

Economic Integration, IFRS Adoption and Accounting Comparability

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Abstract

We examine the effect of economic integration on accounting comparability. Using the adoption of the common Euro currency as a shock to economic integration, we document two effects. First, we show a direct effect around the adoption of the Euro – accounting comparability increases among industries in adopting countries relative to those in non-adopting ones; and this increase is more pronounced when adopting countries also experience increases in arm's-length financing. Second, economic integration also has an indirect effect, by influencing the effect of accounting standards harmonization (proxied by IFRS adoption) on accounting comparability. We find that the effect of IFRS adoption on accounting comparability is two times larger for Euro members compared to non-Euro members. Our paper highlights the interplay between economic integration, accounting standards harmonization, and accounting comparability.

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1. Introduction

We study the extent to which economic integration drives accounting comparability, broadly defined as the extent of similarity between two firms' financial statements. The motivation for our study is twofold: First, there is a long debate on the roles of accounting standards and underlying economic factors in driving variation in observed accounting practices. While prior research suggests that both factors appear to be important, the interplay between these forces is still not well understood. Second, the recent adoption of International Financial Reporting Standards (IFRS) across the globe has generated a renewed interest in understanding the drivers of accounting comparability. While recent studies exploit this event to study the effect of accounting standards harmonization on accounting comparability (e.g., Barth et al., 2012; Yip and Young, 2012), there is no evidence on the effect of economic integration on accounting comparability. Our paper contributes to this literature by addressing two related questions: (i) whether and to what extent economic integration affects accounting comparability and (ii) what role does economic integration play in the effect of accounting standards harmonization on accounting comparability.

The theoretical framework underlying our research questions is that the degree of economic integration is an important force driving accounting comparability. The premise is that financial reporting is shaped not only by accounting standards but also by the underlying economic environment in which firms operate. Because underlying forces such as product and capital market segmentation differ across countries, these can be a deterrent to accounting convergence, despite countries' efforts to harmonize accounting practices. Consequently, one way to achieve accounting convergence is through convergence in these underlying economic determinants (Ball, 2006). Relatedly, when the underlying economic environment is more

similar, one would expect the harmonization of accounting standards to result in greater accounting comparability (Ball, 2006).

Testing these predictions, however, is challenging because the effects of economic integration and accounting standards harmonization on accounting comparability can be confounded by differences in other economic factors such as economic growth and competition as well as in country-level institutions such as enforcement and investor protection – thus making endogeneity a serious concern.

Our identification strategy uses the decision of several countries within the European Union (EU) to adopt the common Euro currency in 1999 to test the impact of economic integration on accounting comparability. This setting has several desirable features: First, membership in a currency union has been shown to integrate firms' product markets by boosting bilateral trade and to foster cross-border arm's length financing through higher mobility of capital (Frankel and Rose, 1998; Rose, 2000; Micco et al., 2003; Rajan and Zingales, 2003). These effects bolster the case for using the Euro adoption as our instrument for economic integration. Second, countries' decision to adopt the Euro was driven by political concerns made several years prior to the effective date and can be safely regarded as exogenous to accounting practices at the time of adoption.¹ Finally, out of the 27 countries in the EU, 11 adopted the Euro in 1999 while 16 did not, giving us a set of treatment and control groups within the EU to estimate changes in accounting comparability in a difference-in-differences design.

¹ As discussed in Frankel and Rose (1998), the Euro adoption might be potentially endogenous to economic integration which makes it harder to isolate the effect of the Euro adoption on bilateral trade. Such endogeneity is less of a concern in our setting as there is little evidence that harmonization in financial reporting was a driver of countries' decision to adopt the Euro. That said, we follow Frankel and Rose (1998) and include country-pair fixed effects in our design to mitigate the endogeneity by removing cross-country differences in the extent of (slow-moving) economic integration. Further, we also control for time-varying country-level factors such the level and growth in GDP, inflation and extent of financial market development to mitigate concerns that the decision to adopt the Euro could be correlated with country-level factors also correlated with accounting comparability.

We expect the adoption of the Euro to increase accounting comparability via two channels. First, membership in a currency union allows firms to trade more with one another across geographical boundaries, thereby integrating their product markets. This results in greater convergence in firms' market shares, profit margins etc. We expect this integration in firms' underlying fundamentals to result in greater reporting comparability. We term this the “*fundamentals*” channel. Second, as the Euro boosted reliance on arm's-length financing due to greater capital mobility among member countries, we expect this shift in financing to alter the nature of financial reporting that is demanded of the firm. In particular, Ball et al. (2000), Leuz et al. (2009), and others argue that when firms borrow capital from arm's-length providers rather than from domestic banks, there is a greater demand for financial reporting transparency, as arm's-length financiers are more likely to use financial statements to monitor performance of borrowers. To the extent, cross-border capital flows emanate from (homogeneous) arm's-length financing sources, we expect them to create a more homogeneous demand for financial reporting. We term this the “*accounting*” channel and expand on it using the following example.

Take two firms – one from Austria and the other from Germany. Suppose that prior to the Euro, each firm accessed local sources of capital, e.g., from an Austrian bank and a German bank respectively. In this case, the financial reporting attributes of these firms will be shaped by the idiosyncratic information demands of the two banks. However, after Euro adoption, both firms can now access international capital markets and thus borrow from arm's-length financiers. Given that these financiers are known to demand greater financial reporting transparency, we expect the extent of accounting comparability between these two firms to increase. We call this

the “*accounting*” *channel* because this effect is incremental to the integration in underlying fundamentals and arises purely from the enhanced demand for financial reporting transparency.²

We test our hypotheses using data from Worldscope and Datastream for 14 EU countries (10 adopters and 4 non-adopters) for the period 1994 to 2004. Our sample comprises of 28,037 industry-pair-year observations across 55 unique one-digit ICB industry-pairs. We start by documenting the convergence in firms’ fundamentals subsequent to the adoption of the Euro. Specifically, we adapt the methodology in Bekaert et al. (2012) and we define earnings convergence as the unsigned difference between the mean *ROAs* of two industry-country-pairs for a given year (multiplied by minus one). We find a significant increase in earnings convergence for Euro adopters relative to non-adopters. Further, we decompose earnings into cash flows and accruals and show that the convergence is partially driven by cash flows, but primarily by working capital accruals. These results are consistent with the argument that the Euro facilitated cross-border trade which resulted in greater business cycle synchronization and a convergence in accounting earnings.

As the above effects comingle the “*fundamentals*” and the “*accounting*” channels, we seek to isolate the latter by focusing on how the “mapping” between economic transactions and reported earnings changed after Euro adoption. In other words, we try to hold the economic transactions (i.e., *fundamentals*) constant and ask whether these transactions are now reported differently after the adoption of the Euro. To do so, we use the measure of accounting comparability developed by De Franco et al. (2011) and find a strong increase for Euro adopters relative to non-adopters.

² In this example, the convergence in the demand for higher transparency leads to higher comparability. We note that this need not always be the case. For example, a convergence in the demand for *lower* transparency (say if firms move from dispersed arm’s length financing to common private capital providers) could also result in higher comparability. This prediction, however, is hard to show in our sample as the Euro was characterized by an increase in arm’s length financing and consequently a higher demand for financial reporting transparency.

To provide further evidence that the “*accounting*” channel is indeed due to greater arm’s-length financing, we partition our sample based on ex-post increases in the extent of bilateral foreign portfolio investment (*FPI*) in our sample countries. This test is based on Rajan and Zingales’s (2003) evidence that cross-border bond financing increased substantially (i.e., by more than three times) after the adoption of the Euro. We predict and find that the increase in accounting comparability is positive and significant only in sub-samples with increases in *FPI*. In contrast, we are unable to detect any change in accounting comparability for sub-samples without an increase in *FPI* between the pre and post periods. The differences in these coefficient estimates are striking. Accounting comparability increases by more than five times in the sub-sample of *FPI* increases as compared to that in the sample without *FPI* increases.

Having documented a direct effect of economic integration on accounting comparability, we turn our attention to an indirect effect. Specifically, we study how economic integration influences the effect of accounting standards harmonization on accounting comparability. Our intent here is to test Ball’s (2006) conjecture that harmonizing accounting standards is likely to result in larger increases in accounting comparability when the underlying economic environment is more similar. We test this hypothesis by using IFRS to capture accounting standards harmonization and conditioning these tests on Euro membership (our proxy for the similarity in the underlying economic environment). The innovation here is that our setting allows us to exploit a dynamic relation between accounting standards harmonization and underlying economic factors by focusing on the former, once convergence in the latter is (relatively) in place.

Our sample for this test consists of 117,905 industry-pair-year observations from 31 countries (14 IFRS adopters from the EU and 17 non-IFRS adopters including the U.S.) during

the period of 2002 to 2007. In contrast to the Euro tests which were confined to the EU, we expand the sample here to non-EU countries because all countries within the EU adopted the Euro, leaving us with no control group. Consistent with Barth et al. (2012) and Yip and Young (2012), we show that IFRS adopters experience greater accounting comparability after IFRS both amongst each other and also with the U.S. More importantly for our setting, once we condition on Euro membership, we find that the increase in accounting comparability for Euro adopters is approximately two times larger than that for non-Euro EU adopters. These findings suggest that accounting standards harmonization can have a substantially different effect on accounting comparability depending on the extent of economic integration amongst adopting countries.

We conclude with some robustness tests. First, to ensure that our Euro adoption effects are not reflecting an ongoing time-trend, we run a falsification test by back-dating the Euro adoption date and re-running our analyses. We are unable to find any changes in accounting comparability around this pseudo shock. Second, we control for first-time enforcement of insider trading laws by Euro adopters to capture concurrent changes in enforcement and continue to find an increase in accounting comparability around the adoption of the Euro. Finally, with regard to the IFRS adoption tests, we follow Christensen et al. (2013) and isolate countries with concurrent changes in enforcement around IFRS. Our results suggest that even after removing such confounding effects, economic integration continues to be an important factor determining the change in accounting comparability around IFRS adoption.

Before we proceed, it is pertinent to note that our study does not take a stance on whether greater economic integration and accounting comparability are “optimal”. After all, recent events in the Euro zone highlight how currency unions can bring about unintended consequences such as cross-border contagion and systemic risk. Thus, any purported claim of the optimality of

greater economic integration (and accounting comparability) requires a fuller examination of all costs and benefits – which is beyond the scope of our paper. Our objective is to use an exogenous shock to economic integration and to identify its effects on accounting comparability. An implication of our findings is that, any future declines in economic integration within the Euro zone might lead to deterioration in accounting comparability, despite the harmonization in accounting standards over the last several years.

The rest of the paper is as follows. Section 2 presents the motivation followed by the hypotheses. Section 3 outlines the empirical design and Section 4 describes the results. Section 5 presents the robustness tests and Section 6 concludes.

2. Motivation and hypothesis development

There has been a resurgence of interest in accounting comparability in the recent years, most notably due to the adoption of IFRS by several countries across the globe. A motivating factor driving IFRS is the idea that a common set of accounting standards can result in greater accounting comparability. Consistent with this argument, Barth et al. (2012) and Yip and Young (2012) show that accounting comparability increased subsequent to the adoption of IFRS, both within IFRS countries and vis-à-vis U.S firms.

While the view that accounting standards harmonization can affect accounting comparability is fairly well-accepted, there is less agreement on the factors that determine the extent of this effect. Prior studies argue that differences in underlying economic fundamentals and in institutional structures across countries can substantially affect reporting practices. For example, Ball et al. (2000, 2003) show that reporting practices are affected by reporting incentives such as “arm’s-length” financing. Similarly, research has shown that country-level

differences in enforcement and other legal institutions influence financial reporting outcomes (Leuz et al., 2003, Bushman and Piotroski, 2006; and Jayaraman, 2012). Overall, prior research suggests that both accounting standards as well as underlying economics (broadly defined to encompass reporting incentives) appear to be at play in shaping reporting practices.

While the above studies explore important drivers of accounting practices, none of these studies directly examines accounting comparability – the construct of interest in our study. Ball (2006) directly confronts the question of financial reporting comparability and discusses the role of accounting standards versus that of institutional features in influencing accounting comparability. Ball notes that “*convergence* in actual financial reporting practice is a different thing than convergence in financial reporting standards... because capital markets are not perfectly integrated (debt markets in particular), and because more generally economic and political integration are both far from being complete, the logic of national *differences* should be equally evident” (our emphasis). Ball’s argument implies that integration in accounting practices is expected to be a function of the underlying forces driving reporting practices such as economic integration.

Our paper seeks to test this argument. In particular, we examine two related questions – first, does economic integration affect accounting comparability, and if so, how important is this effect? And second, does economic integration have a role to play in how accounting standards harmonization affects accounting comparability? In the following section, we make the case for using the adoption of the common Euro currency by countries in the EU as our shock for economic integration.

2.1. Adoption of the Euro currency

The European Union (which was formed as part of the Maastricht Treaty of 1992) instituted the common Euro currency in 1999 as a culmination of efforts to achieve greater economic integration among its members. EU countries were allowed to adopt the common currency as long as they met certain criteria (known as the convergence criteria) that would ensure price stability within the region.³ Two channels through which a common currency affects economic integration are greater bilateral trade and more cross-border arm's length financing.

A large literature in international economics studies the effect of a common currency on bilateral trade. Rose (2000) finds that countries with a common currency trade around three times as much as those with different currencies and Micco et al. (2003) document an increase in trade in the context of the Euro. Further, Frankel and Rose (1998) find that greater bilateral trade between two countries results in greater economic integration (using several measures such as real GDP, industrial production etc.) between them. Using an instrumental variables methodology, they confirm that the direction of causality runs from bilateral trade to economic integration.

With regard to arm's-length financing, Rajan and Zingales (2003) show that the introduction of the Euro led to an explosion of public debt financing in adopting countries. In other words, the Euro adoption had a significant impact on capital mobility which facilitated arm's-length financing across countries. We expect this shift in financing to alter the nature of financial reporting that is demanded of the firm. In particular, when firms borrow capital from arm's-length providers rather than from domestic banks, there is a greater demand for financial

³ The convergence criteria broadly encompassed fiscal and budgetary restrictions such as not having very high inflation rates, government deficit should be not exceed 3% of GDP, government deficit to GDP needs to be less than 60% and long term interest rates should not be more than 2% higher than benchmark countries.

reporting transparency, and this *convergence* in the demand for greater transparency translates into higher accounting comparability.

2.2. Hypotheses

Our first prediction pertains to the direct effect of Euro adoption on accounting comparability. We predict that the adoption of the Euro increases accounting comparability. This hypothesis has two underpinnings. First, we rely on prior research that shows that the Euro resulted in significant economic integration (proxied by the boost in bilateral trade) and in higher arm's length financing. Second, we rely on Ball's (2006) argument that the extent of economic integration shapes differences in financial reporting comparability across firms. In short, our prediction is that the Euro adoption increased economic integration, which in turn, translated into greater accounting comparability. We formalize our hypothesis as follows:

H1: There is an increase in accounting comparability after the adoption of the common Euro currency.

Our second prediction pertains to the role of the Euro in how accounting standards harmonization affects accounting comparability. We use IFRS adoption as our proxy for accounting standards harmonization and, along the lines of Ball (2006), expect its effect on accounting comparability to vary depending on whether adopting countries are members of the Euro. Given that economic integration is argued to magnify the effects of accounting standards harmonization on accounting comparability, we expect the effect of IFRS adoption to be more pronounced for Euro-zone adopters than for non-Euro-zone adopters. Our second hypothesis is:

H2: The effect of IFRS adoption on accounting comparability is more pronounced for Euro members than for non-Euro members.

3. Research design

3.1. Sample

We obtain our data from several sources – accounting data are from Worldscope, stock return data from Datasream, Euro adoption dates and countries from Bekaert et al. (2012), macroeconomic variables from the World Development Indicators (WDI) database of the World Bank and from the Trade and Coordinated Portfolio Investment Survey (CPIS) database of the IMF. As described in more detail below, our notion of comparability refers to the similarity in accounting practices among firms which we estimate at the industry-country-pair level. Thus, we collect firm-level data from Worldscope and Datastream, and collapse it to the industry-country-pair level for the estimation of our proxies for comparability. To avoid the influence of firms' voluntarily adoption of international accounting standards over this period, we remove firms that voluntarily adopted IAS or U.S. GAAP from the sample. The data on voluntary firms comes from Daske et al. (2013). The final sample comprises of 28,037 industry-pair-year observations for 55 unique one-digit ICB industry codes over the period 1994 to 2004 and spanning 14 EU countries. Table 1 shows that of these 14 countries, 10 countries (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Netherlands, Portugal and Spain) adopted the Euro in 1999 while 4 countries (Denmark, Poland, Sweden and the United Kingdom) did not.⁴

3.2. Research design

To estimate the effect of the Euro adoption on accounting comparability, we estimate the following difference-in-differences specification:

⁴ Out of the 27 EU countries, we lose two Euro adopters – Luxembourg (due to insufficient data) and Greece (which adopted the Euro in 2001). We also exclude three countries that more recently adopted the Euro (Slovenia in 2007; and Cyprus and Malta in 2008) and eight non-adopters (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Romania, and Slovakia) due to insufficient data.

$$COMP = \alpha_c + \mu_t + \omega_1 EURO * POST + Controls \quad (1)$$

COMP is a measure of comparability following either Bekaert et al. (2012) or DeFranco et al. (2011), α_c and μ_t are country-pair and year fixed-effects respectively. The inclusion of country-pair effects is especially important given that bilateral trade between two countries is influenced by several factors such as size of the respective economies and by the distance between them (Frankel and Rose, 1998; Rose, 2000). Thus, the inclusion of country-pair effects ensures that we identify off of within-country-pair variation in economic integration, which is what our instrument captures.

EURO is an indicator variable to distinguish between countries that adopted the Euro and those that did not, and *POST* is an indicator variable for years after adoption (i.e., 2000 to 2004). As Euro adoption is hypothesized to increase accounting comparability, the coefficient on ω_1 in eq. (1) is expected to be positive. Finally, we cluster the standard errors at the country-pair level as our treatment is at the country-pair level.

3.3. Primary variables

3.3.1. Earnings comparability (*EARN_COMP*)

Our first measure of comparability uses the methodology in Bekaert et al. (2012). Specifically we measure earnings comparability (*EARN_COMP*) at the industry-pair-year level as the absolute value of the difference between two industries' earnings (i.e., earnings before extraordinary items scaled by total assets). This measure, as they argue, is a simple model-free measure of the extent to which two firms' earnings are similar. Thus, earnings comparability between industry i and industry j in year t is defined as follows:

$$EARN_COMP_{it,jt} = |EARN_{it} - EARN_{jt}| \quad (2)$$

where, $EARN_{it}$ represents earnings scaled by total assets of industry i in year t ; and $EARN_{jt}$ captures earnings of industry j in year t .

Similar to earnings comparability, we define cash flow comparability as follows:

$$CFO_COMP_{it,jt} = |CFO_{it} - CFO_{jt}| \quad (3)$$

where, CFO_{it} represents cash flow from operations of industry i in year t scaled by total assets of industry i in year t .

Turning to accruals comparability, we decompose it into working capital accruals comparability ($WCACCR_COMP$) and depreciation comparability ($DEPR_COMP$)

$$WCACCR_COMP_{it,jt} = |WCACCR_{it} - WCACCR_{jt}| \quad (4)$$

$$DEPR_COMP_{it,jt} = |DEPR_{it} - DEPR_{jt}| \quad (5)$$

where, $WCACCR_{it}$ and $DEPR_{it}$ represent working capital accruals and depreciation of industry i in year t respectively each scaled by total assets of industry i in year t .

3.3.2. Accounting comparability ($ACCT_COMP$)

Our second measure of comparability is from De Franco et al. (2011). Specifically, we define accounting comparability ($ACCT_COMP$) as the similarity between two firms' financial statements given a common set of economic events. We follow their methodology and use stock return as the proxy for the net effect of economic events and earnings as the proxy for financial statements. Their measure better attempts to isolate the “*accounting*” channel (say compared to the methodology in Bekaert et al. (2012)) by measuring the closeness of two firms' reporting functions that map their economic events (that are held constant, by construction) to their respective financial statements.

We adapt De Franco et al.'s measure of comparability in our context to estimate comparability cross-sectionally among country-industries for each year (as opposed to in time-series by firm). This is important because it allows us to capture time-series variation in comparability which we then use as a dependent variable in our difference-in-difference research design. Specifically, we first estimate the following cross-sectional regression for each country-industry-year (industry is defined as one-digit ICB code) in our sample with at least 10 firms:

$$EPS_{ck,i,t} = \alpha_{ck,t} + \beta_{ck,t} RET_{ck,i,t} + \varepsilon_{ck,i,t} \quad (6)$$

where, $EPS_{ck,i,t}$ represents earnings per share at year t scaled by the beginning period stock price for firm i in industry k in country c and RET represents the stock return for the firm during 15-month period starting at the beginning of the fiscal year and ending three months after the end of the fiscal period.

In equation 1, the accounting function for industry k in country c in year t is proxied by $\hat{\alpha}_{ck,t}$ and $\hat{\beta}_{ck,t}$. The accounting function, which we term as the accounting “mapping”, captures the extent to which an economic event (proxied by the stock return) is recognized the financial statements (as proxied by earnings). A similar mapping is generated for each country-industry-year (i.e., $\hat{\alpha}_{dk,t}, \hat{\beta}_{dk,t}$) in our sample.

We compute accounting comparability between industry k in country c and industry k in country d in a given year as follows:

$$ACCT_COMP_{c-d,k,t} = -1 * |[\hat{\alpha}_{c,k,t} + \hat{\beta}_{c,k,t} RET_{c-d,k,t}] - [\hat{\alpha}_{d,k,t} + \hat{\beta}_{d,k,t} RET_{c-d,k,t}]| \quad (7)$$

Accounting comparability between industry k in country c and industry k in country d is the difference between the expected earnings of each industry-country pair, given the average return for the firms in these two industry-country samples. In other words, we hold the

“economic event” constant and estimate accounting comparability as the difference in the accounting mapping between two country-industries in a given point in time.⁵

3.4. Control Variables

Following Bekaert et al. (2012), in the *EARN_COMP* regressions we control for differences in the number of firms within each industry using the sum of the number of firms within the industry-pair (*FIRMS_SUM*), for differences in leverage (*LEV_DIFF*) defined as the absolute value of the difference in industry leverage between the two industries and for differences in firm size using the log of total assets (*LNTA_DIFF*).

We also control for time-varying macroeconomic factors related to countries’ decision to adopt the Euro which might also be correlated with accounting comparability. In particular, we control for differences in the level and growth of GDP (*GDP_DIFF* and *GDPGROW_DIFF*), and annual inflation (*INFL_DIFF*). We also control for differences in financial market development across countries by including the absolute value of the difference in equity market cap of listed firms to GDP (*MKTCAP_DIFF*), and stock turnover of listed firms to GDP (*TURNOVER_DIFF*). This is relevant given that our instrument (the Euro) captures *cross-border* economic integration and thus the inclusion of these variables allows us to better control for *domestic* financial market events.⁶

Turning to the *ACCT_COMP* regressions, we control for the average industry return across each industry-country pairs during the year (*MEAN_RET*) and also for the difference in

⁵ In DeFranco et al.’s (2011) methodology, the intercept ‘ α ’ captures the conditional average earnings to price ratio in the regression whereas the coefficient ‘ β ’ captures the earnings response coefficient. As an alternative methodology to better isolate the “mapping” between economic transactions to earnings, we compute *ACCTCOMP* simply as differences in ‘ β ’ times *RET* (i.e., we do not include differences in ‘ α ’). Our inferences are similar to those presented in the paper.

⁶ While controlling for time-varying macroeconomic factors aids in identification of the Euro effect beyond the inclusion of country-pair dummies, a concern is that they might be over-correcting. For example, Euro adoption has been shown to reduce GDP correlations (e.g., Frankel and Rose, 1998).

returns between the industry-pair (*RET_DIFF*). The latter is meant to be a catch-all for convergence in *fundamentals*, allowing us to better isolate the *accounting* channel. To ensure that our measure of stock returns is not confounded by differences in market-efficiency before versus after the Euro, we control for stock liquidity using the proportion of zero return days (*ZRET_DIFF*). As our measure of accounting comparability is similar in spirit to differences in ERCs, we control for factors shown to be related to ERCs (Collins and Kothari, 1989). In particular, we control for differences in earnings persistence, risk, and growth using differences in the earnings-to-price ratio (*EP_DIFF*) and book-to-market (*BM_DIFF*).⁷ Further, similar to the earnings comparability regressions, we control for differences in macroeconomic factors and also year and country-pair fixed effects.

4. Results

Panel A of Table 2 presents descriptive statistics of our main variables. The first section contains all the comparability variables (expressed in percentage terms). The average value of -5.433 corresponding to *EARN_COMP* corresponds to an earnings difference of 5.43% of total assets. The values for *CFO_COMP* and *ACCR_COMP* are roughly similar in magnitudes. The last row entitled *ACCT_COMP* denotes the DeFranco et al. (2011) measure of accounting comparability and ranges from a low of -22% of assets to a high of 0.01% of assets,. The mean value of 0.551 for *BITRADE* indicates that bilateral trade between country-pairs in our sample amounts to 0.55% of total imports and exports of both countries. Around 48% of the sample comprises of industry-pairs where both industries are from countries that adopted the Euro. The representative industry-pair has 126 firms in both industries combined and depicts an average difference in leverage of around 7.6% of assets. The average difference in industry returns

⁷ To mitigate the influence of large outliers, we use the industry-median *EP* ratio rather than the mean.

between the two industries in the industry pair is 24.8% with the median coming in at 19.3%. Overall, the sample depicts rich heterogeneity with respect to economic characteristics.

Panel B breaks the sample down in the form of a 2-by-2 matrix. The treatment group (i.e., both countries adopted the Euro) is shaded in a dark color and comprises of 13,346 industry-pair-year observations. The remaining three cells of the matrix, shaded in a light color, indicate the control group. These comprise of 12,181 (6,151+6,030) observations where one of the two countries adopted the Euro and 2,510 observations where neither country adopted the Euro. Our results are robust to deleting the off-diagonal observations and comparing only $EURO_i=1$ & $EURO_j=1$ with $EURO_i=0$ & $EURO_j=0$.

4.1. Effect of Euro adoption on economic integration

An important assumption underlying our study is that the adoption of the Euro increased economic integration. Thus, before we test our hypotheses pertaining to accounting comparability, we first validate the above assumption. To do so, we follow prior studies (e.g., Rose, 2000; Micco et al., 2003) and document the effects of Euro adoption on bilateral trade between adopting countries. In particular, we obtain bilateral trade data from the Direction of Trade Statistics (DOTS) database of the IMF and define *BITRADE* as the (log of the) ratio of total imports and exports between the country-pair to total exports and total imports of both countries. This model is analogous to the difference-in-difference specification in eq. (1) but uses bilateral trade at the country-pair level as the dependent variable. We expect bilateral trade between Euro countries to increase after adoption of the common currency, i.e., the coefficient on $EURO*POST$ to be positive and significant.

Table 3 presents evidence consistent with prior research. The first specification includes only year and country-pair effects, while the second also includes the country-level control variables. As *BITRADE* is defined at the country-pair level, we collapse our sample to a country-pair-year panel for this test. As predicted, the coefficient on *EURO*POST* is positive (0.029) and highly significant indicating that Euro adopters experience a pronounced increase in bilateral trade compared to non-adopters. In terms of economic significance, Euro increases bilateral trade in adopting countries by 3% (given that the outcome variable is expressed in logs). These estimates are similar to those in Micco et al. (2003) and provide evidence consistent with an inherent assumption underlying our hypothesis that Euro adoption increased economic integration.

4.2. Effect of Euro adoption on earnings comparability

Table 4 presents the results for earnings comparability (*EARN_COMP*) followed by its components – cash flow comparability (*CFO_COMP*), working capital accruals comparability (*WCACCR_COMP*) and depreciation comparability (*DEPR_COMP*). Consistent with hypothesis *H1*, the coefficient on *EURO*POST* is positive and significant in the first specification, indicating that earnings comparability increases after Euro adoption among adopting-countries relative to non-adopters. In terms of economic significance, given a pre-adoption mean *ACCT_COMP* of -3.775, the value of 1.203 on *EURO*POST* in Column (1) corresponds to an increase in earnings comparability of around one-third ($=1.203/3.775$). We interpret these results as evidence that our shock to economic integration has an important effect on accounting comparability.

The next column presents results for cash flow comparability. The coefficient on *EURO*POST* is positive but insignificant at conventional levels (*t*-statistic of 1.46). The next column, which pertains to working capital accrual comparability, indicates a positive and highly significant coefficient on *EURO*POST*. In terms of economic significance, the Euro adoption increases working capital accrual comparability by 25% relative to pre-adoption levels. In contrast, there is no evidence of a change in depreciation comparability, as evidenced by the insignificant coefficient on *EURO*POST* in the *DEPR_COMP* regression. Overall, we interpret these results as evidence that economic integration increases earnings comparability, and in particular working capital accruals comparability.

4.3. Effect of Euro adoption on accounting comparability

Table 5 presents results based on the DeFranco et al. (2011) measure of accounting comparability, which seeks to hold the *fundamentals* channel constant and attempts to isolate the *accounting* channel. We present three specifications – the first without any controls, the second with only industry-pair controls and finally the full specification with industry-pair and country-pair controls. The coefficient on *EURO*POST* is positive and highly significant in all the specifications, providing robust evidence that our instrument for economic integration increases accounting comparability not only through the *fundamentals* channel but also through the *accounting* channel. In terms of an analogy with prior studies that highlight the role of innate and discretionary factors, we can think of the *fundamentals* channel as being akin to the innate factor and the *accounting* channel as being the counterpart of the discretionary factor.

4.4. Cross-sectional variation – changes in Foreign Portfolio Inflows (*FPI*)

In this section, we seek to bolster our inference that the increase in accounting comparability through the “*accounting*” channel is indeed due to the increase in arm’s-length financing. The adoption of the Euro brought with it an immense opportunity to tap external debt markets for financing. Rajan and Zingales (2003) argue that firms were reluctant to issue large amount of long-term bonds denominated in foreign currencies, because of the foreign exchange risk involved in repayments. They find that the introduction of the Euro resulted in a tripling of the amount of domestic and international corporate debt issued by Euro members, and conclude that the Euro had a quantitatively large effect in promoting the development of arm’s length markets. Given that arm’s-length lenders rely on financial reporting information to monitor borrowers (Ball et al., 2000; Leuz et al., 2009), we expect the increase in arm’s-length financing to increase accounting comparability via the “*accounting*” channel. To test this hypothesis, we condition on increases in the extent of bilateral Foreign Portfolio Inflows (*FPI*) after the Euro adoption. We calculate the change in bilateral mutual *FPI* flows between the country-pair between the pre and post Euro adoption periods. We then split our sample based on increases versus non-increases in *FPI*.⁸ We estimate the model as in eq. (8) but split our sample into two sub-samples of “Increase” and “Non-increase” in *FPIs*. Table 6 presents these results.

Consistent with our expectations, the coefficient on *EURO*POST* is positive and strongly significant in the “Increase” sub-sample, while it is insignificant in the “Non-increase” sub-sample. These coefficients are not only statistically different from each other, but their economic significance is also striking. The increase in accounting comparability in the former sub-sample is more than five times larger than that in the latter. The economically large difference between

⁸ One caveat with these data is that they are available for a much shorter time period and are missing around the years closest to adoption. We define the pre-period as 1997 and the post-period based on 2001 to 2004.

the two sub-samples reinforces the important effect of Euro adoption on arm's-length financing documented by Rajan and Zingales (2003); and of the effect of arm's-length financing on financial reporting (e.g., Ball et al., 2000; Leuz et al., 2009). Overall, we interpret these results as evidence that the elevated demand for financial reporting transparency from arm's-length financiers contributed to the increase in accounting comparability via the “*accounting*” channel.

4.5. Role of economic integration in the impact of accounting standards harmonization

Having documented a direct effect of economic integration on accounting comparability, we now examine a complementary channel, i.e., its role in the effect of accounting standards harmonization on accounting comparability. Following recent studies such as Barth et al. (2012), we use IFRS adoption in 2005 as our proxy for accounting standards harmonization. To maintain consistency with the Euro tests, we restrict our sample of IFRS adopters to the EU. The ideal experiment would be to partition the sample of EU adopters into IFRS adopters and non-adopters and assess the ensuing effect on accounting comparability. However, all countries in the EU adopted IFRS, leaving us with no control group. To circumvent this problem, we benchmark changes in accounting comparability for IFRS EU adopters with IFRS non-adopters from around the world (including the U.S.)

Panel A of Table 7 presents the list of IFRS adopters within the EU and the non-IFRS adopters. The list of IFRS adopters and non-adopters is from Daske et al. (2008). The IFRS sample comprises of 14 EU countries while the control sample contains 17 non-EU countries. We exclude Turkey and New Zealand from the control group because they adopted IFRS subsequently in 2006 and 2007 respectively. Panel A also indicates whether the country is a member of the Euro currency union. As can be seen, there is no EU country in the non-adopter

group since all EU countries adopted IFRS. However, the IFRS group includes both Euro members as well as non-Euro members, which we will exploit in our subsequent tests.

As prior studies focus not only on accounting comparability within the IFRS adopting group (e.g., Yip and Young, 2012), but also with the U.S. (Barth et al., 2012), we present these two effects individually in our analyses. Panel B presents the 3-by-3 breakdown. The sample comprises of 27,234 observations where both industries in the pair are from countries adopting IFRS (shaded in dark grey and codified as *IFRS-IFRS*). Moving across columns, the next cell comprises of 2,945 observations (shaded in a medium gray) that pertain to pairs where industry *i* is from the IFRS group and industry *j* is in the U.S. This group is coded as *IFRS-US*. Analogous definitions extend to the remaining cells in the matrix. The total number of observations for these analyses is 117,905. Our treatment group comprises of two indicators – *IFRS-IFRS* and *IFRS-US*; while the control group comprises of the IFRS:Non-IFRS, US:Non-IFRS, and Non-IFRS:Non-IFRS pairs.⁹

We perform two sets of analyses. First, we replicate prior results of the effect of IFRS adoption on accounting comparability. To do so, we interact *IFRS-IFRS* and *IFRS-US* with a *POST* indicator (that takes the value of 1 for the years 2005-2007 and 0 for the years 2002-2004). These results are presented in Model 1 of Panel C of Table 7. While we estimate the full specification of eq. (1), we present only the main coefficients for the sake of brevity. Consistent with prior studies, the coefficient on *IFRS-IFRS*POST* and *IFRS-US*POST* are both positive and significant, indicating that IFRS adoption increases accounting comparability amongst adopters and also vis-à-vis the U.S.

Next, we turn to the primary focus of our study – which is to examine the role of economic integration in the effect of IFRS on accounting comparability. To do so, we

⁹ Our results are robust to deleting the off-diagonal observations.

differentiate between IFRS adopters based on whether or not they are members of the common Euro currency. In particular, we split the *IFRS-IFRS* indicator into two indicators – *E_IFRS-E_IFRS* to denote instances where both IFRS adopters are members of the Euro; and *NE_IFRS-NE_IFRS* that indicates instances where both IFRS adopters are from the non-Euro zone as well as when only one adopter is from the Euro zone. Similarly, we split the *IFRS-US* indicator into *E_IFRS-US* and *NE_IFRS-US*.

Model 2 presents the above results. Consistent with our expectations and the arguments in Ball (2006), we find that post-IFRS increases in accounting comparability are more pronounced in the case of Euro adopters as compared to non-Euro adopters. In particular, the coefficient on *E_IFRS-E_IFRS*POST* is 6.368 compared to the 3.915 for *NE_IFRS-NE_IFRS*POST*, with these coefficients being significantly different from each other. The relative magnitudes of these coefficients indicate that the effect of IFRS adoption on accounting comparability is almost twice as large for countries that are economically integrated than for those that are not. Similarly, the coefficient on *E_IFRS-US*POST* is around twice as large (5.402) as compared to that on *NE_IFRS-US*POST* (2.501). Overall, accounting standards harmonization results in a more pronounced increase in accounting comparability when there is already greater economic integration amongst the adopting countries.

Before we conclude, it is pertinent to wonder whether our results are being driven by contemporaneous increases in enforcement. Christensen et al. (2013) find that liquidity improvements around the IFRS adoption are confined to five countries – Finland, Germany, the Netherlands, Norway and the U.K. To ensure that our results are not driven by changes in enforcement, we exclude these enforcer countries from our sample and re-estimate the above

specifications. The last specification of Model 3 indicates that our results are robust to excluding enforcers. In particular, the coefficients on all coefficients of interest remain unaltered.

5. Robustness tests

In this section, we perform a series of robustness tests. We verify that our results are not on account of time-trends in the data (Section 5.1); or due to changes in institutional factors such as enforcement around this period (Section 5.2).

5.1. Falsification tests

To verify that our Euro tests are not merely reflecting ongoing time-trends in the data, we run a falsification test. In particular, we back-date the date of Euro adoption to 1995 and run our tests around this pseudo-adoption date.¹⁰ If our results are being driven by time-trends, we expect the coefficient on *PEURO*POST* (to denote *pseudo* adoption) to be positive and significant.

Panel A of Table 7 presents the above results. The first panel presents results for bilateral trade (using a country-year panel) while the second specification presents for accounting comparability. We find a negative and marginally significant coefficient on *PEURO*POST* in the *BITRADE* specification and a negative and insignificant coefficient in the *ACCT_COMP* specification. These results indicate that our Euro tests are unlikely to be due to ongoing time-trends but rather document a distinct common currency adoption effect.

¹⁰ We use a three-year window to ensure no overlap with the Euro period. Our results are robust to using alternative years as pseudo adoption dates and also to alternative windows.

5.2. Concurrent changes in enforcement

Given that the 1990s was a period of greater transformation in European financial markets, it could be that our results are due to countries' concurrent improvements to their institutional features such as the level of enforcement, rather than Euro adoption *per se* (see Christensen et al., 2013 for a similar discussion around IFRS adoption). As it is hard to pinpoint every event for each country that might have transpired around this period, we focus on two events that have been widely studied – financial market liberalization (e.g., Bekaert et al., 2005) and first-time enforcement of insider trading laws (e.g., Bhattacharya and Daouk, 2002). As each of these events has been shown to increase arm's-length financing, it could be that Euro adoption is merely capturing the effects of these other events. We do not find this explanation compelling ex-ante because idiosyncratic events undertaken by countries are likely to *reduce* the similarity in their financial reporting with other countries thereby *decreasing* accounting comparability. However, we run additional tests to verify that changes in enforcements are not driving our Euro (or IFRS) results.

Comparing our sample of Euro adopters to those that liberalized their financial markets during the 1980s and 1990s from Bekaert et al. (2005), we find that none of the Euro members liberalized its financial markets during the 1990s. The only exception is Portugal, but even its liberalization was in 1986, which well-precedes our sample start date. Thus, financial market liberalization is unlikely to be a confounding event during our sample period.

The first-time enforcement of insider-trading laws is, however, another story. Several of our sample adopters also enforced these laws for the first time during the 1990s. Further, given the proximity in adoption dates, one could argue that insider-trading enforcement is contributing to the increases in accounting comparability that we observe around Euro adoption. Amongst our

sample of Euro members, those that enforced insider trading laws during the 1990s are Belgium (1994), Finland (1993), Germany (1995), Italy (1996), Netherlands (1994) and Spain (1998), while those that did not are Austria, France (who enforced in 1975), Ireland and Portugal (see Bhattacharya and Daouk, 2002).

To ensure that our results are not being driven by insider trading enforcement, we define an indicator variable *ITENF* to denote country-pairs where both countries enforced insider trading laws for the first time during our sample period. We then interact *ITENF* with *POST* and include these two variables as additional controls. Panel B1 of Table 7 presents these results. The coefficient on *EURO*POST* remains positive and significant in both specifications, indicating that our Euro results are not due to concurrent changes to enforcement undertaken by countries. Further, consistent with our conjecture, the coefficient on *ITENF*POST* is negative in both specifications (and significant only in Model 1), indicating that insider trading enforcement undertaken by a specific country tends to reduce accounting comparability with other countries.

6. Conclusion

We use the adoption of the common Euro currency by several European Union countries in 1999 as a shock to economic integration to provide evidence on two related questions – what impact does economic integration have on accounting comparability? And, how does it influence the effect of accounting standards harmonization on accounting comparability? We find that economic integration has an important effect on accounting comparability. Further, these effects are stronger in cases where countries experience an increase in arm's-length financing suggesting that a mechanism driving our findings is a greater demand for financial reporting transparency from arm's-length capital providers.

In addition to the above direct effect, we find that economic integration also has an indirect effect – it plays an important role in the extent to which accounting standards harmonization (proxied by IFRS adoption) can result in greater accounting comparability. In particular, we find that conditioning the IFRS adoption effect on Euro zone membership provides of significant heterogeneity in the increases in accounting comparability. Euro countries (that are more economically integrated) experience almost two times as large an increase in accounting comparability upon IFRS adoption as compared to non-Euro adopters. Overall, ours is the first study to provide evidence on the direct and complementary effects of economic integration on accounting comparability.

Our paper contributes to the rapidly growing literature on accounting comparability. However, in contrast to most studies, we document not only the important role of economic integration on accounting comparability, but also the dynamic interactive effects between economic integration and accounting standards harmonization on accounting comparability. Our findings are relevant to academics, regulators and standard setters as more countries (most notably the U.S.) are contemplating switching to IFRS in the coming years.

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Table 1: List of Euro adopters and non-adopters within the EU

Data on Euro adopters and non-adopters are from Table 1 of Bekaert et al. (2012).

<u>Adopters:</u>	<u>Year of adoption</u>
Austria	1999
Belgium	1999
Finland	1999
France	1999
Germany	1999
Ireland	1999
Italy	1999
Netherlands	1999
Portugal	1999
Spain	1999
<u>Excluded:</u>	
Luxembourg	1999
Greece	2001
<u>Non-adopters:</u>	
Denmark	—
Poland	—
Sweden	—
United Kingdom	—

Table 2: Descriptive statistics

EARN_COMP represents earnings comparability, defined as the unsigned difference in ROAs of both industries in the industry-pair. Similar definitions extend to *CFO_COMP* (cash flow comparability), *ACCR_COMP* (accrual comparability), *WCACCR_COMP* (working capital accrual comparability) and *DEPR_COMP* (depreciation comparability). *ACCT_COMP* represents accounting comparability as defined in De Franco et al. (2011). *TRADE* represents (the log of) bilateral trade defined as the sum of exports and imports between the country-pair scaled by imports and exports of both countries (times 10^2). *EURO* takes the value of 1 when both countries of the industry-pair adopt the Euro; and 0 when either one or none of the countries adopts the Euro. *FIRMS_SUM* represents the total number of firm in the industry pair (times 10^{-2}), while *LEV_DIFF* denotes the absolute value of the difference in industry leverage. *LNTA_DIFF* denotes difference in log of total assets. *ZRET_DIFF* captures the difference in the percentage of zero return days. *EP_DIFF* and *BM_DIFF* denote differences in the earnings-to-price and the book-to-market ratio. *RET_DIFF* denotes the difference in industry returns. The country-level variables denote the differences in the level of GDP (*GDP_DIFF*), growth in GDP (*GDPGROW_DIFF*), equity market cap scaled by GDP (*MKTCAP_DIFF*), turnover of listed firms (*TURNOVER_DIFF*) and annual inflation (*INFL_DIFF*).

Panel A: Main variables

	<u>Obs.</u>	<u>Mean</u>	<u>Median</u>	<u>S.D.</u>	<u>Min</u>	<u>Max</u>
<u>Comparability measures:</u>						
<i>EARN_COMP</i>	28,037	-5.433	-3.623	5.520	-26.858	-0.065
<i>CFO_COMP</i>	28,037	-5.207	-4.003	4.527	-22.478	-0.064
<i>ACCR_COMP</i>	28,037	-4.211	-3.110	3.937	-20.488	-0.049
<i>WCACCR_COMP</i>	28,037	-3.242	-2.331	3.134	-16.990	-0.041
<i>DEPR_COMP</i>	28,037	-2.163	-1.689	1.756	-7.749	-0.031
<i>ACCT_COMP</i>	28,037	-3.342	-1.746	4.250	-22.008	-0.009
<u>Bilateral trade:</u>						
<i>TRADE</i>	25,388	0.551	0.483	0.366	0.000	1.516
<u>Euro adoption:</u>						
<i>EURO</i>	28,037	0.476	0.000	0.499	0.000	1.000
<u>Industry-level controls:</u>						
<i>FIRMS_SUM</i>	28,037	126.464	83.000	105.812	25.000	481.000
<i>LEV_DIFF</i>	28,037	7.623	6.341	5.813	0.117	25.292
<i>LNTA_DIFF</i>	28,037	1.802	1.538	1.333	0.030	5.794
<i>ZRET_DIFF</i>	28,037	0.149	0.129	0.109	0.002	0.448
<i>EP_DIFF</i>	28,037	0.060	0.042	0.060	0.001	0.320
<i>BM_DIFF</i>	28,037	0.337	0.278	0.264	0.005	1.169
<i>RET_DIFF</i>	28,037	24.789	19.308	21.084	0.391	104.449
<u>Country-level controls:</u>						
<i>GDP_DIFF</i>	28,037	1.209	1.148	0.890	0.000	3.415
<i>GDPGROW_DIFF</i>	28,037	1.423	1.026	1.419	0.000	8.739
<i>MKTCAP_DIFF</i>	27,937	0.638	0.520	0.523	0.000	3.355
<i>TURNOVER_DIFF</i>	27,764	0.565	0.395	0.513	0.000	2.351
<i>INFL_DIFF</i>	28,037	1.597	1.162	2.346	0.000	39.541

Panel B: 2x2 matrix

The *EURO* indicator takes the value of 1 for cells shaded in dark grey and 0 for those shaded in light gray.

Industry <i>i</i> \ Industry <i>j</i>	<i>EURO_j</i> = 1	<i>EURO_j</i> = 0
<i>EURO_i</i> = 1	13,346	6,151
<i>EURO_i</i> = 0	6,030	2,510

Table 3: Effect of Euro adoption on economic integration

This panel presents results based on a country-pair-year panel. The dependent variable is the log of bilateral trade (*TRADE*) defined as the sum of exports and imports between the country-pair scaled by imports and exports of both countries (times 10^2). *EURO* is an indicator variable that takes the value of 1 when both countries of the country-pair adopt the Euro; and 0 when either one or none of the countries adopts the Euro. *POST* is an indicator variable that denotes the post adoption period. The country-level variables denote the differences in the level of GDP (*GDP_DIFF*), growth in GDP (*GDPGROW_DIFF*), equity market cap scaled by GDP (*MKTCAP_DIFF*), turnover of listed firms (*TURNOVER_DIFF*) and annual inflation (*INFL_DIFF*). All regressions include robust standard errors and year and country fixed effects.

	Model 1		Model 2	
	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>
<i>EURO*POST</i>	0.023	2.68	0.029	2.76
<i>GDP_DIFF</i>			-0.019	-0.51
<i>GDPGROW_DIFF</i>			-0.002	-1.02
<i>MKTCAP_DIFF</i>			-0.006	-0.92
<i>TURNOVER_DIFF</i>			0.014	3.33
<i>INFL_DIFF</i>			-0.002	-4.42
Year effects	Yes		Yes	
Country-pair effects	Yes		Yes	
Adj. R^2	0.96		0.96	
Obs.	1,648		1,608	

Table 4: Effect of Euro adoption on ROA comparability, CFO comparability and accruals comparability

This panel presents results based on an industry-pair-year panel. The dependent variable in the first specification is *EARN_COMP* which represents earnings comparability, defined as the unsigned difference in ROAs of both industries in the industry-pair. Similar definitions extend to *CFO_COMP* (cash flow comparability), *ACCR_COMP* (accrual comparability), *WCACCR_COMP* (working capital accrual comparability) and *DEPR_COMP* (depreciation comparability). *EURO* is an indicator variable that takes the value of 1 when both countries of the industry-pair adopt the Euro; and 0 when either one or none of the countries adopts the Euro. *POST* is an indicator variable that denotes the post adoption period. *FIRMS_SUM* represents the total number of firm in the industry pair (times 10^{-2}), while *LEV_DIFF* denotes the absolute value of the difference in industry leverage. *LNTA_DIFF* denotes difference in log of total assets. The country-level variables denote the differences in the level of GDP (*GDP_DIFF*), growth in GDP (*GDPGROW_DIFF*), equity market cap scaled by GDP (*MKTCAP_DIFF*), turnover of listed firms (*TURNOVER_DIFF*) and annual inflation (*INFL_DIFF*). All regressions include country pair and year fixed effects and robust standard errors clustered by country-pair.

	<i>EARN_COMP</i>		<i>CFO_COMP</i>		<i>WCACCR_COMP</i>		<i>DEPR_COMP</i>	
	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>
<i>EURO*POST</i>	1.203	3.82	0.337	1.46	0.695	4.51	-0.130	-1.53
<i>FIRMS_SUM</i>	0.006	7.21	0.005	12.82	0.003	11.75	0.000	-1.08
<i>LEV_DIFF</i>	-0.118	-9.83	-0.087	-8.97	0.007	1.48	-0.009	-2.05
<i>LNTA_DIFF</i>	-0.303	-5.03	-0.097	-2.26	-0.178	-7.26	-0.230	-7.17
<i>GDP_DIFF</i>	-0.696	-0.63	-2.440	-2.79	1.596	2.76	-2.069	-4.99
<i>GDPGROW_DIFF</i>	0.113	1.89	0.038	0.90	0.006	0.14	0.033	2.08
<i>MKTCAP_DIFF</i>	0.281	0.89	0.142	0.63	0.449	2.82	-0.036	-0.53
<i>TURNOVER_DIFF</i>	0.570	3.08	0.198	1.69	0.153	1.42	-0.113	-2.20
<i>INFL_DIFF</i>	-0.052	-2.61	-0.004	-0.23	-0.110	-7.98	0.015	2.20
Year effects	Yes		Yes		Yes		Yes	
Country-pair effects	Yes		Yes		Yes		Yes	
Adj. R^2	0.20		0.11		0.13		0.11	
Obs.	27,764		27,764		27,764		27,764	

Table 5: Effect of Euro adoption on accounting comparability

This panel presents results based on an industry-pair-year panel. The dependent variable is accounting comparability (*ACCT_COMP*). *EURO* takes the value of 1 when both countries of the industry-pair adopt the Euro; and 0 when either one or none of the countries adopts the Euro. *MEAN_RET* denotes the average return across the two industries in the industry-pair, while *RET_DIFF* denotes the difference in the returns. *ZRET_DIFF* captures the difference in the percentage of zero return days. *EP_DIFF* and *BM_DIFF* denote differences in the earnings-to-price and the book-to-market ratio. The country-level variables denote the differences in the level of GDP (*GDP_DIFF*), growth in GDP (*GDPGROW_DIFF*), equity market cap scaled by GDP (*MKTCAP_DIFF*), turnover of listed firms (*TURNOVER_DIFF*) and annual inflation (*INFL_DIFF*). All regressions include country pair and year fixed effects and robust standard errors clustered by country-pair.

	Model 1		Model 2		Model 3	
	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>
<i>EURO*POST</i>	2.835	8.96	2.513	7.34	2.216	6.23
<i>MEAN_RET</i>			-0.014	-3.55	-0.015	-3.66
<i>RET_DIFF</i>			-0.015	-4.75	-0.014	-4.57
<i>ZRET_DIFF</i>			1.018	1.41	1.151	1.59
<i>EP_DIFF</i>			-35.988	-20.10	-36.808	-19.79
<i>BM_DIFF</i>			-3.093	-7.98	-3.146	-8.26
<i>GDP_DIFF</i>					-1.624	-0.85
<i>GDPGROW_DIFF</i>					0.069	0.61
<i>MKTCAP_DIFF</i>					0.320	0.87
<i>TURNOVER_DIFF</i>					0.194	0.90
<i>INFL_DIFF</i>					0.090	2.81
Year effects	Yes		Yes		Yes	
Country-pair effects	Yes		Yes		Yes	
Adj. R^2	0.18		0.29		0.29	
Obs.	28,037		27,764		27,764	

Table 6: Role of external financing – change in Foreign Portfolio Inflows (ΔFPI)

This panel presents results based on an industry-pair-year panel. The dependent variable is accounting comparability (*ACCT_COMP*). The first (second) specification presents results for industry-pairs where both industry *i* and *j* experience increases (non-increases) in Foreign Portfolio Investments (*FPI*) between the pre and post adoption periods. *EURO* is an indicator variable that takes the value of 1 when both countries of the industry-pair adopt the Euro; and 0 when either one or none of the countries adopts the Euro. *POST* is an indicator variable that denotes the post adoption period. All control variables are included in the regressions but are not tabulated. All regressions include country pair and year fixed effects and robust standard errors clustered by country-pair.

	Increase		Non-increase	
	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>
<i>EURO*POST</i>	2.374	5.02	0.417	0.72
<i>p.val of difference in EURO*POST</i>	0.009			
Year effects	Yes		Yes	
Country-pair effects	Yes		Yes	
Industry controls	Yes		Yes	
Macro controls	Yes		Yes	
Adj. R^2	0.27		0.35	
Obs.	12,889		6,667	

Table 7: IFRS adoption and accounting comparability**Panel A: List of IFRS adopters and non-adopters**

Data for IFRS adopters and non-adopters are from Daske et al. (2008).

<u>Adopters</u>	<u>EURO</u>	<u>Non-adopters</u>	<u>EURO</u>
Austria	1	Argentina	0
Belgium	1	Brazil	0
Denmark	0	Chile	0
Finland	1	China	0
France	1	India	0
Germany	1	Indonesia	0
Ireland	1	Israel	0
Italy	1	Japan	0
Netherlands	1	Malaysia	0
Norway	0	Mexico	0
Poland	0	Pakistan	0
Portugal	1	Peru	0
Spain	1	Russia	0
Sweden	0	South Korea	0
United Kingdom	0	Sri Lanka	0
		Thailand	0
		USA	0

Panel B: 3x3

The indicator variable *IFRS-IFRS* takes the value of 1 for cells shaded in dark grey and 0 for all other cells. Similarly, the indicator variable *IFRS-US* takes the value of 1 for cells shaded in medium grey and 0 for all other cells. The control group (shaded in light grey) comprises of Non-IFRS:Non-US and Non-IFRS:Non-IFRS pairs.

Industry <i>j</i> \ Industry <i>i</i>	<i>IFRS_j</i> = 1	<i>US_j</i> = 1	<i>IFRS_j</i> = 0
<i>IFRS_i</i> = 1	27,234	2,945	25,881
<i>US_i</i> = 1	2,975	259	2,789
<i>IFRS_i</i> = 0	27,603	2,903	25,316

Panel C: IFRS adoption, economic integration and accounting comparability

This panel presents results based on an industry-pair-year panel. The dependent variable is accounting comparability (*ACCT_COMP*). *IFRS-IFRS* takes the value of 1 when both countries adopt IFRS; and 0 when either one or none of the countries adopts IFRS. Similarly, *IFRS-US* indicates pairs where one country adopts IFRS and the other is from the U.S. Model 2 splits the *IFRS-IFRS* indicator into two components – *E_IFRS-E_IFRS* which takes the value of 1 when both IFRS adopters are from the Euro zone; and *NE_IFRS-NE_IFRS* where either one or both of the IFRS adopters are not part of the Euro. Similar definitions extend to the decomposition of *IFRS-US* into *E_IFRS-US* and *NE_IFRS-US*. Model 3 excludes EU countries (both Euro and non-Euro) that undertake contemporaneous changes in enforcement around IFRS adoption. All control variables are included in the regressions but are not tabulated. All regressions include country pair and year fixed effects and robust standard errors clustered by country-pair.

		Model 1 (All IFRS adopters)		Model 2 (Euro versus non-Euro)		Model 3 (Excluding enforcers)	
		<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>
<i>IFRS-IFRS*POST</i>	(1)	5.099	8.69				
<i>IFRS-US*POST</i>	(2)	4.534	6.20				
<i>E_IFRS-E_IFRS*POST</i>	(3)			6.368	10.19	6.091	6.92
<i>NE_IFRS-NE_IFRS*POST</i>	(4)			3.915	5.77	3.354	3.56
<i>E_IFRS-US*POST</i>	(5)			5.402	8.07	5.800	6.46
<i>NE_IFRS-US*POST</i>	(6)			2.501	1.91	1.665	0.98
<i>p. value of (1) = (2)</i>		0.397					
<i>p. value of (3) = (4)</i>				0.000		0.008	
<i>p. value of (5) = (6)</i>				0.029		0.021	
Industry-pair and country-pair controls		Yes		Yes		Yes	
Year effects		Yes		Yes		Yes	
Country-pair effects		Yes		Yes		Yes	
Adj. R^2		0.49		0.49		0.48	
Obs.		117,905		117,905		81,736	

Table 8: Robustness tests**Panel A: Pseudo Euro adoption**

The first (second) specification of this panel presents results based on a country-pair-year (industry-pair-year) panel where the dependent variable is the log of bilateral trade, *TRADE* (accounting comparability, *ACCT_COMP*). *P_EURO* is an indicator variable to denote pseudo Euro adoption (in 1995). *POST* is an indicator variable that denotes the post pseudo adoption period. All control variables are as defined in Table 5. All regressions include country-pair and year fixed effects and robust standard errors.

	<i>BITRADE</i>		<i>ACCT_COMP</i>	
	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>
<i>P_EURO*POST</i>	-0.023	-2.48	-1.153	-2.21
<i>MEAN_RET</i>			-0.014	-3.50
<i>RET_DIFF</i>			-0.033	-9.24
<i>ZRET_DIFF</i>			1.448	1.50
<i>EP_DIFF</i>			-22.061	-11.44
<i>BM_DIFF</i>			-3.146	-7.48
<i>GDP_DIFF</i>	0.001	0.00	-3.195	-0.77
<i>GDPGROW_DIFF</i>	-0.002	-0.73	0.210	2.52
<i>MKTCAP_DIFF</i>	0.012	1.21	0.988	2.94
<i>TURNOVER_DIFF</i>	-0.004	-0.47	0.473	1.02
<i>INFL_DIFF</i>	-0.001	-1.65	0.141	5.09
Year effects	Yes		Yes	
Country-pair effects	Yes		Yes	
Adj. R^2	0.96		0.29	
Obs.	780		11,158	

Panel B: Do concurrent changes in enforcement drive the Euro results?

This panel presents results based on an industry-pair-year panel. The dependent variable is accounting comparability (*ACCT_COMP*). *EURO* takes the value of 1 when both countries of the industry-pair adopt the Euro; and 0 when either one or none of the countries adopts the Euro. *ITENF* takes the value of 1 when both countries of the industry-pair enforce insider trading laws for the first time. *POST* is an indicator variable that denotes the post adoption period. *MEAN_RET* denotes the average return across the two industries in the industry-pair, while *RET_DIFF* denotes the difference in the returns. *ZRET_DIFF* captures the difference in the percentage of zero return days. *EP_DIFF* and *BM_DIFF* denote differences in the earnings-to-price and the book-to-market ratio. The country-level variables denote the differences in the level of GDP (*GDP_DIFF*), growth in GDP (*GDPGROW_DIFF*), equity market cap scaled by GDP (*MKTCAP_DIFF*), turnover of listed firms (*TURNOVER_DIFF*) and annual inflation (*INFL_DIFF*). All regressions include country pair and year fixed effects and robust standard errors clustered by country-pair.

	Model 1		Model 2	
	<u>Coeff.</u>	<u>t-stat</u>	<u>Coeff.</u>	<u>t-stat</u>
<i>EURO*POST</i>	2.875	9.21	2.337	6.98
<i>ITENF*POST</i>	-0.599	-1.83	-1.186	-3.48
<i>MEAN_RET</i>			-0.017	-4.18
<i>RET_DIFF</i>			-0.014	-4.33
<i>ZRET_DIFF</i>			1.201	1.65
<i>EP_DIFF</i>			-37.225	-19.85
<i>BM_DIFF</i>			-3.115	-8.16
<i>GDP_DIFF</i>			-0.868	-0.48
<i>GDPGROW_DIFF</i>			0.084	0.76
<i>MKTCAP_DIFF</i>			0.324	0.90
<i>TURNOVER_DIFF</i>			0.123	0.61
<i>INFL_DIFF</i>			0.079	2.61
Year effects	Yes		Yes	
Country-pair effects	No		Yes	
Adj. R^2	0.18		0.29	
Obs.	28,037		27,764	