use IAS/IFRS on a voluntary basis. Legislative decree 58/2005 of February 25, 2005 stated that companies could use IAS/IFRS in their individual financial reports starting from a date indicated by a Ministerial decree that has never

been issued. Then, only small companies – which, according to Italian law, are allowed to prepare financial reports in an abbreviated form (and defined based on three size criteria)^{iv} – may not use international accounting standards for their financial reporting (consolidated or individual). The exclusion of the small companies from IAS/IFRS adoption is consistent with the “IFRS for private entities” project.^v

3. HYPOTHESES DEVELOPMENT: IAS/IFRS TRANSITION PROCESS AND AUDIT FEES

Consistent with previous literature, we interpret fee variation in the framework of Simunic’s (1980) model, where audit fees are determined by the cost of audit effort and an expected liability loss component. The former depends on the auditor’s workload or on hourly prices, the latter on the auditor’s legal liability costs. We argue that the adoption of IAS/IFRS has two opposite effects on audit fees, as explained below.^{vi}

WHY COULD FEES INCREASE WITH IAS/IFRS?

The adoption of IAS/IFRS increases auditor effort. Greater effort is required from auditors because IAS/IFRS are principle-based, fair value oriented standards – as opposed to Italian GAAP, which are rule-based and historical cost oriented – and, hence, require auditors to make more complex estimates and to use greater professional judgment (Kim *et al.*, 2012, KPMG 2007, Deloitte 2008). The effect is likely to be stronger in the transition year as auditors have to acquire competences and skills not required with Italian GAAP. Both practitioners (Hoogendoorn, 2006) and academics (Haller, 2002; Whittington, 2005) have stressed the difficulties encountered and the preparation required for the transition to the new accounting standards. Therefore, we would expect to observe higher audit fees after the adoption of IAS/IFRS.

Fair value accounting and audit fees – Some recent studies examine the relation between fair value accounting and audit fees. Ettredge *et al.* (2011) document that auditors charge higher fees as the proportion of assets at fair value increases for a sample of US bank holding companies; moreover their findings show that less verifiable fair values increase audit fees. Hu *et al.* (2012), in the Australian setting, document that auditees choosing the revaluation model experience higher audit fees than those choosing the cost model; they interpret the results as evidence that audit pricing varies with the reliability of asset revaluation. Differently, Goncharov *et al.* (2012) concentrate on the European real estate industry around mandatory IFRS adoption; they find that audit fees are significantly lower for auditees reporting property assets at fair value relative to those reporting property assets at depreciated cost. This difference is (partially) driven by impairment

tests that occur only when companies use depreciated costs. They again provide evidence that the difficulty to measure fair value matters in audit fee determination.

Evidence of increase in fees after IAS/IFRS adoption: Academic research - Limited academic research exists on how audit fees are influenced by IAS/IFRS as against previous accounting standards. Griffin *et al.* (2009) find an audit fee increase associated with the adoption of IAS/IFRS together with concurrent corporate governance rules changes in New Zealand. Vieru and Schadewitz (2010) study fee determination in the transition year to IAS/IFRS. Kim *et al.* (2012) document an average increase in audit fees across 14 European countries after the adoption of IAS/IFRS; banks, insurance, and companies that belong to other financial industries are excluded from their sample. As mentioned in the introduction, our analysis extends the results from these contributions since we concentrate on the banking industry. Furthermore, in the Italian environment, we are able to examine both listed and non-listed firms.

Evidence of increase in fees after IAS/IFRS adoption: The view of practitioners and regulators - Professional journals document an increase in audit fees in the UK (Accountancy Magazine, 2005) and in continental Europe (Accountancy Magazine, 2006) after the adoption of IAS/IFRS. An ICAEW survey (ICAEW, 2007) conducted among investors, preparers, and auditors across 23 EU countries confirms that the cost of auditing increased as a consequence of the IAS/IFRS adoption. The SEC noticed that greater costs for auditors with IAS/IFRS are expected due to the change in quality control systems (SEC, 2007). The use of IAS/IFRS by the clients of audit firms influences the practices related to hiring, assigning teams, professional development, and advancement activities. In addition, further auditing guidance may be necessary to cope with the new standards. As reported by PCAOB “some global audit networks have created global offices to consult on the IFRS issue and its implementation with affiliated firms” (PCAOB, 2008: p. 3). This implies greater overhead costs for audit firms.

WHY COULD FEES DECREASE WITH IAS/IFRS?

Higher quality financial statements reduce auditors' risk of mis-statement or misinterpretation. As documented by prior literature (Palmrose, 1988; Lys and Watts, 1994; Heninger, 2001) stakeholders perceiving a failure in financial reporting are more likely to sue the auditor. Consequently, higher quality financial statements reduce expected liability costs and may lead to lower fees required by auditors. This argument is formalized, for example, in the model of Kim *et al.*, (2012). Hence, if IAS/IFRS imply higher quality financial reporting, we would expect to observe a decrease in fees.

Audit fees and financial reporting quality - A number of studies are concerned with the association between audit fees and the quality of financial reporting. One part of this literature employs fees as dependent variable and financial reporting quality as explanatory variable; the results of these works tend to support the view that financial reporting quality is negatively associated with audit fees. Gul *et al.* (2003) find that higher audit fees are paid by firms with a higher absolute value of discretionary accruals; they argue that auditors require greater audit fees as they perceive a higher risk of mis-estimation and valuation errors. Bedard and Johnstone (2004) show that, when auditors perceive that a client has increased risk of earnings management, audit planning is adjusted; examining planned audit fees, they conclude that "audit partners plan on charging higher billing rates when the perception of earnings management risk is high". Feldman *et al.* (2009) find that restatement firms have higher audit fees in the following periods; they interpret their findings as evidence that higher audit fees reflect greater earnings management risk. Schelleman and Knechel (2010) find support for the view that that auditors charge a fee premium for clients with greater risk of earnings management; they also find that auditors increase effort in response to increase earnings management risk.

Another side of the literature has also used financial reporting quality as dependent variable and fees as explanatory variable; the results of these studies are mixed. Some works (Frankel *et al.*, 2002, Hoitash *et al.*, 2007 Chi *et al.*, 2011; Blankley *et al.*, 2012) find a negative association between financial reporting quality and fees paid to auditors. Other studies (e.g. Ashbaugh *et al.*, 2003, Chung and Kallapur, 2003, Larcker and Richardson, 2004, Whisenant *et al.*, 2003) find that the quality of financial reporting is not significantly associated with audit fees.

IAS/IFRS adoption and financial reporting quality - A large body of literature investigates the effect of IAS/IFRS adoption on financial reporting quality and, more specifically, on earnings quality. Although some authors provide evidence about an improvement in accounting quality due to IAS/IFRS adoption, most of the literature finds either mixed results or no improvement at all when comparing reporting quality among public companies before and after IAS/IFRS. Based on a large worldwide sample of firms mainly adopting IAS/IFRS before the mandatory introduction, Barth *et al.* (2008), for example, document an improvement in accounting quality measured by a decrease in earnings management and an increase in both timely loss recognition and value relevance. Van Tendeloo *et al.* (2005) analyze the level of earnings management for a sample of German companies which have voluntarily adopted IAS/IFRS; their results indicate that voluntary adopters of IFRS in Germany cannot be associated with lower earnings management. Christensen *et al.* (2008) find a decrease in earnings management for German early-adopter firms, whereas those firms which waited until IAS/IFRS became mandatory exhibit only a modest increase in earnings

management. Pope and McLealy (2011: p.233) argue that “results on the consequences of IFRS adoption and the quality of implementation are far from uniform across Europe, and depend on factors reflecting preparer incentives and the effectiveness of local enforcement”.

We argue that the overall effect of IAS/IFRS adoption on fees is an empirical issue and we formulate the following null hypothesis (which does not take a directional form):

Hypothesis 1 – Audit fees do not increase after the adoption of IAS/IFRS.

4. MODEL

Only few audit fee determination studies concentrate on financial institutions (e.g., Fields *et al.*, 2004 and Kangaretnam *et al.*, 2010a). Our empirical model is based on the analysis by Fields *et al.* (2004). Specifically, we relate fees paid to the size and the risk of the auditee, considering four types of risk: liquidity risk, operating risk, credit risk, and capital risk.

SIZE - In general, the findings of previous audit fee studies indicate that auditee size is the most important explanatory variable in the determination of fees. In larger companies additional detailed audit procedures and tests have to be implemented; thus, auditors have to spend more time on and put more effort into testing and analysing data and information (Simunic, 1980; Hay *et al.*, 2006). It can be assumed that the same argument applies to banks, and we expect to observe a positive association between size and audit fees. We measure size as the natural logarithm of total assets.

LIQUIDITY RISK - We use transaction accounts and investment securities as proxies for bank liquidity risk. The former can also be considered as a measure of complexity, because banks with higher proportion of transaction accounts have more complex activities to monitor. The relation between transaction accounts and audit fees is, therefore, expected to be positive. We argue that investment securities may be negatively or positively related to audit fees. Liquidity risk decreases as the proportion of total assets held as securities increases; thus, from a liquidity risk point of view, the relation between investment securities and audit fees is expected to be negative. However, a higher proportion of securities implies a higher business risk, due to the volatility of financial markets and this can be reflected by higher fees.

OPERATING RISK - We measure operating risk by the efficiency ratio i.e. total operating expense on total revenues. A higher ratio implies less efficiency within the bank (and higher operating risk) and, consequently, greater complexity for the audit function. Thus, we expect to observe a positive relation between the efficiency ratio and audit fees.

CREDIT RISK - We measure credit risk by the ratio of non-performing loans to gross loans. We expect to find a positive relationship between audit fees and our indicator of credit risk, since verifying the adequacy of the loan loss reserve account is one of the auditor's major responsibilities.

CAPITAL RISK - Capital risk is measured firstly by using the total risk-adjusted capital ratio and intangible assets. Both measures are expected to be positively related to capital risk and, thus, to audit fees. We also consider two country-specific measures of capital risk: (i) the ratio of the fund for general banking risks to the sum of total liabilities and shareholders' equity; (ii) the ratio of guarantees given and commitments registered off balance sheet to the sum of total liabilities and shareholders' equity. The fund for general banking risk is prescribed by EU Directive 86/635: "in view of the particular risks associated with banking and of the need to maintain confidence, provision should be made for the possibility of introducing a liabilities item in the balance sheet entitled 'Fund for general banking risks'". The same EU directive requires that "the notes to the accounts shall state the nature and amount of any type of commitment which is material in relation to an institution's activities." As a reference for the second country-specific capital risk measure we consider guarantees given and commitments indicated in the notes according to the EU directive. Capital risk increases with measures (i) and (ii) and we then expect them to be positively associated with fees.

FURTHER DETERMINANTS OF FEES – We control for loss firms by including a dummy variable for negative net income. Following, for example, Kanagaretnam (2010a), we also include a dummy variable for parent companies. We then consider the square root of the number of bank branches, which is a typical indicator of complexity (Hay *et al.*, 2006). As opposed to other studies in the banking industry, we consider non-listed banks in our analysis; as the listing status has been documented to be relevant in audit fee models also in Italy (see, e.g, Cameran, 2005), we include a dummy variable for listed firms. Furthermore, in line with previous literature documenting a fee premium for large audit firms, we include a dummy variable for the "BIG N" auditors. Finally, we include a dummy variable for observations after 2002, on the grounds that 2002 was the year of Arthur Andersen's (AA) demise.^{vii} The rationale for this variable is to control for the change in the Italian audit market structure following the AA collapse, which has reduced the number of Big audit firms from five to four. As the market share of Big N in Italy has been traditionally higher than in Anglo-Saxon countries, the US General Accounting Office's concern over the competitiveness of the audit market after AA's dissolution (GAO, 2003) is, in our setting, more serious.

The basic model used in the empirical analysis is the following:

$$FEE_{i,t} = b_0 + b_1 ASSETS_{i,t} + b_2 BRANCHES_{i,t} + b_3 LISTED_{i,t} + b_4 PARENT_{i,t} + b_5 LOSS_{i,t} + b_6 EFFICIENCY_{i,t} + b_7 SECURITIES_{i,t} + b_8 TRANSACCT_{i,t} + b_9 GUARCOMM_{i,t} + b_{10} FGBR_{i,t} +$$

$$b_{11}NONPERF_{i,t}+ b_{12}CAPRATIO_{i,t}+ b_{13}INTANG_{i,t}+ b_{14}BIG_{i,t}+ b_{15}POST2002_{i,t}+<FIRM FIXED EFFECTS>+e_{i,t} \quad [1]$$

where all the variables are defined in Table 1.

[Insert Table 1 about here]

Fees and assets are adjusted for inflation in order to focus on the real-term costs of the adoption of the new standards. We use the Italian Official Consumer Index calculated by the Italian National Institute of Statistics (ISTAT) and express fees and assets in terms of 2006 prices – the last year included in our analysis. The other variables are not adjusted as they are ratios of monetary values. A similar approach is taken, for example, by Menon and Williams (2001: p.124).^{viii}

5. SAMPLE AND DATA COLLECTION

Not all banks operating in Italy are required to hire an audit firm. For banks that are not listed, do not have widely distributed financial instruments and do not prepare consolidated accounts, audit activity may be conducted either by Collegio Sindacale^{ix} (a statutory committee of auditors), by an individual chartered auditor, or by an audit firm. We concentrate our analysis on firms which are audited by an audit firm.

We examine data corresponding to the fiscal years between 1999 and 2006. We choose this time period to avoid that the results are influenced by the subsequent credit derivatives turmoil (starting from 2007 banks financial statements experience a severe distress; this is likely to substantially change the relation between audit fees and accounting variables).

Audit fee data are obtained through questionnaires (i.e. direct inquiry to the banks using fax or e-mail).^x We use questionnaires because Italian non-listed firms are not required to disclose audit fees paid in their financial statements. Listed companies (and so listed banks) have been required to disclose their audit fees only starting from 2007. A further benefit of using questionnaire-based data is that we are able to exclude some fee components which are unrelated to our research question. Specifically, in the transition year to IAS/IFRS, auditors charged an additional amount to prepare the reconciliation prospects concerning the previous year; the fees that we asked for exclude this amount. Furthermore, we excluded expense reimbursements.

As a reference for a list of Italian banks, we used the 2007 Bank of Italy's classification which classifies banks annually in five categories – major, large, medium, small, minor – according to the amount of funds intermediated during the fiscal year. We contacted all the non-minor banks

in the 2007 classification, together with those banks which were classified as small in the 2006 classification and became minor in the 2007 classification. This results in 227 banks to which we sent a questionnaire. The number of respondents (banks) audited by an audit firm is equal to 157. Many banks disclosed to us only the audit fees for selected years in the period required; therefore, our sample is not a balanced panel.^{xi}

We gathered financial statements data from Bankscope. For each firm-year observation we require to have data on audit fees and financial statements. Furthermore, we truncate firm-year observations for which the audit fees are in the extreme percentile. The selection procedure results in 136 banks, corresponding to 527 yearly observations.

Table 2 presents descriptive statistics. Cross-correlations are untabulated. The correlation between fees and the dummy for IAS/IFRS financial statements is positive and significantly different from zero; the correlation is significant and positive also with the dummies for the first and second year with IAS/IFRS. Furthermore, fees display a significant and positive correlation coefficient with total derivatives and with derivatives held for hedging purposes. As expected, fees are positively and significantly correlated with total assets. No correlation coefficient between variables included in the same regression is greater than 50%, with the exception of the correlation between fees and total assets (Pearson correlation coefficient equal to 80.6%).

[Insert Table 2 about here]

6. EMPIRICAL ANALYSIS

The effect of adopting IAS/IFRS

As in the standard approach, audit fees are related to the size and the risk of the auditee. Most previous works examine cross-sectional data; the few works concerned with the trend in fees over different years generally estimate pooling regressions (Menon and Williams; 2001; McMeeking *et al.*, 2007). Our dataset consists of 136 banks over 8 years, and we estimate a panel model with firm-specific fixed effects. To test hypothesis 1 we include a dummy variable for financial statements under IAS/IFRS (IAS) in the basic model described in section 4 (specification [1]).

[Insert Table 3 about here]

The results are reported in Table 3 (column 1). As expected, the coefficient of ASSETS is positive, indicating that fees are positively related to a size proxy. Moreover, fees are positively

related to the number of branches and to the dummy for listed firms, which can be interpreted as complexity proxies for banks.

As expected, the relation between fees and three indicators of capital risk (INTANG, GUARCOMM, FGBR) is positive. The coefficient of the fourth indicator of capital risk (CAPRATIO) is, instead, not significantly different from zero.

Fees are also positively related to TRANSACCT, which can be seen as a measure of liquidity risk. SECURITIES has a positive coefficient, which is consistent with the interpretation that business risk increases with investment securities. Finally, lower real fees are paid after 2002, probably as an effect of the Enron stigma (McMeeking *et al.*, 2007). Notice that 2002 is the year of AA's demise. The coefficients of the remaining control variables are weakly significant or not significant.

The coefficient of BIG, although positive, is not significantly different from zero. It should be noticed, however, that, in the sample considered, 91% of audit firms belong to the "Big N" group. Not surprisingly, the variance in fees is mostly explained by the other regressors, and there is no evidence of a premium for big audit firms.

LISTED displays a positive coefficient, as expected. However, it is only weakly (10% level) significantly different from zero. A possible explanation could be that the association between the listed status of a firm and fees paid is partially captured by size. We also orthogonalized size to LISTED (we replaced ASSETS by the residuals in the regression of ASSETS on LISTED – the results are untabulated) and the coefficient of LISTED is positive and highly significant (t-test=3.64).^{xii}

Surprisingly, the coefficient of NONPERF is negative and not significantly different from zero. This does not support the common interpretation, according to which credit risk increases with non-performing loans and greater fees should be required (Fields *et al.* 2004). We investigate more on this point in the robustness checks.

After controlling for the auditor and auditee characteristics, the results suggest that accounting standards influence fee determination. Fees increase when financial statements are IAS/IFRS compliant (the coefficient of IAS is positive and significant).^{xiii} The results are consistent with the idea that IAS/IFRS adoption increases auditor effort. The coefficient of the dummy for IAS/IFRS financial statements corresponds to a mean fee increase^{xiv} equal to 19.29%.

We further examine the effect of the timing of IAS/IFRS adoption. We include in specification 1 dummy variables for the first and the following year with IAS/IFRS (IAS_1STYR and IAS_2NDYR, respectively). The results, which are reported in Table 3 (column 2), indicate that fees increase – with respect to the rest of the sample – both in the transition year and in the

following year. Specifically, the estimated coefficients of the dummy for the IAS/IFRS transition year and for the following year correspond to a mean fee increase of 18.85% and 20.24%, respectively. An F-test (p-value=0.8558) does not allow rejection of the hypothesis that the coefficients of IAS_1STYR and IAS_2NDYR are equal. The findings suggest that the audit fee increase is not limited to the transition year.

Earnings management around IAS/IFRS adoption

The previous results are consistent with the view that greater effort is associated with the new standards. We argue that the opposite effect on fees is expected if IAS/IFRS improve the quality of financial reporting. Accordingly, we here investigate whether earnings quality is affected by the adoption of IAS/IFRS.

In line with previous literature (e.g., Schipper and Vincent, 2003), we infer accounting quality by examining earnings management measures. Specifically, we follow the approach proposed by Kangaretnam *et al.* (2010b) for banks and measure earnings management in two ways. Firstly, we consider the likelihood that managers manage earnings for benchmark-beating behaviour; secondly, we examine the pattern of income increasing loan loss provisions.

1) *Earnings benchmark model*

We estimate the following logit model, relating an earnings benchmark indicator to the dummy for IAS/IFRS financial statements and to a set of control variables. The earnings benchmark indicator reflects the likelihood that managers manage earnings for benchmark-beating behaviour; thus, a positive (negative) coefficient of the dummy for IAS/IFRS implies lower (higher) earnings management with the new standards.

$$EB_{i,t} = b_0 + b_1 BIG_{i,t} + b_2 SIZE_{i,t} + b_3 GROWTH_{i,t} + b_4 LOANS_{i,t} + b_5 LEV_{i,t} + \beta_6 \Delta CFO_{i,t} + b_7 ALLOW_{i,t} + b_8 IAS_{i,t} + \langle FIRM \text{ FIXED EFFECTS} \rangle + e_{i,t} \quad [2]$$

where the definition of the variables can be found in Table 1.

2) *Income increasing abnormal loan loss provisions model*

The approach involves two stages. We first measure abnormal loan loss provision as the residual from a model relating the loan loss provision to a set of control variables. We then focus on the absolute value of negative abnormal loan loss provisions (which are income increasing) and relate it to the dummy for IAS/IFRS financial statements. We interpret a positive (negative)

coefficient of the IAS/IFRS dummy as evidence of decreased (increased) earnings management with the new standards. The analysis is based on the following two equations:

$$LLP_{i,t} = b_0 + b_1 BEG_{i,t} + b_2 LCO_{i,t} + b_3 \Delta LOANS_{i,t} + b_4 LOANS_{i,t} + b_5 NPL_{i,t} + \langle FIRM\ FIXED\ EFFECTS \rangle + e_{i,t} \quad [3]$$

$$ALLP_{i,t} = b_0 + b_1 BIG_{i,t} + b_2 SIZE_{i,t} + b_3 GROWTH_{i,t} + b_4 PASTLLP_{i,t} + b_5 EBTP_{i,t} + b_6 IAS_{i,t} + \langle FIRM\ FIXED\ EFFECTS \rangle + e_{i,t} \quad [4]$$

where the definition of the variables can be found in Table 1.

[Insert Table 4]

The results of the earnings benchmark model are reported in Panel A of Table 4. In both specifications the coefficient of IAS is negative but not significant. The results of the income-increasing loan provision model (second-stage equation) are presented in Panel B of Table 4 (column 1); the coefficient of IAS is again negative and highly insignificant.^{xv} Both models indicate that the extent of earnings management is not associated with IAS/IFRS financial statements.

In light of previous literature, the results are not surprising. As mentioned, the international evidence on the effect of the adoption of IAS/IFRS on audit fees is mixed. These findings suggest that the effect of IAS/IFRS on financial reporting quality cannot explain the change in fees with the new standards. The results described are consistent with the conjecture that the adoption of IAS/IFRS increases the effort required from auditors, thus leading to greater fees.

Fair value accounting and financial derivatives

In the elements of banks' financial statements, financial derivatives are among the items most affected by the IAS/IFRS adoption. The change in accounting for derivatives might have had an important role in explaining the results. We test whether the observed increase in fees after the adoption of the new standards is associated with the presence of financial derivatives.

Firstly, IAS/IFRS require a wider application of fair value for financial instruments and, thus, for financial derivatives. Before the adoption of IAS/IFRS, financial instruments were classified into two categories in Italy: current assets and long-term investments. In general, financial instruments belonging to current assets were evaluated at the minimum between market value and cost, whereas instruments in long-term investments could be evaluated at their cost. With IAS/IFRS, financial assets and financial liabilities have a more articulated classification. For the

initial measurement (i.e. the first time the instruments are written in the financial statements), fair value accounting is extended to all financial instruments. In subsequent measurements, fair value accounting is prescribed for most financial instruments; cost accounting is limited to loans and receivables and to investments held to maturity. Auditing derivatives evaluated at fair value, especially when traded in illiquid markets or in secondary markets, arguably implies an increased auditor effort.

Moreover, IAS/IFRS modify the classification of derivatives in the financial statements.^{xvi} With Italian GAAP, derivatives were classified as capital commitments and, thus, were treated as off-balance sheet items. Conversely, with IAS/IFRS, derivatives are considered as financial instruments and they are classified accordingly. Italian GAAP do not prescribe detailed rules for the evaluation of items in the capital commitments (Italian GAAP require that capital commitments should complement the balance sheet to give a true view of the financial position). Consequently, auditing items in the financial statements requires more effort than items in capital commitments.

Importantly, IAS 39 introduces a major change in the evaluation of securities held for hedging purposes. Before the adoption of IAS/IFRS in Italy, hedging derivatives were evaluated using the same measurement rule used for the hedged items to which they were related – the “consistency evaluation rule”. Contrary to this, IAS 39 overturns the consistency evaluation rule and prescribes to evaluate both hedging derivatives and the hedged items at their fair value in the three forms of hedging considered;^{xvii} this implies a wider application of fair value (both for the derivatives and the hedged items) and, accordingly, greater effort required in the evaluation/auditing of the derivatives and the related hedge items.

As for the definition of hedging, IAS 39, Paragraph 8, sets precise rules;^{xviii} whereas Italian GAAP did not provide any definition of hedging. IAS/IFRS constrain managers’ discretion in the classification of financial derivatives; this requires greater effort from auditors to ensure compliance with the new rules. Additionally, with IAS/IFRS, the effectiveness of the hedge must be verified on an ongoing basis, something which further increases the work burden for auditors.

To sum up, derivatives under IAS/IFRS requires auditors greater effort than under Italian GAAP: in terms of wider application of fair value, compliance with new classification rules, and ongoing verification of the efficacy of the hedge. In banks’ financial reporting, derivatives, held both for trading and for hedging purposes, play a crucial role. Thus we expect derivatives to contribute to the conjectured increase in auditors’ fees after the adoption of IAS/IFRS.

We consider, therefore, how a measure of the amount of derivatives is related to fees around the introduction of IAS/IFRS. We measure the total amount of derivatives (total derivatives, TD)

by: $TD = \frac{\text{Active Derivatives}}{\text{Total Assets}} + \frac{\text{Passive Derivatives}}{\text{Total Liabilities}}$, where active derivatives and passive derivatives

are defined as the derivative instruments classified in assets and in liabilities, respectively. We then introduce in specification [1] the dummy for IAS financial statements and an interaction term involving the measure of the amount of derivatives and the dummy for IAS financial statements. The results, which are reported in Table 5 (column 1), show that the coefficient of (IAS)*(TD) does not significantly differ from zero.

Furthermore, we segment the measure of total derivatives by two components: hedging derivatives, defined as $HD = \frac{\text{Active Hedging Derivatives}}{\text{Total Assets}} + \frac{\text{Passive Hedging Derivatives}}{\text{Total Liabilities}}$, and trading derivatives, defined as $TRD = \frac{\text{Active Trading Derivatives}}{\text{Total Assets}} + \frac{\text{Passive Trading Derivatives}}{\text{Total Liabilities}}$. We estimate the same specification of the model measuring the amount of derivatives by HD and TRD. The results are shown in column 2 of Table 5: the coefficient of IAS*HD is positive and significant, whereas the coefficient of IAS*TRD is not significantly different from zero; the results indicate that the increase in fees experienced by banks in the post-IAS period grows (the coefficient is positive) with the amount of derivatives held for hedging, whereas it is not significantly affected by the amount of derivatives held for trading. The difference in the results between the two categories of derivatives is not unexpected, as the additional auditor effort required for hedging derivatives is likely to be substantially greater than the one required for trading derivatives – in terms of wider application of fair value, compliance with new classification rules, and regular documentation of the efficacy of the hedge.

Finally, we compare the effect of the presence of financial derivatives on fees in the IAS/IFRS transition year and in the following year. We consider the interaction term between the dummy for the variables IAS_1STYR, IAS_2NDYR, HD and TRD. The results, reported in column 3 of Table 5, are consistent with the ones obtained when looking at the overall effect of financial derivatives on fee change after IAS/IFRS adoption. Both in the transition year and in the following year, the fee increase is positively associated with the presence of hedging derivatives, whereas it is not significantly affected by the amount of trading derivatives.

Robustness checks

To assess the robustness of the results, we run a number of additional tests. The results are untabulated for space constraints.

Firstly, we modify the specification of the model (which is presented in Table 3 column 2) with IAS_1STYR and IAS_2NDYR by also including a dummy variable for the year 2005 and interacting it with IAS_1STYR. For the fiscal year 2005, banks could choose whether to prepare their individual financial statements in accordance with IAS/IFRS or to use Italian GAAP, whereas

since 2006 they have had to draw individual accounts according IAS/IFRS; thus, it is reasonable to believe that a learning effect might have driven a greater impact in 2005 than in 2006. Yet, the results do not confirm this conjecture as the interaction term between the dummy for the year 2005 and IAS_1STYEAR is not significant.

Furthermore, we modify the main model (i.e., specification [1] augmented with the dummy for IAS/IFRS financial statements) by excluding the dummy variable for the years after 2002, POST2002. The results are qualitatively unchanged and we interpret them as evidence that, even without controlling for the reorganisation of the audit market which occurred after 2002, a significant increase in fees after IAS/IFRS adoption can be observed.

We inquire into whether the effect of the new standards on fees is different for public and non-public firms by including an interaction term between IAS and LISTED in the main model. The coefficient of the interaction term is not significantly different from zero; this suggests that the increase in fees cannot be explained by the listing status of the firms.

Moreover, we consider two additional control variables that have been found by prior literature to be related to audit fee determination. Previous studies document that US large local offices charge higher audit fees compared to small local offices as a consequence of better audit quality provided (Choi *et al.*, 2010). Evidence of different pricing among different offices is also documented in Europe (e.g. Zerni, 2012). Accordingly, we include in the main model a variable measuring office size (OFFSIZE). Because the largest audit firm offices are located in Rome (the political capital) and in Milan (the economic capital, where the stock market is located), OFFSIZE is defined as a dummy variable coded one if the audit firm is based in Milan or in Rome. We also relate audit fees to mortgage loans as a proportion of gross loans (MORTGLOANS); the variable is calculated similar to Fields *et al.* (2004). We obtain the amount of mortgage loans from Bankscope and we integrate missing values with data from the financial statements (hand collection). The coefficients of OFFSIZE and MORTGLOANS are not significantly different from zero. Inference on the IAS coefficient is unchanged.

The coefficient of NONPERF in the main model is not significantly different from zero. Confounding effects of NONPERF on fees may be due to managers' incentives to reduce the amount of non-performing loans reported; the incentives might be different across listed and non-listed firms and may be mediated by the quality of auditors. Accordingly, we segment the results by an earnings management subsample (we consider the earnings management indicator, measured by LA and JMBE), by LISTED and by BIG. The findings show that in none of the subsamples considered is the coefficient of NONPERF significantly different from zero.

Three potentially relevant accounting and governance reforms were passed during our time sample (1999-2006). In 2004, the reform of the Italian Commercial Law came into effect (and it applies for to listed and non-listed firms); the main novelty was to introduce a clearer separation between taxable income and accounting income. In March 2006, the corporate governance code (Codice Preda) for listed firms was substantially revised; the code regulates the relationship between directors and full auditors. Again in 2006 Law 206/2005 was also implemented as an answer to the financial scandals (e.g., Parmalat), strengthening the monitoring of financial disclosure and providing for the appointment of a person, called “dirigente preposto”, responsible for the company’s financial reporting (Cameran and Pettinicchio, 2010). To control for the effect of these reforms, we include in the main model a dummy for the years after 2004 or for listed firms in the year 2006. During the period under analysis, there were no other reforms of the regulation of the banking activities which are likely to have affected audit fee determination.^{xix} The results show that the coefficients of the dummies for the reforms are not significantly different from zero; the inference regarding the IAS coefficient is unchanged with respect to the main analysis.

As a further possible determinant of an increase in audit effort, we consider the role of the general disparity between Italian GAAP^{xx} and IAS/IFRS. We test whether a disparity indicator is associated with the increase in fees after the adoption of the new standards. We use a measure of disparity of accounting standards in the spirit of Adams *et al.* (1999) and Vieru and Schadewitz (2010).^{xxi} Specifically, we focus on synthesis measures, which are based on the income statement and the balance sheet. We consider the specification of the model with IAS_1STYR and IAS_2NDYR; we interact the measure of disparity with IAS_1STYR. The results show that the interaction term has a coefficient not significantly different from zero.

Finally, we estimate the main model for two allowed legal forms for Italian banks (limited liability vs cooperative/mutual banks), separately, in order to further control for the effect of the proprietorship structure;^{xxii} the results are unchanged in both sub-samples.

7. CONCLUSIONS

In this paper we investigate how the introduction of the international accounting/financial reporting standards (IAS/IFRS) affects auditors’ fee determination in the banking industry. We argue that the adoption of the new standards has two opposite effects on audit fees: on the one hand, the use of IAS/FRS – which are principle-based and fair value oriented standards, as opposed to Italian GAAP – implies greater effort for auditors; this is likely to be reflected by higher fees; on the other hand, if IAS/IFRS improve the quality of financial reporting, expected liability costs decrease and lower fees may be demanded. This study extends the findings of prior research on the effect of

IAS/IFRS adoption on audit fees; contrary to prior contributions, our analysis concentrates on the financial industry and includes both listed and non-listed companies.

We focus on a sample of Italian banks from 1999 to 2006. The Italian environment offers the possibility of investigating the effect of IAS/IFRS adoption also for non-publicly traded firms, while the limits for Italian auditor services guarantee that there are no confusing effects due to non-audit fees. We estimate a panel model relating fees to firm-specific determinants. The results indicate that higher fees are paid after the adoption of IAS/IFRS, in line with the findings reported by practitioner journals. We document a real fee increase after IAS/IFRS adoption approximately equal to 19.29%. This effect is consistent with the view that IAS/IFRS adoption implies higher auditor effort. Our fee data do not support the idea that IAS/IFRS improve banks' financial reporting quality. Accordingly, a specific earnings management model is used which does not provide evidence of improved financial statement quality for IAS/IFRS adopters. A fee increase is observed both in the IAS/IFRS transition year and in the following year, suggesting that the effect of the switch to the new standards on fees is not only attributable to the adjustment process to different rules. We also find evidence that the fee increase is associated with the amount of financial derivatives held for hedging purposes; this can be explained by the greater auditor effort due to the application of the hedge accounting rules prescribed by IAS 39.

A related research question could involve the nature of the longer-term trend of fees after IAS/IFRS adoption. Future research can tackle this issue, but it must be considered that the years after 2006 coincide with a period of extraordinary market downturn and of severe financial stress for the banking industry.

Italy is a typical example of a stakeholder-oriented accounting system, and a further insightful extension of this analysis could investigate the effect of IAS/IFRS adoption in shareholder-oriented systems. As argued by previous literature (Bartov et al., 2005 and Hung and Subramanyam, 2007) IAS/IFRS are inspired by a shareholder-oriented model; thus, the cost of accounting harmonisation in such an environment is likely to be lower.

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NOTES

ⁱ Auditing research recognises that audit firm industry expertise may be an important determinant of audit fees, and the results on the nature of this relationship are contradictory (Ferguson *et al.*, 2006). Previous research on audit fee determination documents a significant industry effect for the financial industry, and banks are largely excluded (exceptions being the US cross-sectional study of Fields *et al.*, 2004 and more recent Kangaretnam *et al.*, 2010a) from the majority of the samples considered (e.g., Francis and Stokes, 1986; Copley and Douthett, 2002; Carson and Fargher, 2007). Other works (e.g., Anderson and Zeghal, 1994) circumvent the industry effect problem by introducing a dummy variable for firms with specialised audit needs. Overall, empirical evidence has mostly been collected for manufacturing and non-financial auditees in a large number of countries (Hay *et al.*, 2006).

ⁱⁱ A detailed analysis concerning 49 countries about the difference between IAS and local GAAP in 2001 on 21 accounting items, shows that Italy has 12 differences (Bae *et al.*, 2008). None of the considered countries had 21 differences. The country has the most differences from IAS is Luxembourg with 18 differences. The Italian “score” is similar to Austria (12), Belgium (13), France (12), Germany (11). Concerning US 4 difference from IAS was reported, 1 for UK and 4 for Australia.

ⁱⁱⁱ Based on Wingate (1997) the litigation risk score represents the risk of doing business as an auditor in a particular country. It may take on values from 1 to 15. Among stakeholder-oriented accounting countries, it is equal to 4.82 for Belgium and Spain and to 6.22 for France and Italy. In order to give the reader an idea of the ranking of the Italian system among the other European countries, the Nordic countries (Denmark, Finland, the Netherlands, and Norway) have a mean value of 5.22, the Germanic group (Austria and Germany) of 4.91, and Ireland of 6.22. Only UK presents a higher value (10), that is equal to the Australian one. The highest value (15) is obtained by US.

^{iv} In Italy, due to the implementation of EU Eight Directives (78/660/EEC, art.8), companies that do not exceed the limits of two of the three size criteria (balance sheet total: 3.65 million Euro, net turnover: 7.3 million Euro, average number of employees during the financial year: 50) may adopt a simplified layout for their financial statements. Two of the size limits will be increased starting from 2009 (balance sheet total: 4.4 million Euro, net turnover: 8.8 million Euro).

^v The International Accounting Standards Board (IASB) issued on 9th July 2009 an International Financial Reporting Standard (IFRS) designed for use by small and medium-sized entities (SMEs). The standard is a result of a five-year development process.

^{vi} Our argument is in line with the model of Kim *et al.* (2012). They show that audit fees increase with audit complexity and decrease with financial reporting quality. They argue that IAS/IFRS lead to increased complexity as IAS/IFRS are “comprehensive, fair-value oriented, and principle-based”; on the other hand, if IAS/IFRS improve the quality of financial reporting quality, this should reduce fees.

^{vii} When Arthur Andersen ceased to operate in the Italian Market, the AA employees and partners were taken over by Deloitte. In our sample, all the auditees that had Arthur Andersen as their audit firm switched to Deloitte & Touche.

^{viii} We also replicated the analysis without adjusting fees and assets for inflation and by including year-fixed effects. The results are qualitatively unchanged; specifically, the estimated coefficient of the IAS dummy corresponds to a mean increase of 18.89%.

^{ix} Collegio Sindacale is made up of individual auditors enrolled in the Register of Revisori Contabili (which is a register where all Italian chartered auditors, who possesses the characteristics required by the Italian law which enforced the

Eighth EU Directive on the approval of people responsible for carrying out the statutory audits of accounting documents, are enrolled).

^x Specifically, we asked for: audit firm name and the amount of the audit fees required by the audit firm. We specified that the amount of the audit fees should exclude what auditors charged for preparing the reconciliation prospects for the IAS/IFRS transition and the reimbursement expenses.

^{xi} To check the stability over time of the results, we estimated the fee model with different time sub-samples: 2000-2006, 2001-2006, 2002-2006; 2003-2006; 2004-2006. The results are qualitatively unchanged.

^{xii} There are 157 firm/year observations (out of 527) corresponding to listed banks. Listed banks display substantially greater assets (mean ASSETS=22.9476), greater number of branches (mean BRANCHES=14.5279) and greater fees (mean FEE=11.5670) paid than the pooled sample. The Pearson correlation coefficient between ASSETS and LISTED is equal to 0.4637 (p-value<0.01). The variance inflation factors corresponding to ASSETS and LISTED are equal to 2.72 and 1.44, respectively.

^{xiii} Inference is unchanged using firm cluster-adjusted standard errors.

^{xiv} It is straightforward to obtain the mean fee increase corresponding to the coefficient of the dummy for IAS financial statements. Following, for example, Simon and Francis (1988), the increase is equal to $(e^{\beta+k} - e^k) / e^k = e^\beta - 1$; where e^k refers to audit fees before IAS/IFRS adoption and $e^{\beta+k}$ refers to audit fees after IAS/IFRS adoption.

^{xv} We also present the results using, as the dependent variable, the positive values of the abnormal loan loss provision (column 2) and all values of the abnormal loan loss provision (column 3). In both cases the coefficient of the dummy for IAS/IFRS is not significant.

^{xvi} IAS/IFRS also changed the definition of derivatives. Italian GAAP considered a definition of derivatives based on the legal form of existing instruments in the market. IAS 39, instead, introduces a definition of derivatives based on the qualifying elements of the instruments (substance principle); this allows one to include in the derivative category all the instruments developed by financial innovation. For example, credit derivatives are encompassed by the IAS/IFRS classification of financial derivatives, whereas they are overlooked by the definition of financial derivatives provided by Italian GAAP.

^{xvii} Three forms of hedging are disciplined: fair value hedging, for the hedge to exposure of changes in fair value; cash flow hedging, for exposure to variability in cash flows; and hedging of investments in foreign operations (IAS 39, paragraphs 85-102). These forms of hedging were not explicitly disciplined by Italian GAAP.

^{xviii} IAS 39, paragraph 88 specifies five conditions to be met for qualifying a hedging relationship for hedge accounting. These conditions concern the documentation of the hedging relationship, the effectiveness of the hedge, the likelihood of the related future transaction, the possibility to measure the effectiveness of the hedge, and the periodical assessment of the effectiveness of the hedge.

^{xix} Specifically, the current regulation of Italian banking activities is based on a 1993 law (TU bancario, D.Lg. 1 settembre 1993, n.385). In the late Nineties and the beginning of new century, a series of reforms changed the corporate governance system for the Italian central bank (Banca d'Italia) but did not change the structure of the 1993 law (TU bancario). The economic crisis determined the issuance at national (Italian) and European level of new rules about the supervision of the banking activity (Costi, 2012) only starting from 2008. These new rules came into effect outside of our sample (1999-2006).

^{xx} For brevity, by Italian GAAP we refer to both Italian law and national accounting principles.

^{xxi} We compute three disparity indexes: $DI_{EBIT} = (BI_{IAS} - BI_{ITGAAP}) / EQ_{ITGAAP}$; $DI_{NI} = [(NI_{IAS} - NI_{ITGAAP}) - (BI_{IAS} - BI_{ITGAAP})] / EQ_{ITGAAP}$; $DI_{EQ} = (EQ_{IAS} - EQ_{ITGAAP}) / EQ_{ITGAAP}$. BI, banking operating income, is computed in two ways: the first measure, BI1, concentrates on the operating income without considering components of profit or loss deriving from evaluation procedures; the second measure, BI2, also considers items deriving from evaluation procedures. NI is net income; EQ is equity capital. We use the absolute value of each index and rank banks into deciles; by assigning a value of nine to the largest decile and zero to the smallest, we compute the corresponding ranked indexes: RDI_{BI} , RDI_{NI} and RDI_{EQ} . To obtain an overall measure of disparity ranging from zero to one, we sum the ranked indexes and divide them by the maximum cumulative value: $ODI = (RDI_{EBIT} + RDI_{NI} + RDI_{EQ}) / 27$; we compute ODI by considering BI defined as BI1 (ODI1) or BI2 (ODI2).

^{xxii} The Bank of Italy grants authorisation to engage in banking if the legal form adopted is that of a “società per azioni” (similar to UK Limited Liability partnership LLC or US limited liability company LLC) or a “società cooperativa per azioni a responsabilità limitata” (legal form general adopted by cooperative & mutual banks).

Table 1: Variables**A. Audit fee model**

FEE:	natural logarithm of audit fees (adjusted for inflation using the Italian Official Consumer Index provided by the Italian National Institute of Statistics-ISTAT – expressed in terms of 2006 prices)
ASSETS:	natural logarithm of total assets (adjusted for inflation using the Italian Official Consumer Index provided by the Italian National Institute of Statistics-ISTAT – expressed in terms of 2006 prices)
BRANCHES:	square root of the number of bank branches
LISTED:	dummy variable that equals 1 for listed firms
PARENT:	dummy variable that equals 1 for parent companies
LOSS:	dummy variable that equals 1 for negative net income
EFFICIENCY:	efficiency ratio – computed as the ratio of total operating expense to total revenue (defined as net interest income plus non-interest income)
SECURITIES:	ratio of securities to total assets
TRANSACCT:	ratio of transaction accounts to total deposits
GUARCOMM:	ratio of guarantees given and commitments to the sum of total liabilities and shareholders' equity
FGBR:	reserve for general banking risks ratio - computed as the ratio of the reserve for general banking risks to the sum of total liabilities and shareholders' equity
NONPERF:	ratio of non-performing loans to gross loans
CAPRATIO:	risk-adjusted capital ratio – computed as the ratio of the total amount of bank regulatory capital to risk-weighted assets
INTANG:	ratio of intangible assets to total assets
BIG:	dummy variable that equals 1 if the auditor is a “BIG” audit firm
IAS	dummy variable that equals 1 for IAS/IFRS compliant financial statements
IAS_1 ST YR	dummy variable that equals 1 for the first year with IAS/IFRS
IAS_2 ND YR	dummy variable that equals 1 for the second year with IAS/IFRS
YEAR05	dummy variable that equals 1 in the fiscal year 2005
POST2002:	dummy variable that equals 1 for observations regarding years after 2002. 2002 is the year of AA demise
TD	$(\text{Active derivatives})/(\text{Total assets})+(\text{Passive derivatives})/(\text{Total liabilities})$
HD	$(\text{Active hedging derivatives})/(\text{Total assets})+(\text{Passive hedging derivatives})/(\text{Total liabilities})$
TRD	$(\text{Active trading derivatives})/(\text{Total assets})+(\text{Passive trading derivatives})/(\text{Total liabilities})$
OFFSIZE	dummy variable that equals 1 if the audit firm is based in Milan or in Rome
MORTGLOANS	ratio of mortgage loans to gross loans

B. Earnings management model

EB:	earnings benchmark indicator (LA or JMBE). LA (i.e. loss aversion) is a dummy variable for a small ROA ($0 < \text{ROA} < 0.0055$); JMBE (i.e. just meeting or beating expectations) is a dummy variable for a small change in ROA ($0 < \Delta \text{ROA} < 0.00004$). The thresholds for LA and JMBE are chosen such that for 10% of the observations the variables are equal to 1
SIZE:	natural logarithm of total assets
GROWTH:	percentage growth in total assets from the beginning to the end of the period
LOANS:	gross loans scaled by total assets at the beginning of the period
LEV:	total equity divided by total assets at the beginning of the period
ΔCFO :	change in cash flows from operations from the beginning to the end of the period, scaled by total assets at the beginning of the period
ALLOW:	allowance for loan losses at the end of the period, scaled by total assets at the beginning of the period
LLP:	provision for loan losses scaled by total assets at the beginning of the period
BEGLLA:	beginning gross loans scaled by total assets at the beginning of the period
LCO:	net loan charge-offs scaled by total assets at the beginning of the period
ΔLOANS :	change in gross loans from the beginning to the end of the period, scaled by total assets at the beginning of the period
NPL:	non-performing loans scaled by total assets at the beginning of the period
ALLP:	absolute value of the negative abnormal loan loss provisions. The abnormal loan loss provisions are obtained as residuals in equation [3]
PASTLLP:	prior year's LLP scaled by total assets at the beginning of the period
EBTP:	earnings before taxes and loan loss provisions divided by total assets at the beginning of the period

Table 2: Descriptive statistics

The statistics refer to 527 firm/year observations.

	<i>Mean</i>	<i>St. Dev.</i>	<i>Min.</i>	<i>Max.</i>
<i>FEE</i>	11.0389	0.8743	7.9518	13.5822
<i>ASSETS</i>	21.6497	1.8248	16.2447	26.0842
<i>BRANCHES</i>	9.3946	8.5993	0.0000	52.4786
<i>LISTED</i>	0.2979	0.4578	0.0000	1.0000
<i>PARENT</i>	0.4156	0.4933	0.0000	1.0000
<i>LOSS</i>	0.0797	0.2711	0.0000	1.0000
<i>EFFICIENCY</i>	0.4557	0.1327	0.3358	0.6777
<i>SECURITIES</i>	0.1816	0.1318	0.0000	0.9126
<i>TRANSACCT</i>	0.3510	0.0995	0.2161	0.4839
<i>GUARCOMM</i>	0.1336	0.2168	0.0000	2.6492
<i>FGBR</i>	0.0038	0.0076	0.0000	0.0920
<i>NONPERF</i>	0.0311	0.0522	0.0000	0.8261
<i>CAPRATIO</i>	0.1931	0.1682	0.0000	0.7959
<i>INTANG</i>	0.0022	0.0000	0.0005	0.0053
<i>BIG</i>	0.9108	0.2853	0.0000	1.0000
<i>IAS</i>	0.1632	0.3699	0.0000	1.0000
<i>IAS_1STYR</i>	0.1082	0.3109	0.0000	1.0000
<i>IAS_2NDYR</i>	0.0550	0.2283	0.0000	1.0000
<i>YEAR05</i>	0.1119	0.3156	0.0000	1.0000
<i>POST2002</i>	0.5199	0.5001	0.0000	1.0000
<i>TD</i>	0.0035	0.0155	0.0000	0.1342
<i>HD</i>	0.0002	0.0018	0.0000	0.0310
<i>TRD</i>	0.0018	0.0112	0.0000	0.1134
<i>OFFSIZE</i>	0.3619	0.4809	0.0000	1.0000
<i>MORTGLOANS</i>	0.2404	0.1529	0.0000	0.9652
<i>LA</i>	0.0101	0.2880	0.0000	1.0000
<i>JMBE</i>	0.1082	0.3109	0.0000	1.0000
<i>GROWTH</i>	0.1628	0.2957	-0.1636	0.4479
<i>LOANS</i>	0.7709	0.0879	0.6735	0.8528
<i>LEV</i>	0.6007	0.7271	0.0195	1.8455
<i>ΔCFO</i>	0.0629	0.0898	-0.0002	0.1998
<i>ALLOW</i>	0.1129	0.1266	0.0000	0.3037
<i>LLP</i>	0.0156	0.0196	0.0002	0.0495
<i>LCO</i>	0.0164	0.0198	0.0000	0.0459
<i>NPL</i>	0.0549	0.0689	0.0000	0.1747
<i>ALLP</i>	0.0000	0.2227	-1.8201	2.9682
<i>EBTP</i>	0.0721	0.0863	0.0018	0.2172

Table 3: IAS/IFRS adoption and audit fees

OLS regression with firm fixed effects. Dependent variable: FEE.
 ***, **, and *: statistical significance at 1%, 5%, and 10%, respectively.

	1	2
<i>CONSTANT</i>	6.7740*** (1.0726)	6.7824*** (1.0750)
<i>ASSETS</i>	0.1598*** (0.0530)	0.1593*** (0.0531)
<i>BRANCHES</i>	0.0714*** (0.0107)	0.0714*** (0.0107)
<i>LISTED</i>	0.1463* (0.0841)	0.1465* (0.0842)
<i>PARENT</i>	-0.0084 (0.0864)	-0.0081 (0.0865)
<i>LOSS</i>	0.0593 (0.0871)	0.0585 (0.0874)
<i>EFFICIENCY</i>	0.0002 (0.0161)	0.0002 (0.0161)
<i>SECURITIES</i>	0.3801* (0.2041)	0.3804* (0.2044)
<i>TRANSACCT</i>	0.0204* (0.0122)	0.0205* (0.0123)
<i>GUARCOMM</i>	0.1756** (0.0747)	0.1748** (0.0749)
<i>FGBR</i>	7.4373*** (2.5522)	7.4090*** (2.5603)
<i>NONPERF</i>	-0.3656 (0.2955)	-0.3653 (0.2959)
<i>CAPRATIO</i>	-0.0776 (0.1129)	-0.0768 (0.1131)
<i>INTANG</i>	0.6978** (0.3528)	0.6954** (0.3535)
<i>BIG</i>	0.0097 (0.1471)	0.0111 (0.1475)
<i>IAS</i>	0.1764*** (0.0439)	
<i>POST2002</i>	-0.1437*** (0.0377)	-0.1439*** (0.0378)
<i>IAS_1STYR</i>		0.1727*** (0.0486)
<i>IAS_2NDYR</i>		0.1844*** (0.0623)
Adj. R ²	0.9043	0.9041
<i>N</i>	527	527

Table 4: Earnings management and IAS/IFRS

Cluster (by firm) adjusted standard errors. ***, **, and *: statistical significance at 1%, 5%, and 10%, respectively.

Panel A: Earnings benchmark

Logit model with firm fixed effects. Dependent variable: LA (column 1), JMBE (column 2).

	1	2
<i>CONSTANT</i>	-1.9163 (2.1557)	-10.4383*** (2.2597)
<i>BIG</i>	-0.3837 (0.5963)	0.2696 (0.4387)
<i>SIZE</i>	0.0202 (0.1141)	0.3427*** (0.1030)
<i>GROWTH</i>	0.0033 (0.0048)	-0.6096*** (0.0827)
<i>LOANS</i>	-0.3816 (1.2163)	1.8956* (0.9854)
<i>LEVERAGE</i>	-0.0329 (0.0365)	0.1635 (0.1156)
Δ CFO	-1.0243* (0.6141)	-5.8660*** (2.2274)
<i>ALLOW</i>	0.0309 (0.1589)	0.5613 (1.5283)
<i>IAS</i>	-0.5916 (0.7026)	-0.4882 (0.3898)
CHI^2	14.1814	67.6040
<i>N</i>	527	527

Panel B: Abnormal loan loss provision

OLS regression with firm fixed effects. Dependent variable: ALLP (column 1), positive values of the abnormal loan loss provision (column 2), all values of the abnormal loan loss provision (column 3).

	1	2	3
<i>CONSTANT</i>	0.0921 (0.0893)	0.2440 (0.1495)	-0.4288*** (0.1398)
<i>BIG</i>	0.0168 (0.0147)	-0.0388 (0.0464)	-0.0718 (0.0678)
<i>SIZE</i>	-0.0024 (0.0046)	-0.0103 (0.0083)	0.0231*** (0.0086)
<i>GROWTH</i>	-0.0043*** (0.0005)	0.0347* (0.0012)	0.0102*** (0.0001)
<i>PASTLLP</i>	0.3781 (0.3072)	-0.1231 (0.1044)	-0.0913 (0.0819)
<i>EBTP</i>	0.0335*** (0.0084)	0.0576 (0.0572)	-0.0379*** (0.0122)
<i>IAS</i>	-0.0230 (0.0143)	0.0253 (0.0335)	0.0179 (0.0188)
Adj. R ²	0.3193	0.1840	0.0942
<i>N</i>	326	201	527

Table 5: IAS/IFRS adoption and financial derivatives

OLS regression with firm fixed effects. Dependent variable: FEE. ***, **, and *: statistical significance at 1%, 5%, and 10%, respectively.

	1	2	3
<i>CONSTANT</i>	6.8224*** (1.0734)	7.0743*** (1.0717)	6.9908*** (1.0760)
<i>ASSETS</i>	0.1568*** (0.0530)	0.1471*** (0.0528)	0.1507*** (0.0531)
<i>BRANCHES</i>	0.0718*** (0.0107)	0.0699*** (0.0107)	0.0702*** (0.0107)
<i>LISTED</i>	0.1534* (0.0844)	0.1504* (0.0838)	0.1473* (0.0840)
<i>PARENT</i>	-0.0092 (0.0864)	-0.0054 (0.0858)	-0.0037 (0.0860)
<i>LOSS</i>	0.0700 (0.0877)	0.0428 (0.0879)	0.0369 (0.0882)
<i>EFFICIENCY</i>	0.0001 (0.0161)	0.0041 (0.0160)	0.0041 (0.0161)
<i>SECURITIES</i>	0.3738* (0.2042)	0.3321 (0.2036)	0.3346 (0.2039)
<i>TRANSACCT</i>	0.0202* (0.0122)	0.0024 (0.0142)	0.0057 (0.0147)
<i>GUARCOMM</i>	0.1704** (0.0748)	0.1715** (0.0743)	0.1725** (0.0745)
<i>FGBR</i>	7.1594*** (2.5654)	6.9750*** (2.5502)	6.8077*** (2.5587)
<i>NONPERF</i>	-0.3511 (0.2958)	-0.2284 (0.2982)	-0.2250 (0.3002)
<i>CAPRATIO</i>	-0.0730 (0.1130)	-0.0943 (0.1126)	-0.0878 (0.1129)
<i>INTANG</i>	0.6897* (0.3528)	0.9173** (0.3630)	0.8753** (0.3672)
<i>BIG</i>	0.0218 (0.1476)	0.0057 (0.1468)	0.0074 (0.1471)
<i>IAS</i>	0.1510*** (0.0501)	0.1311*** (0.0505)	
<i>IASxTD</i>	1.1552 (1.0951)		
<i>POST2002</i>	-0.1444*** (0.0377)	-0.1362*** (0.0377)	-0.1384*** (0.0377)
<i>IASxHD</i>		23.8979** (9.5010)	
<i>IASxTRD</i>		0.0311 (1.1840)	
<i>IAS_1STYR</i>			0.1120** (0.0556)
<i>IAS_2NDYR</i>			0.1770** (0.0770)

<i>HDxIAS_1STYR</i>			20.5026*
			(10.6733)
<i>HDxIAS_2NDYR</i>			28.0475*
			(16.1867)
<i>TRDxIAS_1STYR</i>			1.1896
			(1.4370)
<i>TRDxIAS_2NDYR</i>			-1.7987
			(1.7179)
<hr/>			
<i>Adj. R²</i>	0.9043	0.9056	0.9054
<i>N</i>	527	527	527
<hr/>			