Does Public Firms' Mandatory IFRS Reporting Crowd Out Private Firms' Capital Investment?*

Jiancheng (Duncan) Liu
University of Macau
E-mail: duncanliu@um.edu.mo

Wei Shi
Deakin University
E-mail: wei.shi@deakin.edu.au

Cheng Zeng
Hong Kong Polytechnic University
E-mail: chengzeng@polyu.edu.hk

Guochang Zhang
University of Hong Kong
E-mail: acgzhang@hku.hk

This version: May 2023

* Accepted by Christian Leuz. The authors thank an anonymous referee, Espen Eckbo, Laurence van Lent, Hai Lu, Gordon Richardson, Chang Sun, Karin Thorburn, Baohua Xin, Minlei Ye, Martin Walker, and the seminar participants at Deakin University and the University of Toronto for helpful comments. Shi acknowledges the financial support (Småforsk fund) from Norwegian School of Economics (NHH). Zhang acknowledges the financial support of the University of Hong Kong. An Online Appendix to this paper can be downloaded at https://www.chicagobooth.edu/jar-online-supplements.

Does Public Firms' Mandatory IFRS Reporting Crowd Out Private Firms' Capital Investment?

Abstract: We investigate how the mandatory adoption of International Financial Reporting Standards (IFRS) by publicly listed firms in the European Union affects peer private firms. We find that private firms' capital investment decreases significantly after the IFRS mandate, relative to public firms. Private firms also display decreased investment when benchmarked against firms relatively insulated from the impact of the IFRS mandate, but the magnitude of the effect is smaller in this case. These results are consistent with the hypothesis that mandatory IFRS reporting (combined with other reforms), while increasing public firms' financing and investment, crowds out funding for private firms. The effect is more pronounced for larger private firms and in industries where public peers have greater external financing needs. Our evidence suggests that financial reporting regulations cause shifts in resource allocation in an economy.

Keywords: IFRS; Private Firms; Capital Investment; Investment Responsiveness; Crowding Out.

JEL Classification: D62; D78; G18; G31; G32; G38; M41.

1. Introduction

The mandatory adoption of International Financial Reporting Standards (IFRS) represented a sweeping reform in worldwide financial reporting. More than 144 jurisdictions have thus far either mandated adoption or given companies permission to do so.[1] A large literature examines how this unprecedented reporting reform has impacted publicly listed firms that must adopt the IFRS. We, in contrast, investigate unlisted private firms, which are not directly subject to the regulation. Although their reporting quality does not necessarily change, they may be affected indirectly, due to their connections with public firms in the markets for inputs and outputs. To understand the full costs and benefits of IFRS, it is important to also examine firms outside the scope of the mandate (e.g., De George, Li, and Shivakumar [2016], Leuz and Wysocki [2016]). We specifically focus on the spillovers to private firms' capital investment.[2]

IFRS were developed to provide high-quality, transparent financial information. In implementing the standards, some countries have strived to strengthen supporting infrastructures such as enforcement and governance. Insofar as these reforms collectively constrain opportunism, they can be a force shaping reporting practices. Studies have explored how IFRS reporting affects public firms in terms of information uncertainty (e.g., Byard, Li, and Yu [2011], Horton, Serafeim, and Serafeim [2013]), liquidity (Daske, Hail, Leuz, and Verdi [2008], Christensen, Hail, and Leuz [2013], Daske, Hail, Leuz, and Verdi [2013]), information comparability (Yip and Young [2012], Brochet, Jagolinzer, and Riedl [2013], Cascino and Gassen [2015]), and the interests of foreign intermediaries and investors (Tan, Wang, and Welker [2011], Yu and Wahid [2014]). On the whole, the literature documents capital market benefits around the time of the IFRS mandate. Further, public firms also increase

[1] The IFRS website provides the adoption statuses of countries worldwide: https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/.
[2] We use the term "public firms" interchangeably with "listed firms" and "private firms" interchangeably with "unlisted firms."

their financing and real investment after the mandate (Florou and Kosi [2015], Naranjo, Saavedra, and Verdi [2022]).

However, because countries have mandated IFRS as part of broader efforts to strengthen corporate reporting and enhance capital markets, they have often implemented other reforms alongside the mandate, causing identification difficulties (e.g., Christensen et al. [2013], Leuz and Wysocki [2016]). By delving into what drives reporting outcomes or adopting more refined research designs, several studies have raised doubts about whether IFRS per se accounts for the observed capital market effects (e.g., Daske et al. [2008], Christensen et al. [2013], Daske et al. [2013]).[3] Nonetheless, insofar as public firms do experience broader changes around the mandate, we explore whether these effects spill over to private firms. We treat the IFRS mandate and the accompanying reforms as a bundled event.

We hypothesize that IFRS and accompanying reforms, by improving public firms' reporting, crowd out funding for private firms. Theoretical models show that improved disclosure helps firms attract capital by reducing investors' information processing costs (Fishman and Hagerty [1989]) or lowering investment uncertainty (Zhang [2013]). But because firms compete for resources, this can also divert attention and capital away from nondisclosing firms. In our setting, insofar as public firms attract more capital after switching to IFRS reporting (because, for example, the mandate and related reforms collectively improve reporting quality),[4] private firms could be hurt indirectly. Such a spillover can occur when capital supply is constrained or investors have limited capacity to process information. In line

[3] For example, Daske et al. [2008, 2013] recognize that accounting standards allow for much discretion and that management's incentives are key to reporting outcomes. Christensen et al. [2013] exploit variation in firms' fiscal-year end points to detect whether IFRS adoption alone has an effect versus reporting reforms such as enforcement (which can affect incentives). Their evidence suggests that concurrent enforcement changes, or factors correlated with those changes, are likely behind the observed liquidity effects around IFRS adoption whereas the changes in accounting standards per se seem to play little role.

[4] Concurrent with IFRS adoption, many countries strengthen reporting and transparency requirements and make enforcement changes, which can improve reporting incentives (e.g., Daske et al. [2008]). Improved reporting in turn facilitates real investment through reduced hurdle rates and better monitoring of managers (e.g., Biddle and Hilary [2006], Lambert, Leuz, and Verrecchia [2007], Biddle, Hilary, and Verdi [2009]).

with this argument, empirical studies document negative spillovers in the contexts of the regulation of auditing (Duguay, Minnis, and Sutherland [2020]) and earnings announcement timing (Truong [2023]).

An alternative hypothesis is that IFRS and the accompanying reforms instead enhance private firms' investment by enabling them to learn from public firms. As public firms improve their reporting, private firms can better understand their operations, which enables private firms to formulate better strategies (e.g., Hayes and Lundholm [1996], Admati and Pfleiderer [2000], Chen, Young, and Zhuang [2013]).[5] If this is true, private firms' investment could increase after the IFRS mandate. Given the opposing predictions, the effect on private firms is unclear, and this open question motivates our study.

We construct a large sample of firms in the European Union for the period 2002–2007, centered around 2005, the year public firms were mandated to adopt IFRS (Regulation [EC] No.1606/2002), to conduct difference-in-differences tests. Our study faces identification challenges on two levels. First, the theoretical prediction we test pertains to an indirect effect. Since both public and private firms are affected directly or indirectly, we ideally need a third group of firms as a control—those unaffected by the regulation (Leuz and Wysocki [2016]).[6] However, strictly speaking, all firms are interconnected. Second, IFRS adoption in the European Union was clustered in time, making our tests vulnerable to economic shocks and capital market reforms (unrelated to our hypothesis) around the time of the mandate.[7] This issue is especially pertinent given that capital investment tends to respond slowly to shocks (e.g., Shapiro [1986], Dix-Carneiro and Kovak [2017]) and so can be contaminated by events preceding the mandate.

[5] For example, Admati and Pfleiderer's [2000] model shows that a firm's disclosure enables investors to better value other firms and improves their liquidity. They posit that disclosure regulation can improve welfare by fully reaping externality gains.
[6] The required condition on this control group is SUTVA (stable unit treatment value assumption), meaning that the unit outcome of firms in this group is independent of the treatment status of other firms (e.g., Rubin [1986]).
[7] Christensen et al. [2013] describe the EU directives for capital market reforms around the IFRS mandate.

We tackle these challenges in several ways. First, we benchmark private firms (our "subject" firms) against two different reference groups. We initially benchmark them against public firms (Benchmark1), to detect whether their investment falls relative to public firms as the latter switch to IFRS reporting. While such differential investment is a key part of the theoretical prediction, it alone does not indicate whether private firms' investment per se has declined (as public firms themselves are affected). Thus, we also benchmark subject firms against a subset of private firms mostly insulated from spillovers,[8] namely, small private firms with low financial leverage (Benchmark2). It is well known that small private firms use less external capital than large ones (e.g., Beck, Demirgüç-Kunt, and Maksimovic [2008]) and rely more on internal capital and alternative financing such as leases.[9] They thus compete less with public firms for capital. Further, small private firms using little debt would more likely be insulated from capital competition and hence the spillovers. Also noteworthy is that these firms are not subject to such confounding factors as capital market reforms targeting public firms. The trade-off, however, is that they might be less comparable to our subject firms.

Second, we include country*year fixed effects in our regressions. This specification addresses (unrelated) concurrent economic shocks common to public and private firms and enables us to identify within country-year differences between our subject firms and the benchmarks.

Third, we exploit firms voluntarily adopting IFRS, aiming to disentangle the IFRS effect from other reporting reforms bundled with the mandate. Because public firm voluntary adopters do not undergo accounting changes at the time of the mandate, benchmarking subject

[8] A similar approach is used in studies exploring the spillover effects of regulations (e.g., Armstrong, Glaeser and Kepler [2019], Duguay et al. [2020]).

[9] For example, the EU 2005 report on small and medium-sized enterprises' access to finance indicates that most firms rely on leasing. See https://europa.eu/eurobarometer/surveys/detail/1240 (*SME Access to Finance*, retrieved in July 2021). Further, the report by WSBI-ESBG indicates that these firms tend to meet their financial management needs internally. See http://www.savings-banks.com/SiteCollectionDocuments/EU-US.study.ESBG%20May.2016.pdf (*Financial Systems in Europe and in the US: Structural Differences Where Banks Remain the Main Source of Finance for Companies*, retrieved in July 2021).

firms against them enables isolation of the impact of concurrent reforms dedicated to public firms (absent accounting changes). Thus, by contrasting the result from this analysis with that of our main tests (using Benchmark1), while holding other reforms constant, we can better infer the effect of IFRS.[10] With capital investment a slow-moving variable, this design is especially useful for addressing (unrelated) shocks around the mandate that can cause spurious results. We also explore whether private firm voluntary adopters experience a crowding out effect similar to that on our subject firms, which further illuminates the role of IFRS.

Fourth, we seek evidence from Oriana countries. These countries adopted IFRS in a staggered manner and were not subject to the European Union's capital market reforms, which further alleviates omitted variable concerns. While Oriana countries had their own regulatory and economic shocks, those tend to be less of an issue in staggered difference-in-differences tests as long as the shocks were not highly correlated among countries (because, for example, regulations were uncoordinated). Given that many of the Oriana countries are emerging economies with different institutions from the European Union, this setting speaks to the generalizability of our inferences. As another benefit, two Oriana countries (Australia and New Zealand) required IFRS reporting for both private and public firms, which offers a counterfactual for our tests.

Our results show that, relative to Benchmark1, subject firms experience a significant drop in capital investment after the introduction of IFRS regulation. Based on one of our empirical models, the average drop in their investment, relative to public firms, amounts to 6.2% of total assets. Their investment also becomes less responsive to opportunities post IFRS.[11] One concern is that the different characteristics of subject firms versus pubic firms lead to a

[10] As we are investigating an indirect effect on firms not subject to IFRS reporting, it is infeasible to exploit variation in fiscal year-ends for more precise identification, as done in other studies (e.g., Christensen et al. [2013]).
[11] In contrast, public firms' investment responds more to investment opportunities after IFRS adoption (e.g., Schleicher, Tahoun, and Walker [2010], Shroff, Verdi, and Yu [2014], Loureiro and Taboada [2015], Biddle, Callahan, Hong, and Knowles [2016]).

violation of the parallel trend assumption. To alleviate the concern, we examine a subset of subject firms matched with public firms on country-industry, capital investment, and profitability pre IFRS, and reach the same conclusion. Mapping out the investment effect across the years indicates significant drops in investment level and sensitivity post IFRS starting from 2005.

We then switch to Benchmark2 for difference-in-differences tests—firms relatively insulated from the IFRS mandate. Since public firms are directly affected by IFRS regulation, the aforementioned results for subject firms vis-à-vis Benchmark1 could be due to increases in public firms' investments rather than decreases in private firms' investments. Our analysis shows that, relative to this benchmark, the subject group also displays a decrease in investment post IFRS, both in investment level and sensitivity. This result suggests that large private firms indeed endure a negative spillover effect around the mandate. The magnitude of the effect in this case is smaller than under Benchmark1, which is expected if public firms benefit from the reforms and hence increase their investments. Combined, our results portray a particular pattern of investment that is consistent with the predicted crowding out effect.

To explore cross-sectional variation in the crowding out effect, we partition subject firms by size into the large, medium, and small subsamples on pre-event total assets. Intuitively, larger private firms should be more affected, as they tend to compete more with public firms for capital. Our results are consistent with this notion. Large firms experience a differential investment effect equal to -1.9% of total assets vis-à-vis Benchmark2, and this differential effect diminishes to -1.4% and -0.8% for the medium-size and small firms, respectively. Insofar as firms in Benchmark2 are relatively unaffected, these amounts capture (approximately) the extent of the crowding out effect that subject firms in the three subsamples endure around the IFRS mandate. The effect is economically significant, considering that the average investment of subject firms overall is 3.1% of total assets.

We conduct several tests to better understand the forces behind our results. First, we run falsification tests using firms voluntarily adopting IFRS, which helps pin down the role of accounting standards versus related reporting reforms. In one test that focuses on private firms voluntarily switching to IFRS prior to or at the time of the mandate, we find no significant decrease in investment (vis-à-vis Benchmark1). In another, we employ public firms that voluntarily adopted IFRS before 2005, which should experience less of a reporting change than other public firms at the time of the mandate. We find that the differential investment effect on the subject firms is diminished when benchmarked against public firm early adopters (than against Benchmark1), especially when the benchmark group is restricted to "serious" (as opposed to "label") early adopters (following Daske et al. [2013]). Collectively, these results suggest that the documented negative spillover on subject firms' investment is partially attributable to IFRS regulation.

Second, we examine Oriana countries that implemented IFRS regulation across several years and similarly find significant declines in private firms' investment after IFRS. In contrast to this, private firms experience no such declines in Australia and New Zealand, where the IFRS mandate applies to both public and private firms. This evidence also suggests that improvement in public firms' reporting hinders private firms' investment.

Third, we explore the external financing channel for the crowding out effect, as is suggested by the underlying theories. We expect private firms' investment to decline more when public firms need more financing. And, since private firms mainly use debt, the effect should be transmitted mainly through the debt (vs. equity) market. Following Rajan and Zingales (1998), we estimate public firms' debt and equity financing dependence in an industry using US firms.[12] As expected, we find that subject firms' investment drops more significantly

[12] This simulated instrument approach avoids the concern that external financing undertaken by public firms in our sample is endogenous (see Breuer [2022]).

post IFRS in industries where public firms need more external financing, especially through debt markets.

Finally, given that studies have raised doubts about whether IFRS per se has significant capital market effects, we explore whether the crowding out effect varies with country-level enforcement. We find that the effect is stronger in EU countries where the IFRS mandate is accompanied (versus not accompanied) by enforcement changes. Further analysis indicates that the effect exists mostly in countries with a large distance between local GAAP and the IFRS (which thus undergo greater accounting changes). These results speak to the complementarity of accounting rules and enforcement (Ball, Robin and Wu [2003], Leuz, Nanda, and Wysocki [2003], Burgstahler, Hail, and Leuz [2006]).

This study advances the understanding of how financial reporting regulations impact the real economy. Research has explored how IFRS adoption and related reforms affect pubic firms. Complementing this literature, we find that the impact on public firms spills over to private firms, which reduces their capital investment. This finding is consistent with the theoretical predictions of Fishman and Hagerty [1989] and Zhang [2013] that improving reporting standards can shift resources away from firms less subject to the standards. Further, we find that this crowding out effect is greater on firms that compete more with public firms for capital. The study thus illuminates how reporting regulations impose costs on firms outside their intended scope.

In a concurrent study, Kim and Olbert [2022] find that private firms' disclosure hinders capital supply to public firms, reinforcing the view that disclosure regulations can do unintended harm. However, they do not directly examine firms' real investments. While their evidence of spillovers derives from cross-country equity investment, we show that such effects also exist through debt markets within a country.

Our study also contributes to the broader literature on the interconnectedness of private and public firms. Badertscher, Shroff, and White [2013] report that private firms' investments respond more to investment opportunities in industries with greater public firm presence. They attribute their finding to reduced industry uncertainty that stems from public firms' disclosures. This positive externality is at odds with the crowding out effect we identify. But the research designs of their study and ours differ. For example, they draw inferences from cross-industry variation in public firm presence, which is endogenous to industry characteristics. Their design also ignores possible spillovers to private firms from public firms' financing and investment, which is what our study shows. Indeed, the theoretical analysis of Berg, Reisinger, and Streitz [2021] suggests that the magnitude of spillovers is correlated with public firm presence in an industry, which thus confounds the hypothesized information effect of public firm presence.

2. Institutional Setting and the Hypothesis

2.1 The Institutional Setting

The IFRS originated in the European Union, with the aim of making firms' accounts more accessible and comparable across the continent. EU Regulation 1606/2002 mandated the use of the IFRS for companies listed in European financial markets, starting from Jan. 1, 2005. The regulation requires full IFRS adoption for consolidated statements by publicly listed companies. Ball [2016] reviews the historical development of IFRS adoptions.

Unlisted companies in the European Union were exempted from the mandatory IFRS adoption in 2005, despite the original intention of the EU legislature to cover these firms as well (e.g., Pope and McLeay [2011]). Nonetheless, during the sample period of this study (2002–2007), unlisted firms in Europe could choose to use either IFRS or local GAAP. In some countries (such as Austria, Belgium, France, and Germany), this permission was only granted

for consolidated financial statements.[13] Indeed, as documented below, a few private firms in our sample voluntarily switched to the IFRS either before or at the time of the IFRS mandate.[14]

However, some private firms are subject to the mandate. Slovakia requires private firms to adopt IFRS for their consolidated accounts. Greece mandates IFRS adoption for subsidiaries of listed entities that represent "more than 5% of consolidated revenues or assets or the results." And Spain requires IFRS adoption for the consolidated financial statements of groups that contain a subsidiary listed on a regulated market, regardless of the parent company's own listing status.[15] We exclude from our sample private firms subject to the IFRS mandate (see below).

2.2 Hypothesis Development

An extensive theoretical literature shows that high quality disclosure helps reduce information asymmetries both between a firm's managers and outside investors and among investors; this, in turn, lowers the cost of capital (e.g., Diamond and Verrecchia [1991], Verrecchia [2001], Zhang [2001], Lambert, Leuz, and Verrecchia [2007]) and facilitates financing and investment. In our setting, empirical studies have documented that public firms enjoy increased liquidity and reduced information uncertainty around the IFRS mandate (which

[13] The rules regarding private firms' IFRS adoption vary across countries; see http://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/. It was not until July 2009 that the IASB issued IFRS for small and medium-sized entities, intended for the general-purpose financial statements of entities not subject to public accountability. An entity has public accountability if it files or is in the process of filing financial statements with a securities commission or other regulators for the purpose of issuing securities on a public market, or if, as a main part of its business, it holds assets in a fiduciary capacity for a broad group of third parties.

[14] Ultimately, this decision depends on private firms' own cost and benefit considerations with regard to adoption. Small and medium-sized firms have raised concerns regarding the costs of adopting the full version of the IFRS, including the disclosure requirements, which may explain why few private firms have voluntarily switched. ICAEW (2012) states: "Of course, switching to a new accounting framework also presents businesses with considerable costs and short-term challenges. Accounting policies need to be assessed and updated. Information systems need to be upgraded or replaced. Controls need to be redesigned. Employees need to be trained and investors need to be educated." On the other hand, it is unclear whether private firms switching to the IFRS actually obtain the full benefits. Private firms do not have to follow all the disclosure requirements that accompany the standards, and their financial statements may not be audited rigorously as those of listed firms.

[15] See the IFRS website for information on Slovakia (https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/view-jurisdiction/slovakia/), Greece (https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/view-jurisdiction/greece/), and Spain (https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/view-jurisdiction/spain).

can arise from the combination of IFRS and other reporting reforms). Of more direct relevance to our study, evidence also shows significant increases in public firms' financing and investment (Florou and Kosi [2015], Naranjo et al. [2022]) after the IFRS mandate. Insofar as IFRS regulation and the accompanying reforms affect public firms' reporting and financing, it is conceivable that the effect is transmitted to private firms' investment through competition for input resources.

Theoretical studies explain how a firm's reporting and disclosure can negatively affect other firms. In Fishman and Hagerty's [1989] model, investors have a limited capacity to process information and so can only follow a few firms. As a firm improves its disclosure, it attracts more investor attention, which enhances its price efficiency and increases capital investment. At the same time, however, other firms lose investor attention, and for them price efficiency and investment decline, creating a negative spillover. Relatedly, Zhang [2013] shows that changes in accounting standards can affect firms differently. As the quality of an accounting standard improves (assuming away incentive problems), firms directly subject to the standard will improve their reporting, leading to lower costs of capital and more investment. However, because capital supply is limited, increases in total investment in an economy cause costs of capital to be adjusted upward for all firms (an indirect effect). In the end, firms less directly subject to the standard concerned (such as private firms in our setting) become worse off, as the cost for them from the indirect effect outweighs the benefit from the improved standard, and they end up with less investment. Based on the discussion here, we predict that reforms that improve public firms' reporting and disclosure crowd out private firms' investment.

The models of Fishman and Hagerty [1989] and Zhang [2013] suggest that competition for capital in debt and equity markets can be a channel for the crowding out effect. Competition can arise because capital supply is constrained or investors and analysts have limited capacity

to process information. In practice, both private and public firms rely heavily on private debt, despite public firms having opportunities to tap public capital markets (Armstrong, Guay, and Weber [2010], Chen, Cheng, and Lo [2013], Bharath, Sunder, and Sunder [2008], Lin, Ma, Malatesta, and Xuan [2013]). Furthermore, different financial markets are connected to some degree, as capital flows relatively freely across markets. This suggests that financing by listed firms in public markets can also indirectly affect resource availability for private firms. In our setting, insofar as the IFRS mandate and related reporting reforms help public firms attract more capital, private firms' ability to raise capital for investment is hampered, hence a crowding out effect.[16]

Nonetheless, the literature also offers alternative views on how these reporting reforms affect private firms. Disclosure theories recognize that a firm's public disclosure has strategic value to its peers (e.g., Darrough and Stoughton [1990], Darrough [1993], Gigler [1994]) and that mandatory disclosure can generate positive externalities (e.g., Dye [1990], Admati and Pfleiderer [2000]). Firms learn from their peers' disclosures and real activities, which helps them discover new projects (e.g., Durnev and Mangen [2009], Beatty, Liao, and Yu [2013], Roychowdhury et al. [2019]), lower investment adjustment costs (Dixit and Pindyck [1994]), and respond to investment opportunities (Bloom, Bond, and Van Reenen [2007], Badertscher et al.[2013]). Evidence consistent with disclosure regulations having positive externalities is provided by Bushee and Leuz [2005], who examine SEC disclosure requirements that target a class of previously under-regulated firms, and by Chen, Young, and Zhuang [2013], who show that IFRS adoption by firms in one country leads to increased investment efficiency for peers elsewhere. These studies suggest that, as disclosure regulations improve public firms' transparency, private firms would face less uncertainty about the industry environment, which

[16] Roychowdhury, Shroff, and Verdi [2019] similarly posit that, in circumstances where some firms' disclosures are regulated while others are not, regulation can help regulated firms gain greater access to external capital, thus crowding out the unregulated firms' financing.

facilitates their investments. In light of these countervailing arguments, whether a crowding out effect exists when public firms improve reporting and disclosure is an open question.

3. Research Design

3.1 Empirical Models

We perform a difference-in-differences analysis and mainly use the model below to explain investment levels, the IL model, following Naranjo et al. [2022].

$$\Delta FIX\_ASSET = \alpha + \beta_1 SUBJECT + \beta_2 AFTER + \beta_3 AFTER * SUBJECT + \Gamma * Controls + Country * Year\ FEs + Industry\ FEs + \varepsilon. \quad (1)$$

In Equation (1), *ΔFIX_ASSET* is our measure of capital investment, calculated as the change in fixed assets in year t, relative to year t-1, scaled by total assets in year t-1.[17] *AFTER* is set to 1 for observations in the period 2005–2007 and 0 for observations in the period 2002–2004. *SUBJECT* indicates a private firm in the subject group (described below).

Controls is a vector of control variables (Badertscher et al. [2013]), including *SALE_GR*, *ROA*, *LEV*, *LN_AT*, *CASH*, and *HHI*. Specifically, *SALE_GR* is sales growth, calculated as sales in year t minus sales in year t-1 and scaled by sales in year t-1. *ROA* is return on assets, defined as profit after tax in year t divided by total assets in year t-1. *LEV* is leverage, defined as the sum of loans and long-term debt divided by total assets in year t. *LN_AT* is the natural logarithm of total assets in year t. *CASH* is cash holdings, equal to the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, calculated as the sum of the squared market shares within an industry (defined by a two-digit NACE). See Appendix A for variable definitions.

By including country*year fixed effects in Equation (1), we address shocks and reforms in a country that affect both private and public firms. We also use industry fixed effects to

[17] Our conclusions are unaffected if we alternatively measure capital investment as changes in total assets.

control for cross-industry differences in investment levels. Standard errors are clustered at the firm level.[18] If private firms' investments experience crowding out after the IFRS mandate, we expect a negative coefficient on *AFTER*SUBJECT*.

Besides the IL model, we also use its extended version to explore firms' responsiveness to investment opportunities, referred to as the IO model (e.g., Badertscher et al. [2013], Asker, Farre-Mensa, and Ljungqvist [2015], Graham, Hanlon, Shevlin, and Shroff [2017]).

$$\begin{aligned} \Delta FIX\_ASSET = {} & \alpha + \beta_1 SUBJECT + \beta_2 AFTER * SUBJECT + \beta_3 SALE\_GR + \\ & \beta_4 SUBJECT * SALE\_GR + \beta_5 AFTER * SALE\_GR + \beta_6 AFTER * \\ & SUBJECT * SALE\_GR + \Gamma * Controls + \Phi * AFTER * Controls + \Omega * \\ & Country\ FEs * SALE\_GR + \Upsilon * Industry\ FEs * SALE\_GR + Country * \\ & Year\ FEs + Industry\ FEs + \varepsilon. \end{aligned} \quad (2)$$

In this model, *SALE_GR* proxies for investment opportunities,[19] and now we are interested in the effect through its slope coefficient (i.e., investment sensitivity) as well as the intercept. We interact *SALE_GR* with country and industry fixed effects to control for variation in investment sensitivity across countries and industries (e.g., Gipper, Leuz, and Maffett [2020]). We also interact *Controls* with *AFTER* to further address cross-sectional variation in investment behavior that stems from firm characteristics.[20] If funding for private firm investment is crowded out, we expect a negative coefficient on *AFTER*SUBJECT*, *AFTER*SUBJECT*SALE_GR*, or both.[21]

[18] Our results also hold using country-level clustering (see below).

[19] This proxy is used by, among others, Bloom et al. [2007], Biddle et al. [2009], Gupta and Yuan [2009], and Kausar, Shroff, and White [2016]. We alternatively measure investment opportunities by predicted Tobin's Q based on fundamental variables (Badertscher, Shroff, and White [2013], Campello and Graham [2013], Asker, Farre-Mensa, and Ljungqvist [2015]), industry sales growth (Gupta and Yuan [2009]), or a composite measure that combines sales growth, predicted Tobin's Q, and industry sales growth. Our inferences hold.

[20] These types of interactions are missing in the analysis of Badertscher et al. [2013], which could be another reason that their results are incomparable to ours.

[21] The literature considers high investment sensitivity (responsiveness) as desirable, since firms are more responsive to available opportunities when adjustment costs stemming from agency conflicts, financial constraints, and market frictions are low (Jorgenson [1963], Hubbard [1998], Barnett and Sakellaris [1999], Bushman, Piotroski, and Smith [2011], Shroff, Verdi, and Yu [2014]). Our study does not consider specific forms of agency problems causing over- or under-investment (e.g., Richardson [2006]). Distinguishing between over- and under-

Changes in investment sensitivity around the IFRS mandate represent only one part of the investment effect. Importantly, the literature points out that empirical proxies for investment opportunities are subject to reliability concerns (e.g., Kaplan and Zingales [1997], Kallapur and Trombley [2001], Whited and Wu [2006], Gilje and Taillard [2016]).[22] The IL model avoids using such proxies and captures the overall investment effect more directly.

3.2 Sample Selection

Panel A of Table 1 describes sample selection. We retrieve data from the Bureau van Dijk Amadeus database, which covers both public and private firms in most European countries. We start with the November 2011 disk[23] and require firms (i) to come from those countries covered by Christensen et al. [2013] (Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom); (ii) to have an active status; and (iii) to have a legal form of either public or private. This initial screening yields 15,555,573 firm-year observations with 1,729,380 unique firms.

For our main tests, we restrict the sample to firms with consolidated accounts (Burgstahler, Hail, and Leuz [2006], Drobetz, Janzen, and Meier [2019]), yielding 670,473 observations from 74,497 unique firms. We remove observations with missing data on revenues (which are needed to measure investment opportunities). Following Burgstahler et al. [2006], we require firms to meet at least two of the following three conditions: the number of employees is not less than 50, total revenue is not less than €5 million, and total assets are not less than €2.5 million. We also remove firms in financial industries (NACE = 65, 66), following Klapper, Laeven, and Rajan [2006], because their accounting standards differ and therefore their

investment can be challenging in the absence of a clear benchmark for optimal investment (Bergstresser [2006], Leuz and Wysocki [2016]).

[22] In practice, firms assess investment opportunities based on a variety of information that pertains to both past performance and prospects, but much of the information they use is unobservable to researchers.

[23] Each of the Amadeus disks contains data for the most recent 10 years. The November 2011 disk includes data dating back to 2001 (Kalemli-Ozcan et al. [2015]).

financial variables do not compare with those of firms in other industries. Following previous IFRS studies (e.g., Landsman, Maydew, and Thornock [2012], Yip and Young [2012], Ahmed, Neel, and Wang [2013]), we restrict our sample to the period between 2002 and 2007. We delete observations with missing values for the main variables in our regressions. Finally, because the IFRS mandate applies to certain private firms in Greece, Slovakia, and Spain, we remove private firms from these countries that had switched to the IFRS as of 2005.[24]

As noted, restricting to firms with consolidated accounts shrinks the sample substantially. But there are two advantages of focusing on these firms. First, they have a clearer boundary in comparison with firms without consolidated accounts—which are often members of a business group within which resources can be transferred. So they offer a cleaner setting for detecting the hypothesized behavior. Second, firms with consolidated accounts tend to be larger and hence compete more directly with public firms for capital, which increases the power of tests. Nonetheless, in a further analysis, we also examine the complementary set (i.e., firms with no consolidated accounts) to assess the relevance of our findings in the wider economy.

We separate firms into public and private, according to the listing status shown in Bureau van Dijk. Public firms comprise our Benchmark1. We rank private firms on size (measured by assets) within country-industry in 2004 and then further by leverage; those falling into the bottom half of size and the bottom tercile of leverage constitute the Benchmark2 group. Our subject firms are private firms excluding those in Benchmark2. The final sample comprises 93,436 firm-year observations with 25,821 unique firms. There are 70,890 observations on 20,946 unique private firms in the subject group, 13,528 observations on 3,302 unique public firms in Benchmark1 and 9,018 observations on 1,965 unique private firms in Benchmark2.[25]

[24] Because the Amadeus database does not indicate whether a firm's IFRS adoption is voluntary or mandatory, we take a conservative approach by removing all firms from these countries that adopt IFRS in 2005 (including two firms from Greece, 26 from Spain, and one from Slovakia). Slovakia drops out of the sample after this step.
[25] The number of unique private firms (22,911) and the number of unique public firms (3,302) together exceed the total number of unique firms in the sample (25,821) due to a few firms switching status from private to public or vice versa during the sample period.

Panel B provides the sample distribution by country. Among the 23 EU countries in our sample, the United Kingdom and Sweden have the largest representations, together accounting for 51.14% (= 32.96% + 18.18%) of the overall sample. This pattern holds in the subject group and the two benchmark groups.

[Table 1 about here]

Panel A of Table 2 reports the descriptive statistics of the variables. For the subject group, the mean value of growth in total assets (*ΔTOTAL_ASSET*) is 0.092, and that of growth in fixed assets (*ΔFIX_ASSET*) is 0.031. Sales growth (*SALE_GR*) has a mean of 0.121. The mean *ROA* is 0.041, and the mean leverage (*LEV*) is 0.281. The logarithm of total assets (*LN_AT*) has a mean of 10.885. On average, cash holdings (*CASH*) account for 10.1% of total assets, and the mean Herfindahl-Hirschman Index (*HHI*) is 0.054. For Benchmark1, the mean value of *ΔTOTAL_ASSET* is 0.121, and that of *ΔFIX_ASSET* is 0.061. For Benchmark2, the corresponding amounts are 0.077 and 0.017 for the two variables.

Panel B shows the pair-wise Pearson correlations among the variables in the subject group. We find that growth in both total assets and fixed assets is positively correlated with *SALE_GR* (correlation = 0.40 and 0.25, respectively), significant at the 0.01 level. This preliminary evidence suggests that capital investment is sensitive to investment opportunities.

[Table 2 about here]

4. Main Results

4.1 Difference-in-Differences Regressions Employing Benchmark1

We first examine the investment behavior of the subject group vis-à-vis Benchmark1. Panel A of Table 3 presents the results of the IL model. For the overall subject group, we obtain a significantly negative coefficient on *AFTER*SUBJECT* (-0.059, $p < 0.01$) in column (1), where we include country and industry fixed effects. In column (2), we control for

country*year and industry fixed effects and continue to obtain a significantly negative coefficient (-0.062, $p < 0.01$). These results indicate that, when benchmarked against public firms, the investment level of subject firms drops significantly after the introduction of IFRS.

To address the concern that differences between private and public firms violate the parallel trend assumption, we repeat the tests using a subsample of subject firms matched with public firms (one to one) on country-industry, profitability (ROA), and investment level in 2004. We also observe significant decreases in private firms' investment post IFRS. Specifically, the coefficient on *AFTER*SUBJECT* is -0.042 ($p < 0.01$) and -0.043 ($p < 0.01$) in columns (3) and (4), which correspond to the specifications in columns (1) and (2), respectively. Overall the evidence from the IL model indicates that subject firms' investment falls behind public firms after the IFRS mandate.

Besides the OLS regressions, we also explain the probability of a firm's investment ranked in the top decile of the combined sample (Naranjo et al. [2022]). The internet appendix (Table IA1) shows that the coefficient on *AFTER*SUBJECT* is significantly negative both for the overall subject group and for the matched subject group; that is, when pooling (subject) private and public firms, the private firms are less likely to rank among the top investing firms post IFRS than pre IFRS, which is additional evidence that their investment is falling behind public firms.

Panel B of Table 3 provides the results of the IO model. In estimating this model, we interact *SALE_GR* with country and industry fixed effects to control for cross-sectional differences in investment sensitivity. We also interact the control variables with *AFTER* to allow for their heterogeneous effects in the pre- versus post-IFRS periods. For brevity, we omit the coefficients on *AFTER*Controls* and refer to the internet appendix (Table IA2) for the full model estimation.

For the overall subject sample, we observe a significantly negative effect through both the intercept and the slope. In column (1), where we control for country and industry fixed effects, the coefficient on *AFTER*SUBJECT* is -0.039 ($p < 0.01$), and that on *AFTER*SUBJECT*SALE_GR* is -0.054 ($p < 0.01$). In column (2), where we use country*year and industry fixed effects, these coefficients are -0.040 ($p < 0.01$) and -0.056 ($p < 0.01$), respectively. For the matched sample (columns 3 and 4), the effect through the intercept is significantly negative at the 0.01 level in both columns, and that through the slope is significantly negative at the 0.05 level. Thus, the IO model shows that subject firms experience decreases not only in investment level but also sensitivity post IFRS. Our conclusions from the tests using Benchmark1 (and those using Benchmark2 below) continue to hold if we cluster standard errors at the country level; see the internet appendix (Table IA3).

[Table 3 about here]

Figure 1 maps out the differential investment effect across the years from the IL model for the full subject sample (Panel A) and the matched subject sample (Panel B), respectively. We use the year 2004 as the baseline. There is a (mild) positive pre-event trend of the investment of private versus public firms, and the differential investment drops to become significantly negative from 2005 to 2006 and 2007. For matched subject firms, a clear parallel trend is displayed pre IFRS, and the differential investment level drops sharply from 2005 through 2007. The internet appendix (Table IA4, Panel A) shows the detailed time trend results for the overall subject group and for the matched group.

[Figure 1 about here]

The time trends of the investment effect from the IO model, through the intercept and the slope, are also reported in the internet appendix (Table IA4, Panel B) along with the mapping out of these effects (Figures IA1 and IA2). The parallel trends assumption is satisfied in most instances. For the overall subject group, we observe a significant drop in differential investment

both through the intercept and the slope in the post-IFRS years, but the contrast between the pre- and post-IFRS years is sharper (statistically more significant) for the intercept effect than for the slope effect. For the matched subject group, there is also a significant drop through the intercept and the slope in the post-IFRS years, except in 2007, where the negative slope effect becomes insignificant.

To summarize, the above results show that, after mandatory IFRS adoption by public firms, subject firms experience a significant drop in capital investment, relative to public firms. The negative effect is manifested both through investment level and sensitivity, with latter being weaker. However, because the mandate directly affects public firms, the relative effect documented here could reflect increased investment of pubic firms (rather than decreased investment of subject firms). The use of Benchmark2 below addresses this concern.

4.2 Difference-in-Differences Regressions Employing Benchmark2

We now examine subject firms' investment behavior, relative to Benchmark2—firms mostly insulated from the IFRS mandate.[26] Table 4 shows the results estimated from the IL and IO models after controlling for country*year and industry fixed effects. For the IL model (column 1), the coefficient on *AFTER*SUBJECT* is -0.014 ($p < 0.01$). For the IO model (column 2), the coefficient on *AFTER*SUBJECT* is -0.023 ($p < 0.01$), and that on *AFTER*SUBJECT*SALE_GR* is -0.048 ($p < 0.01$). Thus, subject firms experience decreases in both investment levels and sensitivity, relative to Benchmark2, after the IFRS mandate.

[Table 4 about here]

Figure 2 maps out the time trend of the differential effect from the IL model under Benchmark2, which indicates a significant drop in subject firms' investment levels starting from 2005. The internet appendix (Figure IA3) maps out the effects from the IO model; it

[26] Essentially, we need a control group for which the SUTVA condition holds. Being relatively insulated from spillover effects, Benchmark2 proxies for this group.

shows that subject firms experience significant drops both in investment level and sensitivity starting from 2005, with the negative effect around the IFRS mandate more salient through the intercept than through the slope.[27] While there exists a (relatively mild) pre-event trend in investment levels, the parallel trends assumption is satisfied for investment sensitivity. The detailed time trend results against Benchmark2 are provided in the internet appendix (Table IA6). The result here based on Benchmark2 provides more unambiguous evidence of crowding out.

[Figure 2 about here]

Taken together, our results point to subject firms investing less post IFRS mandate not only in relation to public firms subject to the mandate but also in relation to firms relatively insulated from it. Overall, this suggests that the mandate boosts public firms' capital investment but reduces that of subject firms, with the effect (if any) on small private firms with low leverage situated in between. This cross-sectional pattern is consistently displayed in terms of investment level and sensitivity. We thus conclude that the IFRS mandate crowds out private firms' investment.

4.3 Sensitivity Checks

As shown above (Table 1 Panel B), there is considerable diversity in country representation in our sample. The United Kingdom and Sweden comprise the largest portions, whereas several countries contribute few observations. To demonstrate that our results are not driven by outlier countries, we run a series of sensitivity checks that exclude the United Kingdom, Sweden, countries with below 100 private firm observations, and countries with below 200 private firm observations.

[27] Our finding that subject firms sustain a negative investment effect relative to Benchmark2, suggests that these firms would have stronger incentives to voluntarily adopt IFRS reporting. Evidence consistent with this conjecture is shown in the internet appendix (Table IA5). That is, subject firms have a greater propensity to switch to IFRS reporting post IFRS mandate than do firms in Benchmark2, controlling for firm size and other factors.

We also run tests excluding Germany. The number of German private firms is small in earlier years of the sample when disclosure requirements were not strictly enforced and then increases drastically when a new disclosure mandate took effect in 2007 (Bernard [2016]).[28] Finally, we run tests after excluding Spain, where the IFRS mandate covers some private firms (and the number of Spanish private firms in the sample is nontrivial).

The internet appendix (Table IA7, Panels A and B) shows the results of these sensitivity tests employing Benchmark1 and Benchmark2. Subject firms continue to display significant decreases in capital investment post IFRS mandate in all the adjusted samples, against both benchmarks.

4.4 Heterogeneous Effects Across Subject Firms

To explore the heterogeneity of the documented effects across firms, we partition subject firms into three subsamples (large, medium, and small) based on total assets in the immediate pre-IFRS year. Intuitively, large private firms, being closer to public firms in size, should compete more directly with the latter for financing than small private firms, so they are expected to sustain a worse crowding out effect.

Panel A of Table 5 provides the IL model results using Benchmark1. The coefficient on *AFTER*SUBJECT* is -0.064 ($p < 0.01$) for the large subsample, that is, a differential drop equal to 6.40% of total assets. The coefficient is -0.060 ($p < 0.01$) for the medium-sized and -0.056 ($p < 0.01$) for the small subsamples. The coefficient difference is statistically significant at the 0.01 level between the large and small subsamples. Thus, while all three subsamples experience a differential investment decline (versus public firms), the magnitude of the decline is greatest for large firms. Again, these are relative investment declines of subject firms against Benchmark1 whose own investment seems increasing.

[28] The total German private firm observations post IFRS is roughly three times those from the pre-IFRS years.

Panel B presents the results using Benchmark2. We also observe significant differential effects on the three subsamples of subject firms when benchmarked against firms relatively insulated from the IFRS mandate. Specifically, the coefficients on *AFTER*SUBJECT* are -0.019 ($p < 0.01$), -0.014 ($p < 0.01$), and -0.008 ($p < 0.01$) for large, medium-sized, and small subject firms, respectively. The difference in the coefficient is significant at the 0.01 level between the large and small subsamples.[29]

To the extent that firms in Benchmark2 are little affected by the IFRS mandate, these coefficients in Panel B proxy for the magnitude of the crowding out effects that subject firms in the three subsamples sustain. These investment effects (scaled by total assets) are significant in economic terms, especially for the large firms versus the medium-sized and small ones, considering that the average investment of subject firms as a whole is 3.1% of total assets. Note too that the differential effects are smaller in magnitude when subsample firms are compared with Benchmark2 than with Benchmark1, consistent with public firms themselves increasing investment post IFRS.

[Table 5 about here]

5. Exploiting Variations in Firms' IFRS Adoption Status

In this section, we exploit firms' voluntary IFRS adoption to further illuminate the forces behind our findings. By focusing on differential effects on private, relative to public, firms and using country*year fixed effects, the above tests control for time-period effects that apply to all firms in a country. Still, differential effects can arise from several possible sources: (i) capital market reforms unrelated to reporting (which apply to public firms), (ii) reporting

[29] While capital investment typically displays strong mean reversion, our results from the cross-sectional tests here and those from the main tests are unlikely induced by this property. Untabulated tests indicate that large subject firms do not display greater mean reversion than do medium-sized or small ones, even though they sustain the largest investment effects. Also note that the staggered difference-in-differences tests below using the Oriana setting, where the IFRS event occurs at different times across countries, yield the same qualitative results as from the EU setting, which should further help address the concern.

reforms introduced with IFRS as a package (which also apply to public firms), and (iii) IFRS adoption itself. By varying firms' adoption status (while holding other factors constant), we aim to disentangle scenario (iii) from scenarios (i) and (ii).

First, we employ private firms that voluntarily switched to IFRS reporting. To the extent that these private firms become less disadvantaged in information reporting than non-adopters by signaling their incentives to switch to the IFRS, we expect them to sustain a smaller crowding out effect or none at all. Second, we use public firms voluntarily adopting IFRS prior to the mandate as an alternative benchmark. If these early adopters do not change their reporting as much as other public firms at the time of the mandate, we would expect to see a smaller differential effect when subject firms are benchmarked against them.

5.1. Private Firms Voluntarily Adopting the IFRS

We obtain 217 private firms that adopt IFRS reporting as of 2005, as indicated in Bureau van Dijk Amadeus, with a total of 1,072 observations; we indicate them by *VOL_ADOPT*.[30] We examine the investment behavior of these voluntary adopters around 2005 using the IL model, with the results presented in Panel A of Table 6. When Benchmark1 is used (column 1), the coefficient on *AFTER*VOL_ADOPT* is insignificant (coefficient = -0.003, p = 0.776). That is, the investment effect on these private firms does not differ significantly from that on public firms. When Benchmark2 is used (column 2), the coefficient on *AFTER* VOL_ADOPT* is significantly positive (coefficient = 0.035, $p < 0.01$), suggesting that private firm adopters actually experience an increase in investment when benchmarked against firms relatively insulated from spillovers. This evidence does not indicate that the investments of private firm IFRS adopters are crowded out, which contrasts with the result for subject firms in general.

[30] These firms are either from the subject group or Benchmark2, constituting 1.34% of the overall private firm sample. As mentioned, the database does not distinguish between voluntary and mandated adoption. Given that private firms possibly subject to the IFRS mandate (from Greece, Slovakia, and Spain) are already excluded, the remaining ones presumably are voluntary adopters. In any case, the test conducted here still makes sense, even if this group contains some firms that were mandated to adopt IFRS reporting.

Note that the sample size of private firm voluntary adopters is much smaller than the subject group. To better compare their respective effects, we construct a subsample of subject firms matched (one to one) with voluntary adopters on country-industry, profitability, and investment in the immediate pre-IFRS year and run difference-in-differences tests. In columns (3) and (4) of Panel A, we continue to find evidence of crowding out; the coefficient on *AFTER* SUBJECT* is significantly negative both against Benchmark1 (coefficient = -0.054, $p < 0.01$) and Benchmark2 (coefficient = -0.016, $p = 0.089$). Thus, the result for private firm IFRS adopters in columns (1) and (2) does not seem to be driven by the small sample.

[Table 6 about here]

5.2. Public Firms Early IFRS Adopters as an Alternative Benchmark

Daske et al. [2013] identify a set of public firms that voluntarily adopt the IFRS prior to 2005. They classify these firms as either serious or label adopters, depending on whether firms have strong incentives to improve their transparency and reporting. We now examine the investment of our subject firms using these public firm early adopters as benchmarks.[31]

The results are presented in Panel B of Table 6. In column (1), where we use serious adopters (797 observations) as the benchmark, the coefficient on *AFTER*SUBJECT* is -0.030 ($p < 0.01$). In column (2), where we use label adopters (306 observations) as the benchmark, the coefficient on *AFTER*SUBJECT* is -0.054 ($p = 0.018$). Both coefficients are smaller in magnitude than in column (3) based on Benchmark1 (-0.062, $p < 0.01$), which repeats the previous results in Table 3 (column 2 of Panel A). Untabulated tests show that the coefficient differs significantly at the 0.01 level between columns (1) and (3) but insignificantly between columns (2) and (3). These results suggest that the investment effect experienced by public firm early adopters, serious adopters in particular, is less pronounced than for other public firms.

[31] We obtain the list of public firm early adopters used by Daske et al. [2013] from the *Journal of Accounting Research* website (https://research.chicagobooth.edu/arc/journal-of-accounting-research/online-supplements/volume-51).

They point to a link between the differential investment effects from our tests and IFRS reporting. At the same time, however, there is still a remaining significant effect on subject firms, relative to serious adopters, which suggests that there are likely other forces at work (such as concurrent reporting reforms).[32]

In an additional analysis, we use public firms traded on unregulated EU markets as yet another reference group. Unregulated public firms either use the local GAAP or voluntarily adopt IFRS. As a group, we expect them not to experience the same level of (positive) investment impact around the IFRS mandate as other public firms. Consequently, the differential effect on our subject firms would be smaller when benchmarked against unregulated public firms. We identify unregulated public firms using a firm's market identifier in Datastream and restrict the sample to the five countries with at least 100 observations on unregulated public firms (Belgium, France, Germany, Sweden, and the United Kingdom).[33] Our difference-in-differences analysis examines subject firms from these same five countries. The results reported in the internet appendix (Table IA8) show that, while subject firms experience a negative investment effect, relative to either unregulated public firms or Benchmark1, the effect is significantly smaller under the former benchmark than under Benchmark1. This finding suggests that the investment effect experienced by public firms around the IFRS mandate depends on their adoption status, which further points to the role of IFRS reporting.

6. Evidence from Oriana Countries

[32] Relatedly, Daske et al. [2008] and Christensen et al. [2013] find that public firm early adopters still experience a strong liquidity effect around the IFRS mandate and suggest concurrent changes in enforcement as a potential reason.

[33] We obtain the list of EU unregulated markets by excluding regulated markets indicated by the law firm CMS Cameron McKenna: https://cms-lawnow.com/-/media/files/regzone%20/reports/smart-pdf/database-of-regulated-markets.pdf (*A database of regulated markets across the EEA*, retrieved in January 2021). We cross check the information both with European Securities and Markets Authority website (https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_upreg) and with related recent studies (e.g., Christensen et al. [2016], Byard, Darrough, and Suh [2021]).

We now switch to Oriana countries for further evidence. The tests here complement the main tests above in several ways. First, many Oriana countries have less developed markets and institutions than EU countries. Thus, evidence from this setting elucidates the generalizability of our findings. Second, Oriana countries adopted IFRS reporting in different years (from 2003 to 2012 in our sample below). This alleviates the concern that the results from the EU are spurious to (unrelated) concurrent events.

However, we also note some limitations. These countries also undergo significant events of their own related to politics, regulation, and trade.[34] Nonetheless, to the extent that these events are not highly correlated among the countries, confounding factors are less of a problem. Also, data quality might not be as high as the EU sample.[35]

We retrieve data on public and private firms from 16 Asia-Pacific countries/jurisdictions from the Bureau van Dijk Oriana database that mandated staggered IFRS adoption during the period 2002–2012. They are Qatar (adoption in 2002), Singapore (2003), the United Arab Emirates (2003), Australia (2005), Hong Kong (2005), the Philippines (2005), Syria (2005), Turkey (2006), Fiji (2007), Kazakhstan (2007), New Zealand (2007), Israel (2008), South Korea (2011), Malaysia (2012), the Russian Federation (2012), and Sri Lanka (2012). Five countries drop out for having no private firms in the dataset (Qatar, the United Arab Emirates, the Philippines, Fiji, and Syria). We exclude Kazakhstan, where IFRS adoption is mandated

[34] For instance, Australia signed free trade agreements in 2004 (just before its IFRS adoption in 2005) with the United States and Thailand. Hong Kong was hit by a SARS outbreak in 2003, two years before it adopted IFRS. And Malaysia, which adopted IFRS in 2012, held an election in 2010 and then another in 2013. Surrounding its IFRS mandate in 2011, South Korea held a local election in 2010, a parliamentary election in 2011, and presidential election in 2012. Another significant event was the establishment of Korea Commission for Corporate Partnership in 2010 (https://elaw.klri.re.kr/kor_service/lawView.do?hseq=52666&lang=ENG). Its stated purpose is "to attain their shared growth by resolving the polarization between large enterprises and small-medium enterprises with the aim of laying the foundation for sustainable growth of the national economy," which likely boosts the development of small private versus large enterprises.

[35] The data source (Bureau van Dijk Oriana dataset) is compiled from diverse sources for the various countries, instead of from a common provider and using a standardized collection procedure. The level of representation of a country's private firms varies widely across countries. This can give rise to concerns regarding consistency as well as overall data quality relative to the EU sample (from Bureau van Dijk Amadeus database). To the extent that there is greater noise in the dataset, difficulties arise with regard to finding significant results in support of the theoretical prediction.

for large businesses and public-interest companies (including financial institutions, state-owned enterprises, and extractive companies) but not along the divide of public versus private firms.[36] Malaysia required public firms to adopt IFRS reporting from 2012, but adoption for the agriculture and construction industries was delayed to 2018; we thus exclude Malaysian entities in these two industries for our tests.[37] Finally, Australia and New Zealand are separately examined; they mandated IFRS adoption for both public and private firms (explained below). We end up with eight countries that mandate IFRS reporting for public firms but not private ones. As above, we use observations from three years before to three years after the IFRS event and construct the subject group, Benchmark1, and Benchmark2 analogously to those in the main tests. This process yields 82,000 firm-year observations in the subject group, 19,886 in Benchmark1, and 48,689 in Benchmark2. Panel A of Table 7 describes the sample distribution by country.[38]

Panel B reports the staggered difference-in-differences tests using the IL model. Consistent with the results from the EU sample, we obtain a significantly negative coefficient on *AFTER*SUBJECT* both in column (1) under Benchmark1 (coefficient = -0.030, $p < 0.01$) and in column (2) under Benchmark2 (-0.013, $p < 0.01$). That is, private firms in the subject group experience a significant drop in capital investment post IFRS, both compared with public firms and with private firms mostly insulated from spillovers. Further, the differential investment effect is greater under Benchmark1 than under Benchmark2, which also echoes the EU findings.

[Table 7 about here]

[36] See https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/view-jurisdiction/kazakhstan/ for details.
[37] For adoption details, see https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/view-jurisdiction/malaysia. These two industries account for 7.05% of the Malaysian private and public firms in the sample. Our inferences do not change if we also include Malaysian firms from the two industries.
[38] Several countries have zero observations in Benchmark2, which simply means that they have no private firm observations for the year immediately before the IFRS mandate, when the sample is divided into the subject group and Benchmark2. We reach the same conclusions if we remove countries with no more than 100 private firm observations.

Figure 3 maps the time trend of the effects on subject firms across the years. It displays a significant drop in investment level vis-à-vis both Benchmark1 (Panel A) and Benchmark2 (Panel B). The internet appendix (Table IA9 Panel A) provides the detailed time trend results. The parallel trend assumption is satisfied using Benchmark1, while there is a mild negative pre-event trend using Benchmark2.

[Figure 3 about here]

The results of the IO model for the Oriana sample are reported in the internet appendix (Table IA9 Panel B). There is a significantly negative intercept effect on subject firms both under Benchmark1 and Benchmark2. The effect through the slope (investment sensitivity) is insignificant under Benchmark1 while significantly negative under Benhcmark2. These results further support the predicted crowding out effect.

Private firms in Australia and New Zealand are subject to the IFRS mandate alongside public firms,[39] which serves as a counterfactual for our tests. (In this case, private firms' IFRS adoption should be more exogenous than voluntary adoption in the European Union.) We follow their respective regulatory thresholds for IFRS adoption to identify firms subject to the IFRS mandate in the two countries, yielding 3,679 and 5,174 firm-year observations for private and public firms, respectively. We examine the investment of private versus public firms in the two countries. Table 8 shows that, based on the IL model, the differential investment effect is insignificant. In other words, private firms in these two countries do not experience a decline in capital investment, relative to their public counterparts. Figure 4 maps out the effects across the years, which indicates that private firms in the two countries do not experience a significant

[39] Australian IFRS equivalents are required for unlisted firms meeting at least two of the following conditions: revenue not less than A$25 million, assets not less than A$12.5 million, and employees not less than 50. New Zealand IFRS is required for unlisted firms with either total assets larger than NZ$60 million or revenue greater than NZ$30 million. See https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/view-jurisdiction/australia/, and https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/view-jurisdiction/new-zealand/ for details, respectively.

drop in investment vis-à-vis public firms post IFRS. The detailed time trend results are shown in the internet appendix (Table IA10).

[Table 8 about here]

[Figure 4 about here]

7. Exploring the Financing Channel

This section explores the capital market channel for transmitting the crowding out effect, aiming to support the theoretical argument underlying our hypothesis. Without having access to public capital markets, private firms mostly rely on private debt (e.g., bank loans) for investment. Public firms, while able to tap public markets, also rely heavily on private debt for ongoing operations.[40] Therefore we posit that competition between them occurs more through the debt than the equity markets.

Below we conduct analysis that distinguishes industries where competition for debt and equity faced by private firms varies. Additionally, we run tests by singling out the United Kingdom, where capital market frictions are considered low.

7.1. Public Firms' Financing Needs and Private Firms' Investment

We partition the subject firm group based on public peers' debt and equity financing needs. To avoid endogeneity concerns regarding public and private firms' financing activities, we follow Rajan and Zingales's [1998] approach and use firms in the United States to determine public firms' dependence on external debt and equity financing in different

[40] Armstrong et al. [2010] report that public firms access debt markets more frequently than equity markets. Among all debt, private loans constitute about twice as much as public debt, in dollar amounts (Bharath et al. [2008]). Likewise, Lin et al. [2013] find that bank debt accounts for 71% of total debt in their sample of 9,831 public firms from 20 East Asian and Western European countries for the 2001–2010 period. Chen et al. [2013] also show that the amount of debt financing exceeds that of equity financing for their sample of public firms and furthermore private debt comprises a greater part than public debt.

industries.[41] We run regressions using the IL model for the partitioned industry groups (against Benchmark1), with the results shown in Table 9. For the subsample where public firms have high dependence on debt financing in a country-industry (column 1), we find a significantly negative coefficient on *AFTER*SUBJECT* (-0.070, $p < 0.01$). For the subsample where public firms have low dependence debt financing (column 2), the coefficient on *AFTER*SUBJECT* has a smaller magnitude (-0.055, $p < 0.01$). The difference in the coefficient on *AFTER*SUBJECT* between the two columns is significant ($p = 0.032$). Thus, the crowding out effect that private firms experience is sensitive to the extent of public peers' debt financing.[42]

Public firms' equity needs also matter. We observe from columns (3) and (4) that private firms also experience a (somewhat) stronger crowding out effect when public firms in the same industry have high, than low, equity financing needs. However, the difference in the coefficient on *AFTER*SUBJECT* between the two groups is not significant at the 0.1 level ($p = 0.125$). Thus, while private firms do not compete directly with public firms in equity markets, activities in equity markets can spill over to debt markets. Taken together, our results are consistent with the view that competition for capital between private and public firms occurs mainly in the debt market.

[Table 9 about here]

7.2 The Case of the United Kingdom

[41] We first obtain the industry link table and the corresponding firm-level variables from Compustat North America. We calculate, for each industry (two-digit NACE), public firms' dependence on total external financing and by debt and equity from the period 1990–1999. Dependence on total external financing equals the aggregate total external financing (capital expenditures net of operating cash flows) divided by the aggregate capital expenditures. Dependence on external equity financing equals the aggregate net share issuances divided by the aggregate capital expenditures, and dependence on external debt financing equals dependence on total external financing minus dependence on external equity financing. Our conclusions are insensitive to using alternative periods for calculating public firms' financing dependence (e.g., 1980–1989 or 1996–2005).

[42] Relatedly, we find that public peers' dependence on debt financing is positively correlated with increases in subject firms' cost of debt (correlation = 0.065, $p < 0.01$). Also, private firms might respond to the crowding out effect by using alternative forms of financing. An untabulated analysis of UK firms finds that, across different industries, changes in private firms' use of leases around the IFRS event are positively correlated with public peers' dependence on debt financing in the industry (correlation = 0.149, $p < 0.01$).

One might expect the crowding out effect to be less pronounced where capital market frictions are low. To this end, we compare those private firms in the subject group that are from the United Kingdom versus those from other EU countries on the ground that the United Kingdom has a more active capital market and so its private firms might face fewer capital constraints, attenuating any crowding out. Consistent with this conjecture, the results of the IL model in the internet appendix (Table IA11) suggest that UK private firms experience a less severe crowding out effect than private firms in other EU countries.[43]

8. Additional Analyses

8.1 Evidence from Private Firms with No Consolidated Accounts

Our tests above employ EU private firms that have consolidated accounts, which represent a relatively small subset of all private firms in these economies. We now explore whether the effect holds more generally among private firms with no consolidated accounts. As for the main tests before, we conduct a difference-in-differences analysis involving three firm groups: (i) the subject group with 492,562 observations on private firms with unconsolidated accounts (Subject_UA); (ii) Benchmark1, that is, the same group of public firms as before; and (iii) Benchmark2_UA, consisting of small firms with low leverage among the private firms with no consolidated accounts (constructed analogously to Benchmark2), with 66,065 observations. The internet appendix (Table IA12 Panels A and B) reports the results. For the subject group as a whole, we observe a significant drop in investment around the IFRS event, relative to both Benchmark1 and Benchmark2_UA. Partitioning the subject group into quintiles on size (measured by total assets), we find that the magnitude of the effect (under

[43] Badertscher et al. [2013] use the United Kingdom for a placebo test and show that public firm presence in UK industries has little effect on private firms' investment sensitivity (a slope effect). Their result appears somewhat in line with our finding here that UK private firms are less subject to spillovers from public firms' investment. However, we observe (from their Table 6) that public firm presence actually has a significantly positive intercept effect, suggesting that UK private firms' investment is not unaffected; this calls into question the validity of using these firms as a placebo.

Benchmark1) decreases as firm size shrinks. The evidence further confirms that the crowding out effect is more pronounced for larger private firms, which compete more directly with public firms in capital markets.[44]

8.2 Countries With versus Without Concurrent Changes in Enforcement

Many countries implemented the IFRS mandate as a package to reform not only accounting and disclosure but also auditing, governance, and enforcement (Daske et al. [2008]). As such, our observed effect is likely the joint result of these multiple reforms. Christensen et al. [2013]) find that capital market effects associated with IFRS reporting (such as liquidity) are correlated with enforcement changes, whereas accounting changes per se do not seem to play a significant role. In light of this, we now explore how the documented crowding out effect is associated with enforcement changes.

Following Christensen et al. [2013], we group the EU countries in our sample into those that bundle IFRS adoption with enforcement changes (Finland, Germany, Iceland, the Netherlands, Norway, and the United Kingdom) and those that do not (Belgium, Czech Republic, Spain, France, Greece, Hungary, Italy, Lithuania, Luxembourg, Poland, Portugal Ireland, and Sweden). For each group, we use the IL model to estimate the differential effects on subject versus public firms from the same countries while controlling for country*year fixed effects.

The results are reported in Panel A of Table 10. Column (1) corresponds to the countries without bundled enforcement changes. The coefficient on *AFTER*SUBJECT* is significantly negative (-0.053, $p < 0.01$), consistent with subject firms sustaining a crowding out effect in this group. Column (2) corresponds to the countries with bundled enforcement changes, and

[44] We expect that many of the private firms in this group are subsidiaries of firms in our main test samples (those with consolidated accounts). If so, the subject firm effect from the tests here would mirror that from the main tests, where a significant crowding out effect was found. On the other hand, we envisage that the sample here, which contains more small firms, is likely confounded by other factors, such as economic policies targeting small enterprises.

we also obtain a significantly negative coefficient on *AFTER*SUBJECT* (-0.067, $p < 0.01$). The difference in the coefficient between the two columns is significant at the 0.1 level, suggesting that, for countries implementing IFRS reporting with enforcement changes, the crowding out effect for private firms is somewhat stronger. As noted, the distribution of German private firms is uneven pre versus post IFRS, which might render inferences from the results less clear. Thus, we also conduct an analysis after excluding Germany from the bundled group. Column (3) shows that the coefficient on *AFTER*SUBJECT* now is -0.075 ($p < 0.01$); the coefficient difference now is sharpened between the bundled and unbundled groups, significant at the 0.01 level.[45]

[Table 10 about here]

In Panel B, we repeat the above analysis separately for countries with a large versus small GAAP distance—which measures the dissimilarity between a country's local GAAP and IFRS (Bae, Tan, and Welker [2008], Byard et al. [2011]). Our aim is to illuminate how accounting standards and enforcement complement each other. We find that the effect of enforcement changes seems more pronounced in countries that undergo greater changes in accounting standards. Specifically, among countries with a large GAAP distance, the coefficient on *AFTER*SUBJECT* is -0.038 ($p < 0.01$) for those countries without bundled enforcement changes (column 1), and it becomes more negative for those with bundled enforcement changes—-0.049 ($p < 0.01$) including Germany (column 2) and -0.066 ($p < 0.01$) excluding Germany (column 3). The coefficient in column (3) is significantly different from that in column (1) at the 0.10 level, but the coefficient in column (2) is not. On the other hand, among

[45] We also explore the effect of enforcement versus the IFRS in Oriana countries. The countries in our sample implemented enforcement changes either before or after (but not concurrent with) IFRS adoption. Our (untabulated) results indicate a significant effect around IFRS adoption in countries that have not made enforcement changes but a smaller effect around IFRS adoption in countries where enforcement changes are already in place. At the same time, we find a significant effect around enforcement changes, regardless of whether countries have adopted the IFRS. These results suggest that, in Oriana countries, the IFRS mandate and enforcement changes each play a role, but there seems to exist substitution effects between them. We acknowledge that this analysis is exploratory, and it is premature to draw definitive conclusions.

countries with small GAAP distances, while the coefficient is significantly negative with and without bundled enforcement changes (columns 4 and 5), there is little difference in the coefficient between them.

Taken together, the results are consistent with the view that IFRS reporting and enhanced enforcement may work together to affect firm behavior. Our finding echoes the work of Daske et al. [2008], Byard et al. [2011], and Florou and Pope [2012], who show that the effect of accounting standards depends on reporting incentives and enforcement.

9. Conclusion

We examine how financial reporting regulations targeting public firms affect the capital investment of their private peers. Although private firms are not subject to the IFRS mandate and related reporting reforms, they are connected to public firms economically, by virtue of sharing common markets for inputs and outputs and by learning from each other's disclosures. Studies have shown that public firms experience improved information environments and increased financing and investment after the IFRS mandate. Our study shows that public firms' IFRS reporting (in conjunction with the related reforms) has a negative spillover effect on private firm investment. Specifically, EU private firms experience decreased investment and a lower degree of responsiveness to investment opportunities post IFRS mandate. This result holds both when private firms are benchmarked against public firms directly subject to the mandate and against a subset of (private) firms mostly insulated from the negative spillover effect. Our finding is consistent with the theoretical predictions of Fishman and Hagerty [1989] and Zhang [2013], that increasing the quality of financial reporting standards and disclosure can crowd out the investments of some firms, especially those that compete for funding with the firms that experience improved reporting. Our analysis of Oriana countries, which

mandated the IFRS in a staggered fashion, provides separate evidence in support of this prediction.

We find that, in the cross section, negative investment spillovers are felt most strongly by large private firms, which tend to compete more directly for financing with public firms. Also, private firms' investments are crowded out more post IFRS (versus pre IFRS) when their public peers in the same industry have greater needs for external debt and, to a lesser extent, equity financing.

On the other hand, the effect is attenuated when the reporting gap between private and public firms seems narrower. Specifically, we find no significant evidence of private firms' investment being crowded out when they either voluntarily switch to the IFRS along with public firms, as in the European Union, or are mandated to adopt the IFRS alongside public firms, as in Australia and New Zealand. The contrasting results for firms with different adoption statuses help pin down the role of the IFRS mandate in explaining the documented effect.

Lastly, we find that the crowding out effect is somewhat stronger in countries where the IFRS mandate is bundled with enforcement changes than in countries without concurrent enforcement changes, but this result is displayed only in countries with large (versus small) GAAP distances. These findings point to the complementarity of accounting standards and other institutional arrangements.

This study is among the first to demonstrate that mandatory financial reporting regulations can shift capital from one sector of an economy to another. That is, reporting regulations for one group of firms can impose significant costs on firms beyond the intended scope. Such negative spillovers need to be considered in evaluating reporting and disclosure regulations.

Some caveats of the study should be noted. Our estimates of the crowding out effect may not be precise, as we do not have a control group that is completely insulated from the IFRS mandate and related reforms. Further, identification challenges impede disentangling the role of IFRS from other concurrent reporting reforms, and so the observed effect should be viewed as a joint outcome of these reforms.

REFERENCES

ADMATI, A. R., AND P. PFLEIDERER. "Forcing Firms to Talk: Financial Disclosure Regulation and Externalities." *Review of Financial Studies* 13 (2000): 479–519.

AHMED, A. S., M. NEEL, AND D. WANG. "Does Mandatory Adoption of IFRS Improve Accounting Quality? Preliminary Evidence." *Contemporary Accounting Research* 30 (2013): 1344–1372.

ARMSTRONG, C. S., W. R. GUAY, AND J. P. WEBER. "The Role of Information and Financial Reporting in Corporate Governance and Debt Contracting." *Journal of Accounting and Economics* 50 (2010): 179–234.

ARMSTRONG, C. S., S. GLAESER, AND J. D. KEPLER. "Strategic Reactions in Corporate Tax Planning." *Journal of Accounting and Economics* 68 (2019): 101232.

ASKER, J., J. FARRE-MENSA, AND A. LJUNGQVIST. "Corporate Investment and Stock Market Listing: A Puzzle?" *Review of Financial Studies* 28 (2015): 342–390.

BADERTSCHER, B., N. SHROFF, AND H. D. WHITE. "Externalities of Public Firm Presence: Evidence from Private Firms' Investment Decisions." *Journal of Financial Economics* 109 (2013): 682–706.

BAE, K.-H., H. TAN, AND M. WELKER. "International GAAP Differences: The Impact on Foreign Analysts." *The Accounting Review* 83 (2008): 593–628.

BALL, R. "IFRS: 10 Years Later." *Accounting and Business Research* 46 (2016): 545–571.

BALL, R., A. ROBIN, AND J. S. WU. "Incentives versus Standards: Properties of Accounting Income in Four East Asian Countries." *Journal of Accounting and Economics* 36 (2003): 235–270.

BARNETT, S. A., AND P. SAKELLARIS. "A New Look at Firm Market Value, Investment, and Adjustment Costs." *The Review of Economics and Statistics* 81 (1999): 250–260.

BEATTY, A., S. LIAO, AND J. J. YU. "The Spillover Effect of Fraudulent Financial Reporting on Peer Firms' Investments." *Journal of Accounting and Economics* 55 (2013): 183–205.

BECK, T., A. DEMIRGÜÇ-KUNT, AND V. MAKSIMOVIC. "Financing Patterns around the World: Are Small Firms Different?" *Journal of Financial Economics* 89 (2008): 467–487.

BERG, T., M. REISINGER, AND D. STREITZ. "Spillover Effects in Empirical Corporate Finance. " *Journal of Financial Economics* 142 (2021): 1109–1127.

BERGSTRESSER, D. "Discussion of 'Overinvestment of Free Cash Flow." *Review of Accounting Studies* 11 (2006): 191–202.

BERNARD, D. "Is the Risk of Product Market Predation a Cost of Disclosure?" *Journal of Accounting and Economics* 62 (2016): 305–325.

BHARATH, S. T., J. SUNDER, AND S. V. SUNDER. "Accounting Quality and Debt Contracting.' *The Accounting Review* 83 (2008): 1–28.

BIDDLE, G. C., C. M. CALLAHAN, H. A. HONG, AND R. L. KNOWLES. "Do Adoptions of International Financial Reporting Standards Enhance Capital Investment Efficiency?" Working paper, 2016. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2353693

BIDDLE, G. C., AND G. HILARY. "Accounting Quality and Firm-Level Capital Investment." *The Accounting Review* 81 (2006): 963-82.

BIDDLE, G. C., G. HILARY, AND R. S. VERDI. "How does Financial Reporting Quality Relate to Investment Efficiency?" *Journal of Accounting and Economics* 48 (2009): 112–131.

BLOOM, N., S. BOND, AND J. VAN REENEN. "Uncertainty and Investment Dynamics." *The Review of Economic Studies* 74 (2007): 391–415.

BREUER, M. "Bartik Instruments: An Applied Introduction." *Journal of Financial Reporting* 7 (2022): 49–67.

BROCHET, F., A. D. JAGOLINZER, AND E. J. RIEDL. "Mandatory IFRS Adoption and Financial Statement Comparability." *Contemporary Accounting Research* 30 (2013): 1373–1400.

BURGSTAHLER, D. C., L. HAIL, AND C. LEUZ. "The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms." *The Accounting Review* 81 (2006): 983–1016.

BUSHEE, B. J., AND C. LEUZ. "Economic Consequences of SEC Disclosure Regulation: Evidence from the OTC Bulletin Board." *Journal of Accounting and Economics* 39 (2005): 233–264.

BUSHMAN, R. M., J. D., PIOTROSKI, AND A.J. SMITH, "Capital Allocation and Timely Accounting Recognition of Economic Losses." *Journal of Business Finance & Accounting* 38 (2011): 1–33.

BYARD, D., Y. LI, AND Y. YU. "The Effect of Mandatory IFRS Adoption on Financial Analysts' Information Environment." *Journal of Accounting Research* 49 (2011): 69–96.

BYARD, D., M. DARROUGH, AND J. SUH. "Re-examining the Impact of Mandatory IFRS Adoption on IPO Underpricing." *Review of Accounting Studies* 26 (2021): 1344–1389.

CAMPELLO, M., AND J. R. GRAHAM. "Do Stock Prices Influence Corporate Decisions? Evidence from the Technology Bubble." *Journal of Financial Economics* 107 (2013): 89–110.

CASCINO, S., AND J. GASSEN. "What Drives the Comparability Effect of Mandatory IFRS Adoption?" *Review of Accounting Studies* 20 (2015): 242–282.

CHEN, X., Q. CHENG, AND A. K. LO. "Accounting Restatements and External Financing Choices." *Contemporary Accounting Research* 30 (2013): 750–779.
CHEN, C., D. YOUNG, AND Z. ZHUANG. "Externalities of Mandatory IFRS Adoption: Evidence from Cross-Border Spillover Effects of Financial Information on Investment Efficiency." *The Accounting Review* 88 (2013): 881–914.
CHRISTENSEN, H. B., L. HAIL, AND C. LEUZ. "Capital-Market Effects of Securities Regulation: Prior Conditions, Implementation, and Enforcement." *Review of Financial Studies* 29 (2016): 2885–2924.
CHRISTENSEN, H. B., L. HAIL, AND C. LEUZ. "Mandatory IFRS Reporting and Changes in Enforcement." *Journal of Accounting and Economics* 56 (2013): 147–177.
DARROUGH, M. N. "Disclosure Policy and Competition: Cournot vs. Bertrand." *The Accounting Review* 68 (1993): 534–561.
DARROUGH, M. N., AND N. M. STOUGHTON. "Financial Disclosure Policy in an Entry Game." *Journal of Accounting and Economics* 12 (1990): 219–243.
DASKE, H., L. HAIL, C. LEUZ, AND R. VERDI. "Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences." *Journal of Accounting Research* 46 (2008): 1085–1142.
DASKE, H., L. HAIL, C. LEUZ, AND R. VERDI. "Adopting a Label: Heterogeneity in the Economic Consequences Around IAS/IFRS Adoptions." *Journal of Accounting Research* 51 (2013): 495–547.
DE GEORGE, E. T., X. LI, AND L. SHIVAKUMAR. "A Review of the IFRS Adoption Literature." *Review of Accounting Studies* 21 (2016): 898–1004.
DIAMOND, D., AND R. VERRECCHIA. "Disclosure, Liquidity, and the Cost of Capital." *Journal of Finance* 46 (1991): 1325–1359.
DIX-CARNEIRO, R., AND B. K. KOVAK. "Trade Liberalization and Regional Dynamics." *American Economic Review* 107 (2017): 2908-2946.
DIXIT, A., AND R. PINDYCK. "Investment Under Uncertainty" (1994). Princeton University Press. Princeton, NJ.
DROBETZ, W., M. JANZEN, AND I. MEIER. "Investment and Financing Decisions of Private and Public Firms." *Journal of Business Finance & Accounting* 46 (2019): 225–262.
DUGUAY, R., M. MINNIS, AND A. SUTHERLAND. "Regulatory Spillovers in Common Audit Markets." *Management Science* 66 (2020): 3389–3411.
DURNEV, A., AND C. MANGEN. "Corporate Investments: Learning from Restatements." *Journal of Accounting Research* 47 (2009): 679–720.
DYE, R. A. "Mandatory versus Voluntary Disclosures: The Cases of Financial and Real Externalities." *The Accounting Review* 65 (1990): 1–24.
FISHMAN, M. J., AND K. M. HAGERTY. "Disclosure Decisions by Firms and the Competition for Price Efficiency." *Journal of Finance* 44 (1989): 633–646.
FLOROU, A., AND U. KOSI. "Does Mandatory IFRS Adoption Facilitate Debt Financing?" *Review of Accounting Studies* 20 (2015): 1407–1456.
FLOROU, A., AND P. POPE. "Mandatory IFRS Adoption and Institutional Investment Decisions." *The Accounting Review* 87 (2012): 1993-2025.
GIGLER, F. "Self-Enforcing Voluntary Disclosures." *Journal of Accounting Research* 32 (1994): 224–240.
GILJE, E. P., AND J. P. TAILLARD. "Do Private Firms Invest Differently than Public Firms? Taking Cues from the Natural Gas Industry." *Journal of Finance* 71 (2016): 1733–1778.
GIPPER, B., C. LEUZ, AND M. MAFFETT. "Public Oversight and Reporting Credibility: Evidence from the PCAOB Audit Inspection Regime." *Review of Financial Studies* 33 (2020): 4532–4579.
GRAHAM, J. R., M. HANLON, T. SHEVLIN, AND N. SHROFF. "Tax Rates and Corporate Decision-Making." *Review of Financial Studies* 30 (2017): 3128–3175.
GUPTA, N., AND K. YUAN. "On the Growth Effect of Stock Market Liberalizations." *Review of Financial Studies* 22 (2009): 4715–4752.
HAYES, R. M., AND R. LUNDHOLM. "Segment Reporting to the Capital Market in the Presence of a Competitor." *Journal of Accounting Research* 34 (1996): 261–279.
HORTON, J., G. SERAFEIM, AND I. SERAFEIM. "Does Mandatory IFRS Adoption Improve the Information Environment?" *Contemporary Accounting Research* 30 (2013): 388–423.
HUBBARD, R. G. "Capital-Market Imperfections and Investment." *Journal of Economic Literature* 36 (1998): 193–225.
ICAEW. "*The Future of IFRS: Information for Better Markets Initiative*." (2012). ICAEW.
JORGENSON, D. W. "Capital Theory and Investment Behavior." *American Economic Review* 53 (1963): 247–259.
KALEMLI-OZCAN, S., B. SORENSEN, C. VILLEGAS-SANCHEZ, V. VOLOSOVYCH, AND S. YESILTAS. "*How to Construct Nationally Representative Firm Level Data from the ORBIS Global Database*." (2015). Working paper. National Bureau of Economic Research.

KALLAPUR, S., AND M. A. TROMBLEY. "The Investment Opportunity Set: Determinants, Consequences and Measurement." *Managerial Finance* 27 (2001): 3–15.
KAPLAN, S. N., AND L. ZINGALES. "Do Investment-Cash Flow Sensitivities Provide Useful Measures of Financing Constraints?" *Quarterly Journal of Economics* 112 (1997): 169–215.
KAUSAR, A., N. SHROFF, AND H. WHITE. "Real Effects of the Audit Choice." *Journal of Accounting and Economics* 62 (2016): 157–181.
KIM, J., AND M. OLBERT. "How Does Private Firm Disclosure Affect Demand for Public Firm Equity? Evidence from the Global Equity Market." *Journal of Accounting and Economics* 74 (2022): 101545.
KLAPPER, L., L. LAEVEN, AND R. RAJAN. "Entry Regulation as a Barrier to Entrepreneurship." *Journal of Financial Economics* 82 (2006): 591–629.
LAMBERT, R., C. LEUZ, AND R. VERRECCHIA. "Accounting Information, Disclosure, and the Cost of Capital." *Journal of Accounting Research* 45 (2007): 385–420.
LANDSMAN, W. R., E. L. MAYDEW, AND J. R. THORNOCK. "The Information Content of Annual Earnings Announcements and Mandatory Adoption of IFRS." *Journal of Accounting and Economics* 53 (2012): 34–54.
LEUZ, C., D. NANDA, AND P. D. WYSOCKI. "Earnings Management and Investor Protection: An International Comparison." *Journal of Financial Economics* 69 (2003): 505–527.
LEUZ, C., AND P. D. WYSOCKI. "The Economics of Disclosure and Financial Reporting Regulation: Evidence and Suggestions for Future Research." *Journal of Accounting Research* 54 (2016): 525–622.
LIN, C., MA, Y., MALATESTA, P., AND XUAN, Y. "Corporate Ownership Structure and the Choice between Bank Debt and Public Debt." *Journal of Financial Economics*, 109 (2013): 517–534.
LOUREIRO, L., AND A. TABOADA. "Do Improvements in the Information Environment Enhance Insiders' Ability to Learn from Outsiders?" *Journal of Accounting Research* 53 (2015): 863–905.
NARANJO, P., D. SAAVEDRA, AND R. S. VERDI. "The Pecking Order and Financing Decisions: Evidence from Changes to Financial-Reporting Regulation." *Journal of Accounting, Auditing & Finance* (2022): 727–750.
POPE, P. F., AND S. J. MCLEAY. "The European IFRS Experiment: Objectives, Research Challenges and Some Early Evidence." *Accounting and Business Research* 41 (2011): 233–266.
RAJAN, R., AND L. ZINGALES. "Financial Dependence and Growth." *American Economic Review* 88 (1998): 559–586.
RICHARDSON, S. "Over-Investment of Free Cash Flow." *Review of Accounting Studies* 11 (2006): 159–189.
ROYCHOWDHURY, S., N. SHROFF, AND R. S. VERDI. "The Effects of Financial Reporting and Disclosure on Corporate Investment: A Review." *Journal of Accounting and Economics* 68 (2019): 1–27.
RUBIN, D. B. "Comment: Which Ifs Have Causal Answers." *Journal of the American Statistical Association* 81 (1986): 961–962.
SCHLEICHER, T., A. TAHOUN, AND M. WALKER. "IFRS Adoption in Europe and Investment-Cash Flow Sensitivity: Outsider versus Insider Economies." *International Journal of Accounting* 45 (2010): 143–168.
SHAPIRO, M. D. "The Dynamic Demand for Capital and Labor." *Quarterly Journal of Economics* 101 (1986): 513–542.
SHROFF, N., R. S. VERDI, AND G. YU. "Information Environment and the Investment Decisions of Multinational Corporations." *The Accounting Review* 89 (2014): 759–790.
TAN, H., S. WANG, AND M. WELKER. "Analyst Following and Forecast Accuracy After Mandated IFRS Adoptions." *Journal of Accounting Research* 49 (2011): 1307–1357.
TRUONG, P. "Peer Effects and Disclosure Timing: Evidence from Earnings Announcements." *The Accounting Review* (2023): 1–32.
VERRECCHIA, R. "Essays on Disclosure." *Journal of Accounting and Economics* 32 (2001): 91–180.
WHITED, T. M., AND G. WU. "Financial Constraints Risk." *Review of Financial Studies* 19 (2006): 531–559.
YIP, R. W. Y., AND D. YOUNG. "Does Mandatory IFRS Adoption Improve Information Comparability?" *The Accounting Review* 87 (2012): 1767–1789.
YU, G., AND A. S. WAHID. "Accounting Standards and International Portfolio Holdings." *The Accounting Review* 89 (2014): 1895–1930.
ZHANG, G. "Private Information Production, Public Disclosure, and the Cost of Capital: Theory and Implications." *Contemporary Accounting Research* 18 (2001): 363–384.
ZHANG, G. "Accounting Standards, Cost of Capital, Resource Allocation, and Welfare in a Large Economy." *The Accounting Review* 88 (2013): 1459–1488.

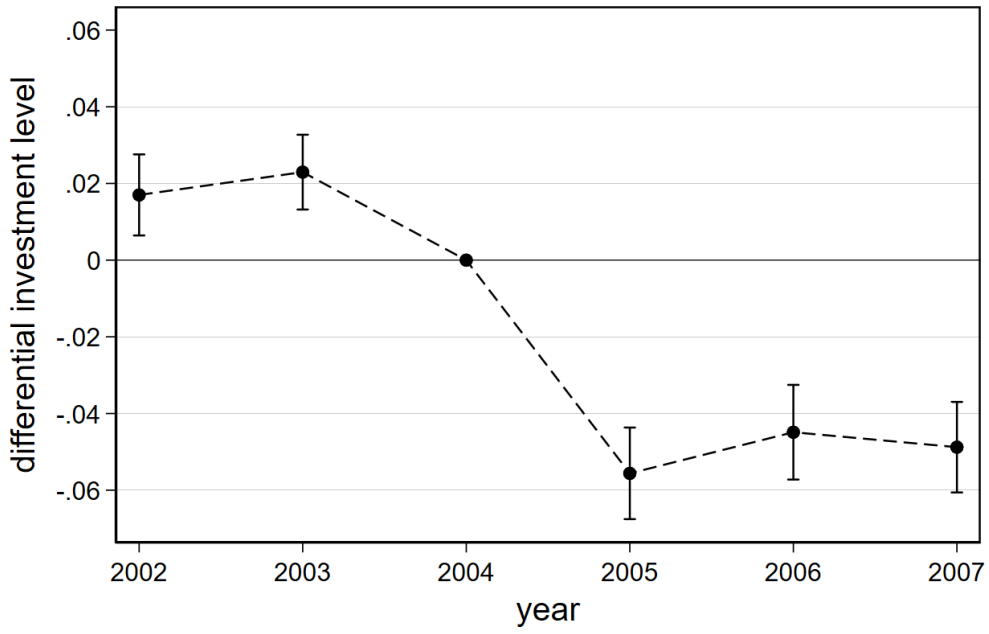
APPENDIX A: VARIABLE DEFINITIONS

Variable Name	Description
SUBJECT	An indicator variable equal to one for firms from the subject group and zero from benchmark group (Benchmark1 or Benchmark2). Benchmark1 group is the public firms from the same country. For Benchmark2 group, we rank private firms on size (measured by assets) within country-industry in the immediate pre-IFRS year and then further by leverage; those falling into the bottom half of size and the bottom tercile of leverage constitute the Benchmark2 group. Our subject firms are private firms excluding those in Benchmark2.
AFTER	An indicator variable equal to one for observations in the IFRS mandate period (three years after) and zero for observations before the IFRS mandate (three years before).
ΔTOTAL_ASSET	Asset growth, defined as the change in total assets from year t-1 to year t, scaled by total assets in year t-1.
ΔFIX_ASSET	Fixed asset growth, defined as the change in fixed assets from year t-1 to year t, scaled by total assets in year t-1.
SALE_GR	Sales growth, defined as the change in sales from year t-1 to year t, scaled by sales in year t-1.
ROA	Return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1.
LEV	Leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t.
LN_AT	Firm asset size, defined as the natural logarithm of total assets in year t.
CASH	Cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t.
HHI	The Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE.
VOL_ADOPT	An indicator variable equal to 1 for private firms that voluntarily adopt IFRS as of 2005, and 0 for firms in Benchmark1 or Benchmark2.

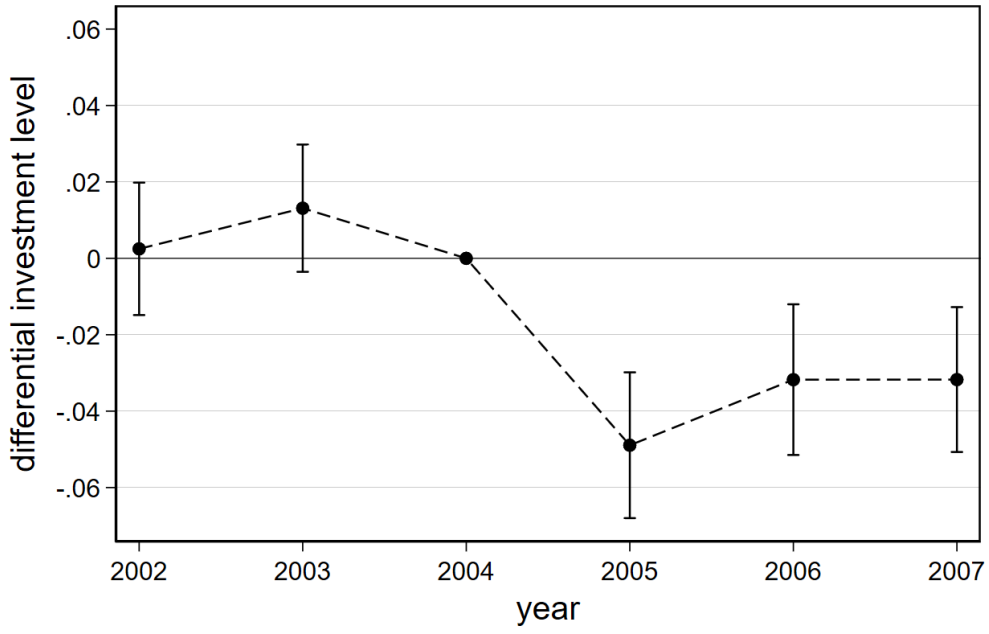
FIGURE 1

Mapping Out IL Model Effects: Subject Firms versus Benchmark1

Panel A. Differential Investment Effect (Overall Subject Group)



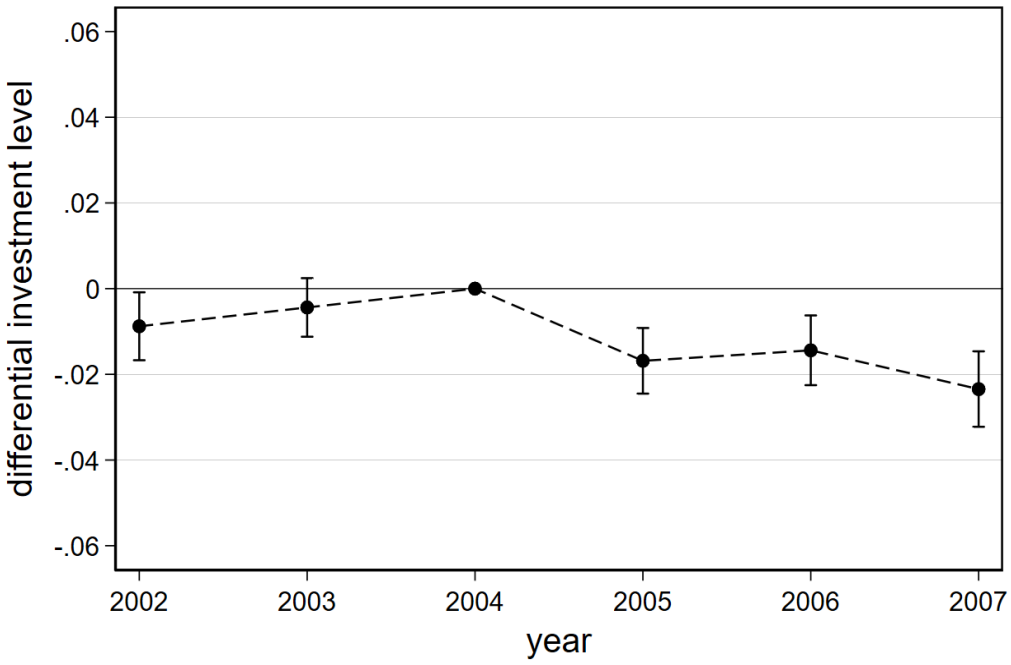
Panel B. Differential Investment Effect (Matched Subject Group)



This figure maps out the differential effect estimated from the IL model across the sample years, with confidence intervals, on EU subject firms versus Benchmark1, using 2004 as the base year. Panels A and B show the results for the overall subject and matched subject groups, respectively.

FIGURE 2

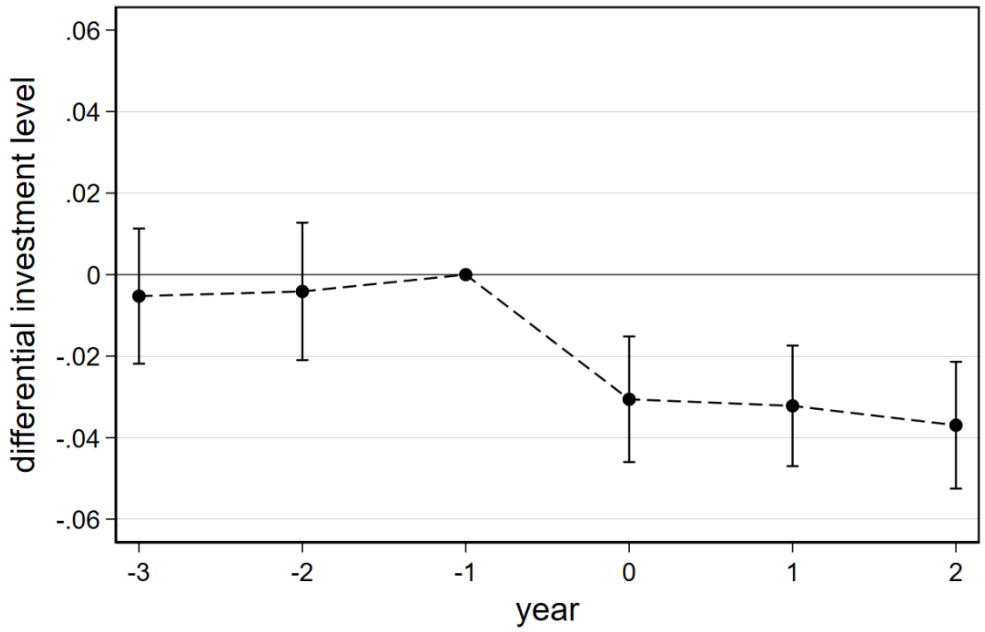
Mapping Out IL Model Effects: Subject Firms versus Benchmark2



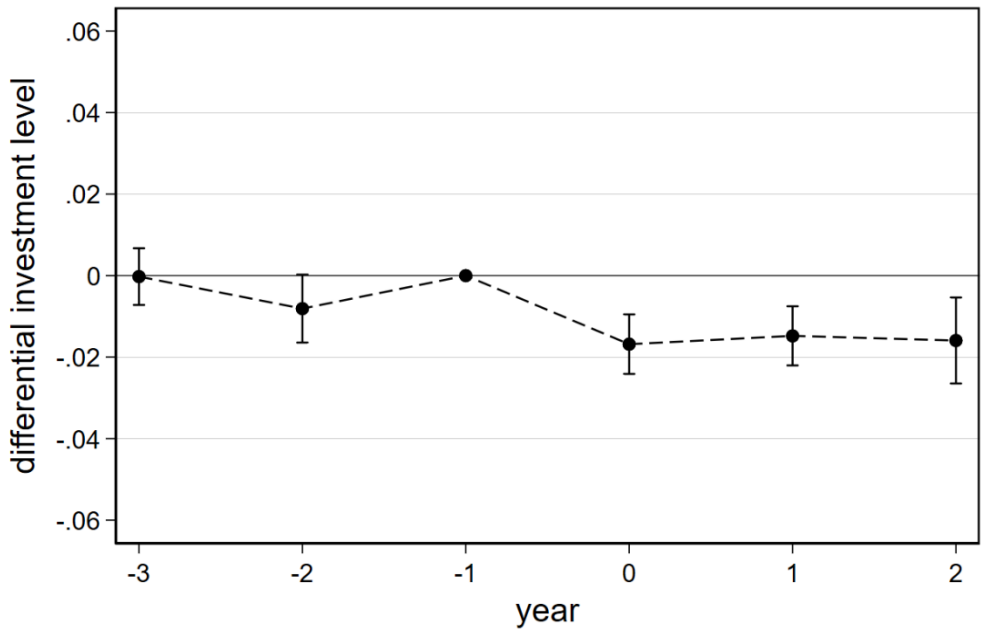
This figure maps out the differential effect from the IL model across the sample years, with confidence intervals, on EU subject firms versus Benchmark2, using 2004 as the base year.

FIGURE 3
Mapping Out IL Model Effects for Oriana Countries

Panel A. Oriana Subject Firms versus Benchmark1



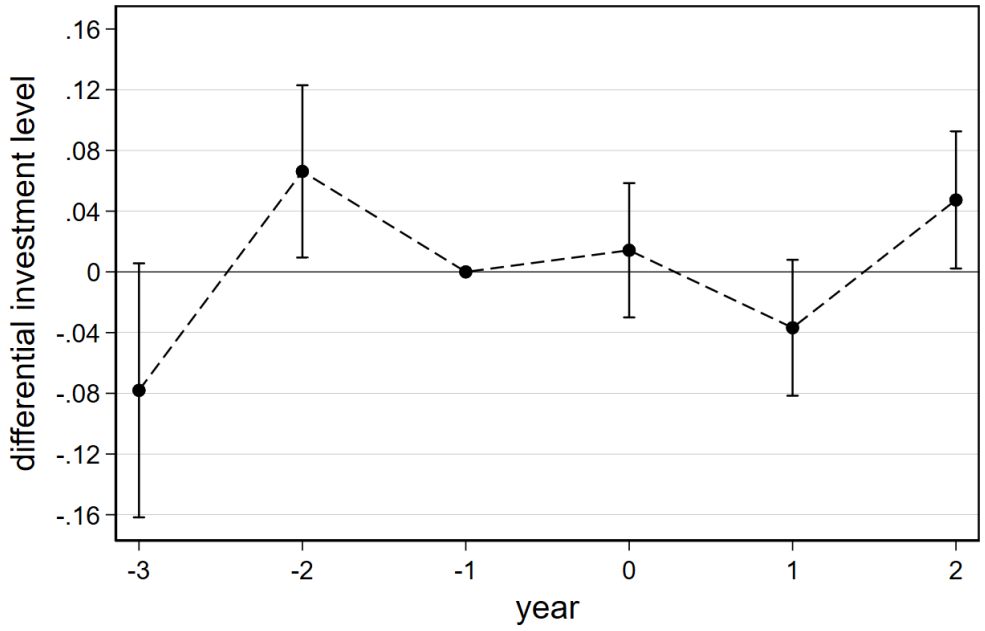
Panel B. Oriana Subject Firms versus Benchmark2



This figure maps out the differential investment effect from the IL model across the years surrounding the staggered IFRS adoption, with confidence intervals, for Oriana countries, using the year immediately before a country's IFRS adoption as the base year. Subject firms are benchmarked against Benchamrk1 in Panel A and Benchmark2 in Panel B.

FIGURE 4

Mapping Out IL Model Effects for Australia and New Zealand



This figure maps out the differential investment effect on private versus public firms in Australia and New Zealand across the years surrounding IFRS adoption, with confidence intervals, using the year immediately before a country's IFRS adoption as the base year.

TABLE 1

Sample Selection and Distribution by Country

Panel A. Sample Selection

Filtering Procedures	Number of Observations	Number of Firms
All observations from the BvD Amadeus disk for the period 2002-2007 meeting the following requirements: (1) Country: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, the United Kingdom (Christensen et al. [2013]). (2) Legal status: Active companies. (3) Legal form: Public, private.	15,555,573	1,729,380
Restricted to consolidated accounts.	670,473	74,497
Restricted to non-missing revenues.	287,788	57,071
Restricted to observations meeting at least two of the three requirements: (1) number of employees no fewer than 50; (2) total revenue no less than EUR 5 million; (3) total assets no less than EUR 2.5 million (Burgstahler et al. [2006]).	185,979	40,036
Firms in financial industries removed (NACE = 65; 66).	183,914	39,527
Restricted to the years 2002-2007.	133,991	36,445
Restricted to non-missing values of *INVEST*, *HHI*, *LEV*, *ROA*, *CASH*, *LNAT*.	93,556	25,850
Remove private firms from Slovakia, and firms from Greece and Spain that adopt IFRS as of 2005	93,436	25,821
Public firms (Benchmark1)	13,528	3,302
Private firms, including	79,908	22,911
Private firms excluding small sized low leverage (Subject firms)	70,890	20,946
Small low leverage private firms (Benchmark2)	9,018	1,965

Panel B. Sample Distribution by Country

Country	All	Percentage	Subject	Percentage	Benchmark1	Percentage	Benchmark2	Percentage
Austria	-	0.00%	-	0.00%	-	0.00%	-	0.00%
Belgium	2,274	2.43%	1,860	2.62%	188	1.39%	226	2.51%
Czech Republic	1	0.00%	1	0.00%	-	0.00%	-	0.00%
Denmark	-	0.00%	-	0.00%	-	0.00%	-	0.00%
Estonia	-	0.00%	-	0.00%	-	0.00%	-	0.00%
Finland	5,040	5.39%	3,991	5.63%	552	4.08%	497	5.51%
France	2,167	2.32%	166	0.23%	1,995	14.75%	6	0.07%
Germany	8,030	8.59%	5,330	7.52%	2,305	17.04%	395	4.38%
Greece	74	0.08%	39	0.06%	35	0.26%	-	0.00%
Hungary	15	0.02%	15	0.02%	-	0.00%	-	0.00%
Iceland	11	0.01%	4	0.01%	7	0.05%	-	0.00%
Ireland	58	0.06%	4	0.01%	54	0.40%	-	0.00%
Italy	11,368	12.17%	9,514	13.42%	825	6.10%	1,029	11.41%
Lithuania	688	0.74%	495	0.70%	164	1.21%	29	0.32%
Luxembourg	31	0.03%	24	0.03%	7	0.05%	-	0.00%
Netherlands	8,194	8.77%	6,667	9.40%	601	4.44%	926	10.27%
Norway	-	0.00%	-	0.00%	-	0.00%	-	0.00%
Poland	1,057	1.13%	714	1.01%	267	1.97%	76	0.84%
Portugal	566	0.61%	347	0.49%	202	1.49%	17	0.19%
Slovenia	-	0.00%	-	0.00%	-	0.00%	-	0.00%
Spain	6,077	6.50%	4,934	6.96%	594	4.39%	549	6.09%
Sweden	16,986	18.18%	13,659	19.27%	1,313	9.71%	2,014	22.33%
United Kingdom	30,799	32.96%	23,126	32.62%	4,419	32.67%	3,254	36.08%
Total	93,436	100.00%	70,890	100.00%	13,528	100.00%	9,018	100.00%

This table describes the sample selection procedure (Panel A), and firm-year observations by country over the period 2002-2007 for the combined sample of EU private and public firms, the subject group, Benchmark1, and Benchmark2, respectively (Panel B).

TABLE 2
Descriptive Statistics

Panel A. Summary Statistics

VARIABLE	Subject N=70,890			Benchmark1 N=13,528			Benchmark2 N=9,018		
	MEAN	MEDIAN	SD	MEAN	MEDIAN	SD	MEAN	MEDIAN	SD
ΔTOTAL_ASSET	0.092	0.049	0.256	0.121	0.045	0.348	0.077	0.046	0.230
ΔFIX_ASSET	0.031	0.002	0.139	0.061	0.010	0.202	0.017	-0.002	0.111
SALE_GR	0.121	0.063	0.346	0.137	0.061	0.404	0.079	0.049	0.256
ROA	0.041	0.032	0.084	0.036	0.042	0.109	0.064	0.053	0.090
LEV	0.281	0.253	0.226	0.208	0.178	0.181	0.103	0.064	0.120
LN_AT	10.885	10.754	1.548	12.240	12.013	1.914	9.448	9.370	0.962
CASH	0.101	0.051	0.133	0.129	0.074	0.153	0.160	0.107	0.166
HHI	0.054	0.030	0.078	0.083	0.036	0.111	0.050	0.030	0.071

Panel B. Correlations (Subject Group)

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
(1) ΔTOTAL_ASSET							
(2) ΔFIX_ASSET	0.70***						
(3) SALE_GR	0.40***	0.25***					
(4) ROA	0.26***	0.11***	0.13***				
(5) LEV	0.01***	0.07***	0.05***	-0.31***			
(6) LN_AT	0.08***	0.09***	0.06***	-0.06***	0.09***		
(7) CASH	0.24***	0.05***	0.09***	0.30***	-0.31***	-0.08***	
(8) HHI	-0.02***	-0.01	-0.01	0.01***	-0.09***	0.07***	0.02***

This table provides the distributional statistics of subject firms, Benchmark1, and Benchmark2 (in Panel A), and the pair-wise correlations between variables for subject firms (in Panel B). *ΔTOTAL_ASSET* is total asset growth, measured as the change in total assets from year t-1 to year t, scaled by total assets in year t-1. *ΔFIX_ASSET* is fixed asset growth, measured as the change in fixed assets from year t-1 to year t, scaled by total assets in year t-1. *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, equal to profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is leverage, defined as the sum of loans and long-term debt in year t, divided by total assets in year t. *LN_AT* is firm size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 3

Analysis of Subject Firms versus Benchmark1

Panel A. Results for the IL Model

	Subject vs. Benchmark1		Matched Subject vs. Benchmark1	
DepVar= ΔFIX_ASSET				
	(1)	(2)	(3)	(4)
SUBJECT	0.005**	0.007***	0.001	0.002
	(0.013)	(0.003)	(0.792)	(0.673)
AFTER	0.061***		0.049***	
	(0.000)		(0.000)	
AFTER*SUBJECT	**-0.059*** **	**-0.062*** **	**-0.042*** **	**-0.043*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.106***	0.104***	0.160***	0.156***
	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.194***	0.194***	0.287***	0.289***
	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.064***	0.064***	0.085***	0.084***
	(0.000)	(0.000)	(0.000)	(0.000)
LN_AT	0.007***	0.007***	0.006***	0.006***
	(0.000)	(0.000)	(0.000)	(0.000)
CASH	0.059***	0.058***	0.061***	0.059***
	(0.000)	(0.000)	(0.000)	(0.000)
HHI	-0.010	-0.010	-0.021	-0.036
	(0.224)	(0.234)	(0.441)	(0.197)
CONSTANT	-0.087***	-0.050***	-0.068***	-0.044*
	(0.000)	(0.000)	(0.006)	(0.081)
Country FEs	Yes	-	Yes	-
Industry FEs	Yes	Yes	Yes	Yes
*Country*Year FEs*	No	Yes	No	Yes
CLUSTER	Firm	Firm	Firm	Firm
N	84,418	84,418	14,062	14,062
adj. R-sq	0.129	0.133	0.199	0.206

Panel B. Results for the IO Model

	Subject vs. Benchmark1		Matched Subject vs. Benchmark1	
DepVar= ΔFIX_ASSET				
	(1)	(2)	(3)	(4)
SUBJECT	0.007***	0.007***	0.003	0.002
	(0.001)	(0.000)	(0.348)	(0.521)
AFTER	-0.012		-0.017	
	(0.151)		(0.407)	
AFTER*SUBJECT	**-0.039*** **	**-0.040*** **	**-0.031*** **	**-0.029*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.106***	0.101***	0.175	0.178
	(0.000)	(0.000)	(0.421)	(0.427)
*SUBJECT*SALE_GR*	-0.058***	-0.056***	-0.036	-0.035
	(0.000)	(0.000)	(0.197)	(0.187)
*AFTER*SALE_GR*	0.039***	0.042***	0.045**	0.047**
	(0.004)	(0.002)	(0.027)	(0.023)
AFTER*SUBJECT*SALE_GR	**-0.054*** **	**-0.056*** **	**-0.078** **	**-0.079** **
	(0.000)	**(0.000)**	**(0.027)**	**(0.023)**
ROA	0.210***	0.212***	0.315***	0.325***
	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.048***	0.048***	0.052***	0.050***
	(0.000)	(0.000)	(0.000)	(0.000)
LN_AT	0.004***	0.004***	0.004***	0.002**
	(0.000)	(0.000)	(0.002)	(0.030)
CASH	0.047***	0.047***	0.059***	0.057***
	(0.000)	(0.000)	(0.003)	(0.005)
HHI	-0.024***	-0.023**	-0.018	-0.024
	(0.010)	(0.018)	(0.539)	(0.417)
CONSTANT	-0.057***	-0.062***	-0.028	-0.034
	(0.000)	(0.000)	(0.354)	(0.249)
*AFTER*Controls*	Yes	Yes	Yes	Yes
*SALE_GR*Country FEs*	Yes	Yes	Yes	Yes
*SALE_GR*Industry FEs*	Yes	Yes	Yes	Yes
Country FEs	Yes	No	Yes	No
Industry FEs	Yes	Yes	Yes	Yes
*Country*Year FEs*	No	Yes	No	Yes
CLUSTER	Firm	Firm	Firm	Firm
N	84,418	84,418	14,062	14,062
adj. R-sq	0.149	0.153	0.227	0.234

This table reports the differential investment effect on subject firms versus Benchmark1 for the 2002-2007 period for the IL model (Panel A) and the IO model (Panel B). In both panels, columns (1) and (2) show the results for the whole subject group, and columns (3) and (4) for a subset of subject firms matched with public firms in Benchmark1 (on country-industry, profitability, and investment level pre-IFRS). The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero from Benchmark1. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 4

Difference-in-Differences Analysis of Subject Firms versus Benchmark2

	IL model	IO Model
DepVar= ΔFIX_ASSET		
	(1)	(2)
SUBJECT	0.000	0.006***
	(0.965)	(0.002)
AFTER*SUBJECT	**-0.014*** **	**-0.023*** **
	(0.000)	**(0.000)**
SALE_GR	0.086***	-0.016
	(0.000)	(0.341)
*SUBJECT*SALE_GR*		0.045***
		(0.000)
*AFTER*SALE_GR*		0.034**
		(0.047)
AFTER*SUBJECT*SALE_GR		**-0.048*** **
		(0.008)
CONSTANT	-0.083***	-0.080***
	(0.000)	(0.000)
Controls	Yes	Yes
*AFTER*Controls*	No	Yes
*SALE_GR*Country FEs*	No	Yes
*SALE_GR*Industry FEs*	No	Yes
Industry FEs	Yes	Yes
*Country*Year FEs*	Yes	Yes
CLUSTER	Firm	Firm
N	79,908	79,908
adj. R-sq	0.099	0.114

This table reports the differential investment effect on subject firms versus Benchmark2 for the 2002-2007 period. Columns (1) and (2) show the difference-in-differences results for the IL and IO models, respectively. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero from Benchmark2. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 5

Heterogeneous Effects Across Subject Firms

Panel A. Difference-in-Differences Results against Benchmark1

Size Group=	Large	Medium	Small
DepVar=ΔFIX_ASSET			
	(1)	(2)	(3)
SUBJECT	0.004	0.009***	0.006*
	(0.180)	(0.002)	(0.054)
AFTER*SUBJECT	**-0.064*** **	**-0.060*** **	**-0.056*** **
	(0.000)	**(0.000)**	**(0.000)**
SALE_GR	0.146***	0.141***	0.138***
	(0.000)	(0.000)	(0.000)
CONSTANT	-0.059***	-0.064***	-0.057***
	(0.000)	(0.000)	(0.001)
Diff in AFTER*SUBJECT (1)-(3)		**-0.008*** **	
		(0.000)	
Controls	Yes	Yes	Yes
Industry FEs	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm
N	32,106	30,142	30,211
adj. R-sq	0.192	0.189	0.189

Panel B. Difference-in-Differences Results against Benchmark2

Size Group=	Large	Medium	Small
DepVar=ΔFIX_ASSET			
	(1)	(2)	(3)
SUBJECT	-0.011***	-0.017***	-0.002
	(0.001)	(0.000)	(0.284)
AFTER*SUBJECT	**-0.019*** **	**-0.014*** **	**-0.008*** **
	(0.000)	**(0.000)**	**(0.004)**
SALE_GR	0.107***	0.085***	0.074***
	(0.000)	(0.000)	(0.000)
CONSTANT	-0.094***	-0.235***	-0.242***
	(0.000)	(0.000)	(0.000)
Diff in AFTER*SUBJECT (1)-(3)		**-0.011*** **	
		(0.000)	
Controls	Yes	Yes	Yes
Industry FEs	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm
N	27,993	26,180	26,216
adj. R-sq	0.117	0.107	0.095

This table reports the difference-in-differences results from the IL model for the 2002-2007 period for the large, medium, and small subject firm groups (based on pre-event total assets) against Benchmark1 (Panel A) and Benchmark2 (Panel B). The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero for Benchmark1 in Panel A and Benchmark2 in Panel B. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount

of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 6

Exploring Variation in Firms' IFRS Adoption Status

Panel A. Effects on Private Firm Voluntary Adopters

	Private Firm Vol. Adopters vs. Benchmark1	Private Firm Vol. Adopters vs. Benchmark2	Matched Subject vs. Benchmark1	Matched Subject vs. Benchmark2
DepVar= ΔFIX_ASSET				
	(1)	(2)	(3)	(4)
VOL_ADOPT	-0.004	-0.033***		
	(0.608)	(0.001)		
AFTER*VOL_ADOPT	**-0.003**	**0.035*** **		
	(0.776)	**(0.001)**		
SUBJECT			0.017**	-0.020**
			(0.034)	(0.018)
AFTER*SUBJECT			**-0.054*** **	**-0.016***
			(0.000)	**(0.089)**
SALE_GR	0.162***	0.086***	0.164***	0.073***
	(0.000)	(0.000)	(0.000)	(0.000)
CONSTANT	-0.040	-0.149***	-0.040	-0.232***
	(0.207)	(0.000)	(0.201)	(0.000)
Controls	Yes	Yes	Yes	Yes
Industry FEs	Yes	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm	Firm
N	14,600	10,090	14,280	9,770
adj. R-sq	0.241	0.127	0.243	0.125

Panel B. Public Firm Early Adopters as a Benchmark

	Subject vs. Public Firm Serious Adopters	Subject vs. Public Firm Label Adopters	Subject vs. Benchmark1
DepVar= ΔFIX_ASSET			
	(1)	(2)	(3)
SUBJECT	0.010	0.013	0.007***
	(0.125)	(0.293)	(0.003)
AFTER*SUBJECT	**-0.030*** **	**-0.054** **	**-0.062*** **
	(0.004)	**(0.018)**	**(0.000)**
SALE_GR	0.087***	0.087***	0.104***
	(0.000)	(0.000)	(0.000)
CONSTANT	-0.078***	-0.067***	-0.050***
	(0.000)	(0.000)	(0.000)
Controls	Yes	Yes	Yes
Industry FEs	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm
N	71,687	71,196	84,418
adj. R-sq	0.099	0.100	0.133

Panel A of the table reports falsification tests on private firm voluntary IFRS adopters against Benchmark1 and Benchmark2 (columns 1 and 2), along with tests on subject firms matched with private firm voluntary adopters (columns 3 and 4). *VOL_ADOPT* is an indicator variable equal to 1 for private firms that voluntarily adopt IFRS as of 2005, and 0 for firms in Benchmark1 or Benchmark2. *SUBJECT* is an indicator variable equal to 1 for matched subject firms and 0 for firms in Benchmark1 or Benchmark2. Panel B presents tests on subject firms benchmarked against public firm early adopters, categorized into serious adopters (column 1) and label adopters (column 2), and against Benchmark1 (public firms in general). *SUBJECT* is an indicator variable equal to one for

firms from the subject group and zero for public firms. In both panels, the dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. Control variables are suppressed for brevity. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 7

Results from Oriana Countries

Panel A. Sample Distribution by Country

Country (Adoption year)	All		Subject Firms		Benchmark1		Benchmark2	
Singapore (2003)	4,914	3.26%	3,027	3.69%	1,254	6.31%	633	1.30%
Hong Kong (2005)	1,034	0.69%	10	0.01%	1,024	5.15%	0	0.00%
Turkey (2006)	866	0.58%	100	0.12%	766	3.85%	0	0.00%
Israel (2008)	2,521	1.67%	80	0.10%	2,433	12.23%	8	0.02%
South Korea (2011)	14,858	9.87%	7,704	9.40%	5,911	29.72%	1,243	2.55%
Russian Federation (2012)	2,888	1.92%	230	0.28%	2,628	13.22%	30	0.06%
Sri Lanka (2012)	1,203	0.80%	10	0.01%	1,193	6.00%	0	0.00%
Malaysia (2012)	122,291	81.22%	70,839	86.39%	4,677	23.52%	46,775	96.07%
Total	150,575	100.00%	82,000	100.00%	19,886	100.00%	48,689	100.00%

Panel B. Difference-in-Differences Results Using Benchmark1 and Benchmark2

	Subject vs. Benchmark1	Subject vs. Benchmark2
DepVar= ΔFIX_ASSET		
	(1)	(2)
SUBJECT	0.012***	-0.006***
	(0.001)	(0.001)
AFTER*SUBJECT	**-0.030*** **	**-0.013*** **
	(0.000)	**(0.000)**
SALE_GR	0.009***	0.008***
	(0.000)	(0.000)
ROA	0.101***	0.064***
	(0.000)	(0.000)
LEV	0.029***	0.033***
	(0.000)	(0.000)
LN_AT	0.009***	0.011***
	(0.000)	(0.000)
CASH	-0.127***	-0.120***
	(0.000)	(0.000)
HHI	0.004	0.029**
	(0.710)	(0.020)
CONSTANT	-0.031*	-0.014
	(0.079)	(0.858)
Industry FEs	Yes	Yes
*Country*Year FEs*	Yes	Yes
CLUSTER	Firm	Firm
N	101,886	130,689
adj. R-sq	0.085	0.074

This table reports the results from Oriana countries. Panel A shows the sample distribution by country for all firms combined, the subject group, Benchmark1, and Benchmark2, respectively. Panel B shows the difference-in-differences results against Benchmark1 and Benchmark2. The sample period starts from three years before to three years after a country's IFRS adoption. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from subject group and zero for Benchmark1 or Benchmark2, respectively, in columns (1) and (2). *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period and zero for observations before the IFRS mandate in a country. *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding,

defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 8

Private Versus Public Firms in Australia and New Zealand

DepVar=ΔFIX_ASSET	
	(1)
SUBJECT	-0.172***
	(0.000)
AFTER*SUBJECT	**-0.002**
	(0.924)
SALE_GR	0.027***
	(0.000)
ROA	-0.014
	(0.606)
LEV	-0.049**
	(0.047)
LN_AT	0.028***
	(0.000)
CASH	-0.150***
	(0.000)
HHI	-0.008
	(0.805)
CONSTANT	-0.147***
	(0.004)
Industry FEs	Yes
*Country*Year FEs*	Yes
CLUSTER	Firm
N	8,853
adj. R-sq	0.129

This table reports the difference-in-differences results for private versus public firms in Australia and New Zealand. The sample period starts from three years before to three years after a country's IFRS adoption. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for private firms and zero for public firms from Australia and New Zealand. *AFTER* is an indicator variable for observations in the IFRS mandate period. *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 9

Exploring the Financing Channel

	High Public Firms' Debt Financing Dependence	Low Public Firms' Debt Financing Dependence	High Public Firms' Equity Financing Dependence	Low Public Firms' Equity Financing Dependence
DepVar=ΔFIX_ASSET				
	(1)	(2)	(3)	(4)
SUBJECT	0.012***	0.001	0.006*	0.008**
	(0.000)	(0.676)	(0.084)	(0.014)
AFTER*SUBJECT	**-0.070*** **	**-0.055*** **	**-0.067*** **	**-0.056*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.101***	0.106***	0.110***	0.098***
	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.205***	0.183***	0.189***	0.199***
	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.064***	0.064***	0.060***	0.067***
	(0.000)	(0.000)	(0.000)	(0.000)
LN_AT	0.007***	0.007***	0.007***	0.007***
	(0.000)	(0.000)	(0.000)	(0.000)
CASH	0.057***	0.060***	0.058***	0.059***
	(0.000)	(0.000)	(0.000)	(0.000)
HHI	-0.022	0.001	-0.003	-0.016
	(0.123)	(0.924)	(0.834)	(0.136)
CONSTANT	-0.048***	-0.058***	-0.055***	-0.061***
	(0.000)	(0.000)	(0.000)	(0.000)
Diff in AFTER*SUBJECT (1)-(2);(3)-(4)	**0.015** ** **(0.032)**		**0.011 (0.125)**	
Industry FEs	Yes	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm	Firm
N	41,948	42,572	41,545	42,975
adj. R-sq	0.132	0.134	0.138	0.129

This table reports the regression results for subject firms versus Benchmark1 by industry groups partitioned on the extent of public firms' external debt and equity financing dependence, following the method of Rajan and Zingales [1998]. Columns (1) and (2) compare industries that are more versus less debt financing dependent, and columns (3) and (4) provide the analogous results based on equity financing dependence. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to 1 for subject firms and 0 for firms in Benchmark1. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005- 2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 10

Enforcement Changes and GAAP Distance

Panel A. Countries with and without Bundled Enforcement Changes

	Non-bundled	Bundled (incl. Germany)	Bundled (excl. Germany)
DepVar=ΔFIX_ASSET			
	(1)	(2)	(3)
SUBJECT	0.010**	0.007**	0.006
	(0.010)	(0.027)	(0.115)
AFTER*SUBJECT	**-0.053*** **	**-0.067*** **	**-0.075*** **
	(0.000)	**(0.000)**	**(0.000)**
SALE_GR	0.116***	0.095***	0.093***
	(0.000)	(0.000)	(0.000)
ROA	0.200***	0.185***	0.175***
	(0.000)	(0.000)	(0.000)
LEV	0.101***	0.041***	0.039***
	(0.000)	(0.000)	(0.000)
LN_AT	0.010***	0.005***	0.004***
	(0.000)	(0.000)	(0.000)
CASH	0.087***	0.043***	0.040***
	(0.000)	(0.000)	(0.000)
HHI	-0.029**	-0.009	-0.016
	(0.035)	(0.451)	(0.288)
CONSTANT	-0.087***	-0.030***	-0.015
	(0.000)	(0.003)	(0.166)
Diff in AFTER*SUBJECT		**-0.014***	**-0.022*** **
(2)-(1); (3)-(1)		**(0.062)**	**(0.005)**
Industry FEs	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm
N	37,416	47,002	39,367
adj. R-sq	0.149	0.123	0.122

Panel B. Countries with Large vs Small GAAP Distances

	Large GAAP Distance			Small GAAP Distance	
	Non-bundled	Bundled (Incl. Germany)	Bundled (Excl. Germany)	Non-bundled	Bundled
DepVar=ΔFIX_ASSET					
	(1)	(2)	(3)	(4)	(5)
SUBJECT	0.009**	0.010**	0.021**	0.009	0.005
	(0.048)	(0.025)	(0.013)	(0.170)	(0.222)
AFTER*SUBJECT	**-0.038*** **	**-0.049*** **	**-0.066*** **	**-0.076*** **	**-0.076*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.133***	0.098***	0.083***	0.089***	0.094***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.207***	0.211***	0.200***	0.206***	0.173***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.088***	0.079***	0.122***	0.118***	0.033***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LN_AT	0.010***	0.007***	0.005***	0.009***	0.005***
	(0.000)	(0.000)	(0.005)	(0.000)	(0.000)
CASH	0.106***	0.078***	0.099***	0.067***	0.034***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
HHI	-0.033	-0.047**	-0.021	-0.024	-0.008
	(0.121)	(0.019)	(0.793)	(0.753)	(0.681)
CONSTANT	-0.084***	-0.079***	-0.060***	-0.092***	-0.015
	(0.000)	(0.000)	(0.006)	(0.000)	(0.185)
Diff in AFTER*SUBJECT		**-0.011**	**-0.028***		**0.000**
(2)-(1); (3)-(1); (5)-(4)		**(0.271)**	**(0.070)**		**(0.977)**
Industry FEs	Yes	Yes	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm	Firm	Firm
N	22,386	12,189	4,554	34,813	15,030
adj. R-sq	0.174	0.130	0.131	0.123	0.124

Panel A of this table compares the subject firm effects versus Benchmark1 between countries that mandate IFRS reporting bundled with, and not bundled with, concurrent enforcement changes. Panels B further distinguishes countries with large versus small GAAP distances. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from subject group and zero for benchmark 1 group. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

The Internet Appendix

List of Figures and Tables

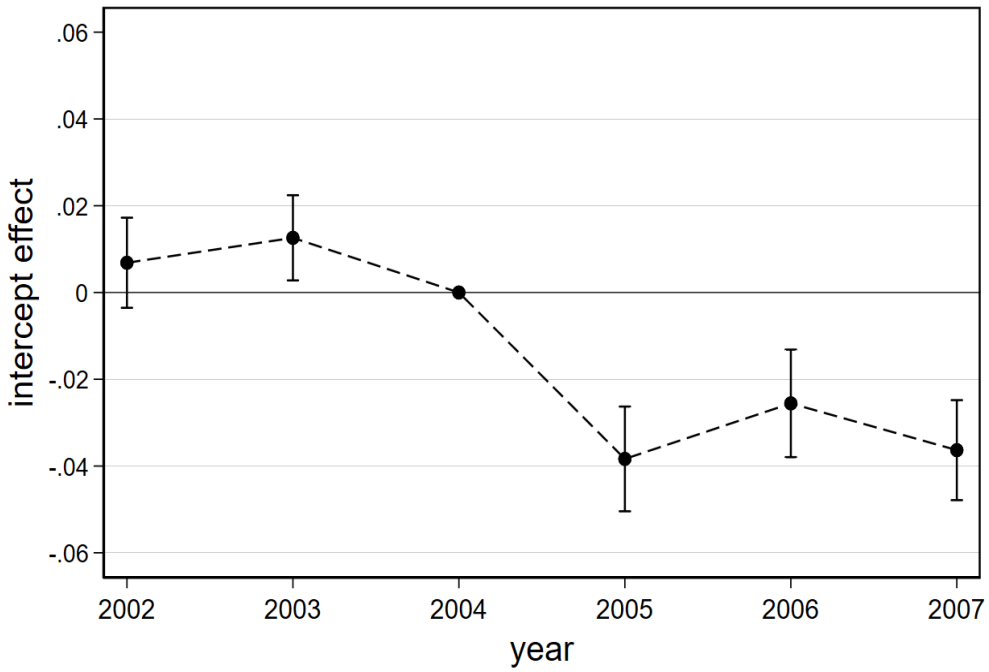
Figure IA1. Mapping Out IO Model Effects: Subject Firms versus Benchmark1
Figure IA2. Mapping Out IO Model Effects: Matched Subject Firms versus Benchmark1
Figure IA3. Mapping Out IO Model Effects: Subject Firms versus Benchmark2

Table IA1. Linear Probability Analysis of Subject Firms versus Benchmark1
Table IA2. Full IO Model Estimation under Benchmark1
Table IA3. Clustering Standard Errors by Country
Table IA4. Time Trend of Investment Effects Using Benchmark1
Table IA5. Propensity of Subject Firms Voluntarily Switching to IFRS versus Benchmark2
Table IA6. Time Trend of Investment Effects Using Benchmark2
Table IA7. Sensitivity Tests by Excluding Certain Countries
Table IA8. Unregulated Public Firms as a Benchmark
Table IA9. Additional Results for Oriana Countries
Table IA10. Time Trend of Investment Effects for Australia and New Zealand
Table IA11. Subject Firms from the UK versus Other EU Countries
Table IA12. Private Firms without Consolidated Accounts

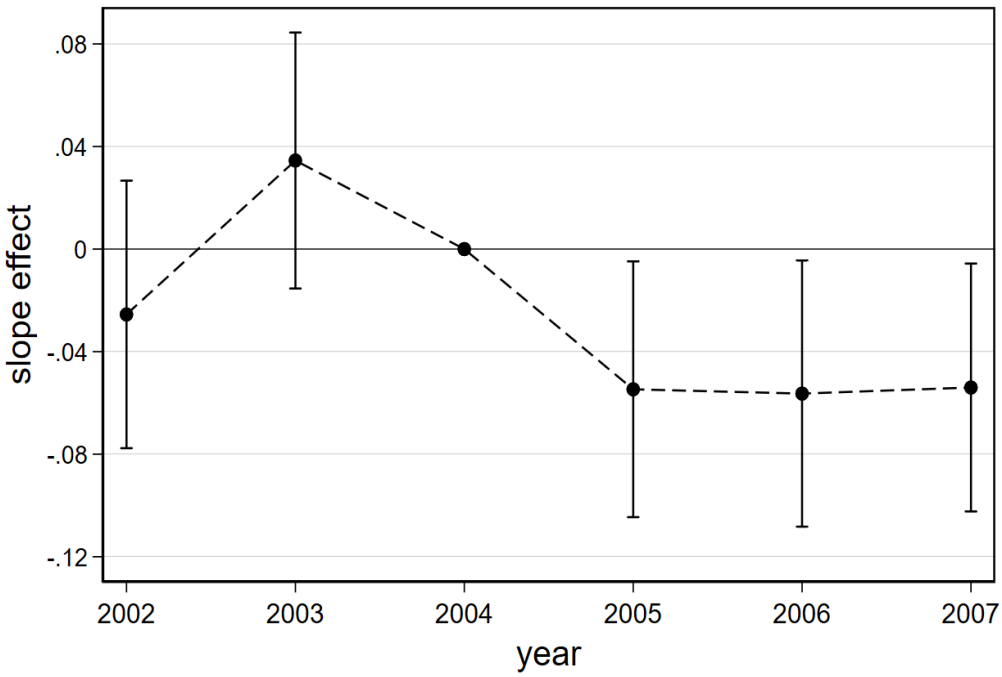
Figure IA1

Mapping Out IO Model Effects: Subject Firms versus Benchmark1

Panel A. Differential Intercept



Panel B. Differential Slope

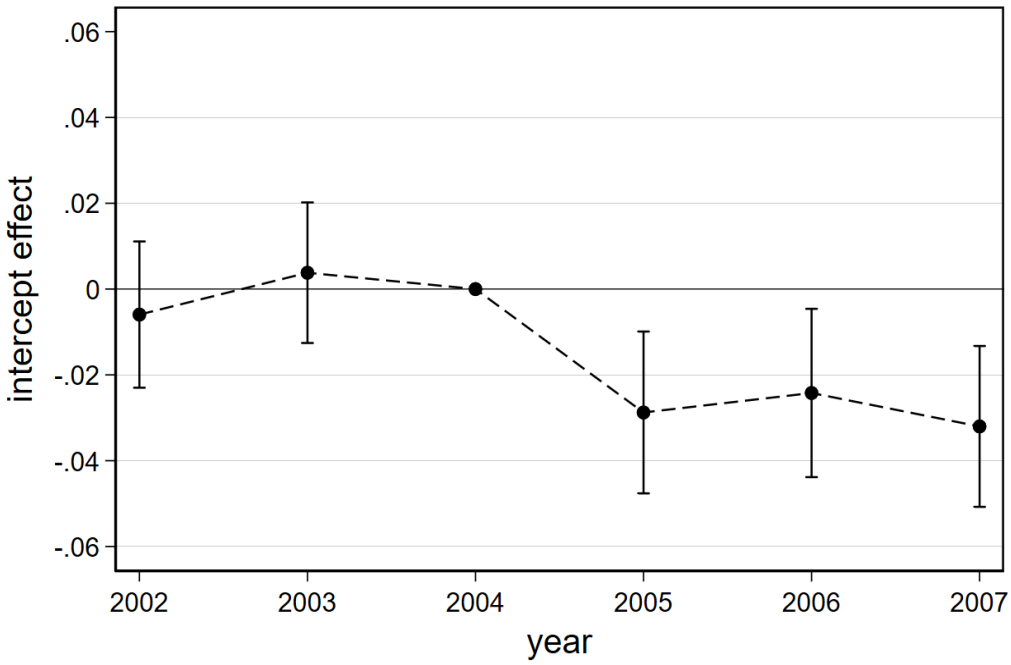


This figure maps out the differential effects from the IO model across the sample years, with confidence intervals, on EU subject firms against Benchmark1, using 2004 as the base year. Panels A and B report the effects through the intercept and the slope, respectively.

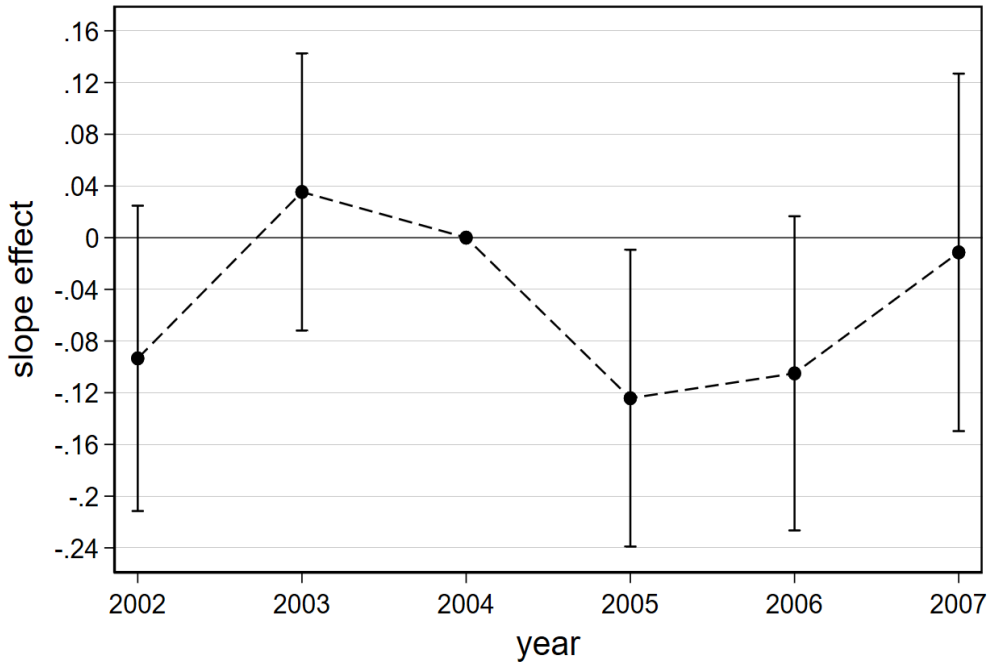
Figure IA2

Mapping Out IO Model Effects: Matched Subject Firms versus Benchmark1

Panel A. Differential Intercept



Panel B. Differential Slope

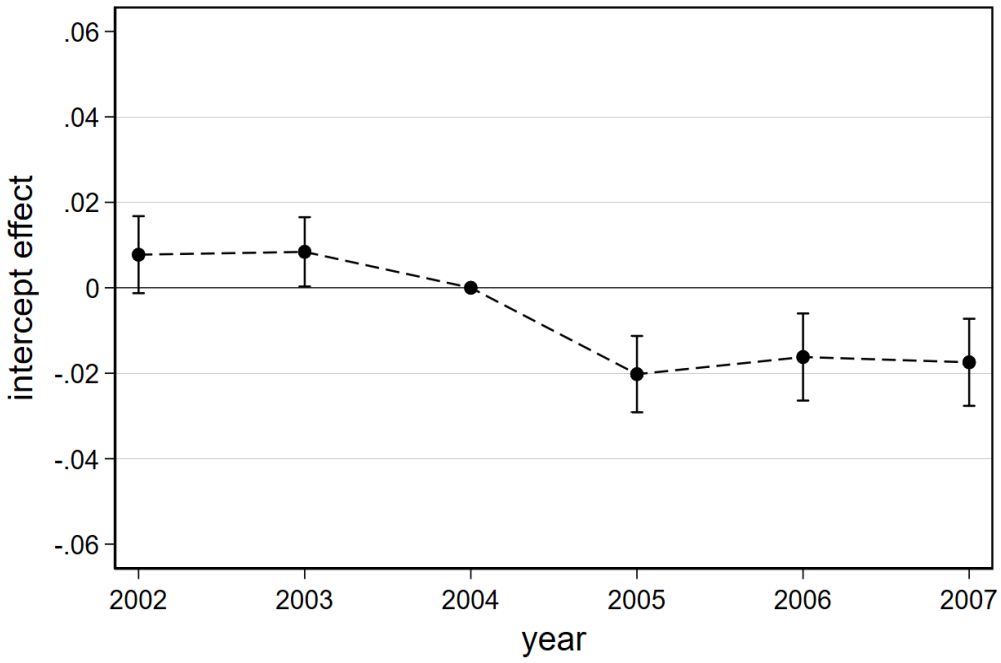


This figure maps out the differential effects from the IO model across the sample years, with confidence intervals, on EU matched subject firms against Benchmark1, using 2004 as the base year. Panels A and B report the effects through the intercept and the slope, respectively.

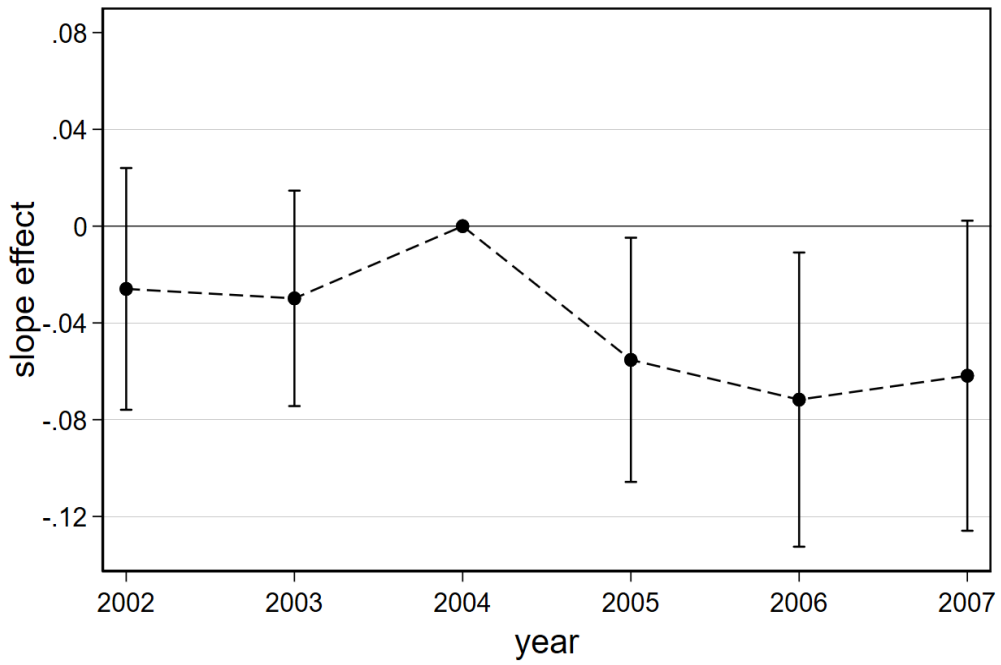
Figure IA3

Mapping Out the IO Model Effects: Subject Firms versus Benchmark2

Panel A. Differential Intercept



Panel B. Differential Slope



This figure maps out the differential effects from the IO model across the sample years, with confidence intervals, on EU subject firms against Benchmark2, using 2004 as the base year. Panels A and B report the effects through the intercept and the slope, respectively.

Table IA1

Linear Probability Analysis of Subject Firms versus Benchmark1

	Subject vs. Benchmark1		Matched Subject vs. Benchmark1	
DepVar=Prob(ΔFIX_ASSET>=P90)				
	(1)	(2)	(3)	(4)
SUBJECT	-0.015***	-0.010**	-0.007	-0.006
	(0.001)	(0.027)	(0.372)	(0.461)
AFTER	0.095***		0.087***	
	(0.000)		(0.000)	
AFTER*SUBJECT	**-0.097*** **	**-0.105*** **	**-0.085*** **	**-0.088*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.166***	0.164***	0.240***	0.235***
	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.222***	0.221***	0.258***	0.262***
	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.143***	0.143***	0.179***	0.178***
	(0.000)	(0.000)	(0.000)	(0.000)
LN_AT	0.009***	0.009***	0.007***	0.007***
	(0.000)	(0.000)	(0.000)	(0.000)
CASH	0.080***	0.079***	0.128***	0.125***
	(0.000)	(0.000)	(0.000)	(0.000)
HHI	-0.034*	-0.038**	-0.041	-0.070
	(0.053)	(0.032)	(0.480)	(0.236)
CONSTANT	-0.042**	0.015	-0.028	0.015
	(0.028)	(0.424)	(0.567)	(0.764)
Country FEs	Yes	No	Yes	No
Industry FEs	Yes	Yes	Yes	Yes
*Country*Year FEs*	No	Yes	No	Yes
CLUSTER	Firm	Firm	Firm	Firm
N	84,418	84,418	14,062	14,062
adj. R-sq	0.082	0.084	0.122	0.126

This table reports the linear probability analysis of subject firms versus Benchmark1 for the 2002-2007 period. The dependent variable is *Prob(ΔFIX_ASSET>=P90),* an indicator variable equal to one for investment levels higher than the 90th percentile in the combined sample, and zero otherwise. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero from Benchmark1. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA2

Full IO Model Estimation under Benchmark1

	Subject vs. Benchmark1	Matched Subject vs. Benchmark1
DepVar=ΔFIX_ASSET		
	(1)	(2)
SUBJECT	0.007***	0.002
	(0.000)	(0.521)
AFTER*SUBJECT	**-0.040*** **	**-0.029*** **
	(0.000)	**(0.000)**
SALE_GR	0.101***	0.178
	(0.000)	(0.427)
*SUBJECT*SALE_GR*	-0.056***	-0.035
	(0.000)	(0.187)
*AFTER*SALE_GR*	0.042***	0.047**
	(0.002)	(0.023)
AFTER*SUBJECT*SALE_GR	**-0.056*** **	**-0.079** **
	(0.000)	**(0.023)**
ROA	0.212***	0.325***
	(0.000)	(0.000)
LEV	0.048***	0.050***
	(0.000)	(0.000)
LN_AT	0.004***	0.002**
	(0.000)	(0.030)
CASH	0.047***	0.057***
	(0.000)	(0.005)
HHI	-0.023**	-0.024
	(0.018)	(0.417)
*AFTER*ROA*	-0.062***	-0.086*
	(0.000)	(0.063)
*AFTER*LEV*	0.007***	0.063***
	(0.000)	(0.001)
*AFTER*LN_AT*	-0.040***	0.007***
	(0.000)	(0.000)
*AFTER*CASH*	0.101***	-0.010
	(0.000)	(0.731)
*AFTER*HHI*	-0.056***	-0.047
	(0.000)	(0.243)
CONSTANT	0.042***	-0.034
	(0.002)	(0.249)
*SALE_GR*Country FEs*	Yes	Yes
*SALE_GR*Industry FEs*	Yes	Yes
Industry FEs	Yes	Yes
*Country*Year FEs*	Yes	Yes
CLUSTER	Firm	Firm
N	84,418	14,062
adj. R-sq	0.153	0.234

This table reports the full IO model estimation for subject firms versus Benchmark1 for the 2002-2007 period. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero from Benchmark1. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total

assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA3

Clustering Standard Errors by Country

Panel A. IL Model versus Benchmark1

	Subject vs. Benchmark1		*Matched Subject vs. Benchmark1*	
DepVar=ΔFIX_ASSET				
	(1)	(2)	(3)	(4)
SUBJECT	0.005	0.007**	0.001	0.002
	(0.253)	(0.029)	(0.744)	(0.600)
AFTER	0.061***		0.049***	
	(0.000)		(0.000)	
AFTER*SUBJECT	**-0.059*** **	**-0.062*** **	**-0.042*** **	**-0.043*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.106***	0.104***	0.160***	0.156***
	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.194***	0.194***	0.287***	0.289***
	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.064***	0.064***	0.085***	0.084***
	(0.002)	(0.002)	(0.000)	(0.000)
LN_AT	0.007***	0.007***	0.006***	0.006***
	(0.000)	(0.000)	(0.000)	(0.000)
CASH	0.059***	0.058***	0.061***	0.059***
	(0.000)	(0.000)	(0.001)	(0.001)
HHI	-0.010	-0.010	-0.021	-0.036
	(0.315)	(0.269)	(0.485)	(0.193)
CONSTANT	-0.087***	-0.050**	-0.068***	-0.044***
	(0.000)	(0.029)	(0.000)	(0.004)
Country FEs	Yes	No	Yes	No
Industry FEs	Yes	Yes	Yes	Yes
*Country*Year FEs*	No	Yes	No	Yes
CLUSTER	Country	Country	Country	Country
N	84,418	84,418	14,062	14,062
adj. R-sq	0.129	0.133	0.199	0.206

Panel B. IO Model versus Benchmark1

	Subject vs. Benchmark1		*Matched Subject vs. Benchmark1*	
DepVar=ΔFIX_ASSET				
	(1)	(2)	(3)	(4)
SUBJECT	0.007*	0.007***	0.003	0.002
	(0.091)	(0.000)	(0.319)	(0.463)
AFTER	-0.012		-0.017	
	(0.463)		(0.347)	
AFTER*SUBJECT	**-0.039*** **	**-0.040*** **	**-0.031*** **	**-0.029*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.106***	0.101***	0.175***	0.178***
	(0.000)	(0.001)	(0.000)	(0.000)
*SUBJECT*SALE_GR*	-0.058*	-0.056	-0.036	-0.035
	(0.091)	(0.101)	(0.485)	(0.487)
*AFTER*SALE_GR*	0.039***	0.042***	0.045***	0.047***
	(0.005)	(0.001)	(0.006)	(0.004)
AFTER*SUBJECT*SALE_GR	**-0.054*** **	**-0.056*** **	**-0.078*** **	**-0.079*** **
	(0.006)	**(0.005)**	**(0.008)**	**(0.008)**
ROA	0.210***	0.212***	0.315***	0.325***
	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.048***	0.048***	0.052***	0.050***
	(0.001)	(0.001)	(0.000)	(0.000)
LN_AT	0.004***	0.004***	0.004**	0.002**
	(0.001)	(0.000)	(0.016)	(0.011)
CASH	0.047***	0.047***	0.059**	0.057**
	(0.004)	(0.004)	(0.031)	(0.036)
HHI	-0.024**	-0.023***	-0.018	-0.024
	(0.010)	(0.001)	(0.509)	(0.308)
CONSTANT	-0.057***	-0.062***	-0.028**	-0.034***
	(0.000)	(0.001)	(0.049)	(0.004)
*AFTER*Controls*	Yes	Yes	Yes	Yes
*SALE_GR*Country FE*	Yes	Yes	Yes	Yes
*SALE_GR*Industry FE*	Yes	Yes	Yes	Yes
Country FEs	Yes	No	Yes	No
Industry FEs	Yes	Yes	Yes	Yes
*Country*Year FEs*	No	Yes	No	Yes
CLUSTER	Country	Country	Country	Country
N	84,418	84,418	14,062	14,062
adj. R-sq	0.149	0.153	0.227	0.234

Panel C. IL and IO Models versus Benchmark2

	IL model	IO Model
DepVar=ΔFIX_ASSET		
	(1)	(2)
SUBJECT	0.000	0.006
	(0.980)	(0.143)
AFTER*SUBJECT	**-0.014*** **	**-0.023*** **
	(0.000)	**(0.000)**
SALE_GR	0.086***	-0.016
	(0.000)	(0.135)
*SUBJECT*SALE_GR*		0.045***
		(0.000)
*AFTER*SALE_GR*		0.034**
		(0.029)
AFTER*SUBJECT*SALE_GR		**-0.048** **
		(0.024)
CONSTANT	-0.083***	-0.080***
	(0.000)	(0.000)
Controls	Yes	Yes
*AFTER*Controls*	No	Yes
*SALE_GR*Country FE*	No	Yes
*SALE_GR*Industry FE*	No	Yes
Industry FEs	Yes	Yes
*Country*Year FEs*	Yes	Yes
CLUSTER	Country	Country
N	79,908	79,908
adj. R-sq	0.099	0.114

This table shows the results using country-level clustering for standard errors (instead of firm-level) for the 2002-2007 period. Panels A and B report the differential effect on subject firms versus Benchmark1 for the IL model and the IO model, respectively. Panel C reports the differential effect on subject firms versus Benchmark2 for the IO and IL models. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero from either Benchmark1 or Benchmark 2. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the country level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE IA4

Time Trend of Subject Firm Effects against Benchmark1

Panel A. Results for the IL Model

	Subject vs. Benchmark1	Matched Subject vs. Benchmark1
DepVar= ΔFIX_ASSET		
	(1)	(2)
SUBJECT	-0.006	-0.003
	(0.136)	(0.600)
*YEAR2002*SUBJECT*	0.017***	0.002
	(0.002)	(0.779)
*YEAR2003*SUBJECT*	0.023***	0.013
	(0.000)	(0.123)
YEAR2005*SUBJECT	**-0.056*** **	**-0.049*** **
	(0.000)	**(0.000)**
YEAR2006*SUBJECT	**-0.045*** **	**-0.032*** **
	(0.000)	**(0.002)**
YEAR2007*SUBJECT	**-0.049*** **	**-0.032*** **
	(0.000)	**(0.001)**
SALE_GR	0.104***	0.157***
	(0.000)	(0.000)
CONSTANT	-0.050***	-0.044*
	(0.000)	(0.081)
Controls	Yes	Yes
Industry FEs	Yes	Yes
*Country*Year FEs*	Yes	Yes
CLUSTER	Firm	Firm
N	84,418	14,062
adj. R-sq	0.133	0.207

Panel B. Results for the IO Model

	Subject vs. Benchmark1	Matched Subject vs. Benchmark1
DepVar=ΔFIX_ASSET		
	(1)	(2)
*YEAR2002*SUBJECT*	0.007	-0.006
	(0.196)	(0.494)
*YEAR2003*SUBJECT*	0.013**	0.004
	(0.012)	(0.649)
YEAR2005*SUBJECT	**-0.038*** **	**-0.029*** **
	(0.000)	**(0.003)**
YEAR2006*SUBJECT	**-0.026*** **	**-0.024** **
	(0.000)	**(0.016)**
YEAR2007*SUBJECT	**-0.036*** **	**-0.032*** **
	(0.000)	**(0.001)**
*YEAR2002*SUBJECT*SALE_GR*	-0.025	-0.093
	(0.338)	(0.121)
*YEAR2003*SUBJECT*SALE_GR*	0.035	0.035
	(0.175)	(0.518)
YEAR2005*SUBJECT*SALE_GR	**-0.055** **	**-0.124** **
	(0.032)	**(0.034)**
YEAR2006*SUBJECT*SALE_GR	**-0.056** **	**-0.105** *
	(0.033)	**(0.091)**
YEAR2007*SUBJECT*SALE_GR	**-0.054** **	**-0.011**
	(0.029)	**(0.872)**
*SUBJECT*SALE_GR*	-0.057***	-0.022
	(0.004)	(0.643)
SALE_GR	0.110***	0.187
	(0.000)	(0.402)
SUBJECT	0.001	0.002
	(0.879)	(0.746)
CONSTANT	-0.062***	-0.035
	(0.000)	(0.215)
Controls	Yes	Yes
*Year FE*Controls/SALE_GR*	Yes	Yes
*SALE_GR*Country FEs*	Yes	Yes
*SALE_GR*Industry FEs*	Yes	Yes
Industry FEs	Yes	Yes
*Country*Year FEs*	Yes	Yes
CLUSTER	Firm	Firm
N	84,418	14,062
adj. R-sq	0.154	0.237

This table presents the time trends of subject firm effects using Benchmark1 for the 2002-2007 period estimated from the IL model (Panel A) and the IO model (Panel B). In both panels, column (1) shows the results for the whole subject group, and column (2) for a subset of subject firms matched with public firms in Benchmark1 (on country-industry, profitability, and investment level pre-IFRS). The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero from Benchmark1. *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *YEAR2002* (*2003/2005/2006/2007*) is an indicator variable equal to one for observations in the year 2002 (2003/2005/2006/2007) and zero otherwise. Control variables are omitted for brevity. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA5

Propensity of Subject Firms Voluntarily Switching to IFRS versus Benchmark2

	Subject vs. Benchmark2
DepVar = Prob(IFRS=1)	
	(1)
SUBJECT	-0.015***
	(0.000)
AFTER*SUBJECT	**0.014*** **
	(0.000)
SALE_GR	0.003
	(0.109)
ROA	0.039***
	(0.000)
LEV	-0.010*
	(0.084)
LN_AT	-0.002
	(0.441)
CASH	0.010***
	(0.000)
HHI	0.013
	(0.258)
CONSTANT	-0.096***
	(0.000)
Industry FEs	Yes
*Country*Year FEs*	Yes
CLUSTER	Firm
N	79,908
adj. R-sq	0.108

This table reports the propensity of subject firms voluntarily switching to IFRS versus Benchmark2 for the 2002-2007 period. The dependent variable is *Prob(IFRS=1)*, an indicator variable equal to one for private firms that adopt IFRS in a given year, and zero otherwise. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero from Benchmark2. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA6

Time Trend of Subject Firm Effects against Benchmark2

	IL Model	IO Model
DepVar=ΔFIX_ASSET		
	(1)	(2)
*YEAR2002*SUBJECT*	-0.009**	0.008*
	(0.030)	(0.092)
*YEAR2003*SUBJECT*	-0.004	0.008**
	(0.208)	(0.042)
YEAR2005*SUBJECT	**-0.017*** **	**-0.020*** **
	(0.000)	**(0.000)**
YEAR2006*SUBJECT	**-0.014*** **	**-0.016*** **
	(0.001)	**(0.002)**
YEAR2007*SUBJECT	**-0.023*** **	**-0.017*** **
	(0.000)	**(0.001)**
*YEAR2002*SUBJECT*SALE_GR*		-0.026
		(0.309)
*YEAR2003*SUBJECT*SALE_GR*		-0.030
		(0.189)
YEAR2005*SUBJECT*SALE_GR		**-0.055****
		(0.032)
YEAR2006*SUBJECT*SALE_GR		**-0.072****
		(0.021)
YEAR2007*SUBJECT*SALE_GR		**-0.062***
		(0.059)
*SUBJECT*SALE_GR*		0.059***
		(0.000)
SALE_GR	0.086***	-0.021
	(0.000)	(0.243)
SUBJECT	0.004	-0.001
	(0.145)	(0.868)
CONSTANT	-0.082***	-0.080***
	(0.000)	(0.000)
Controls	Yes	Yes
*Year FEs*Controls/SALE_GR*	No	Yes
*SALE_GR*Country FEs*	No	Yes
*SALE_GR*Industry FEs*	No	Yes
Industry FEs	Yes	Yes
*Country*Year FEs*	Yes	Yes
CLUSTER	Firm	Firm
N	79,908	79,908
adj. R-sq	0.099	0.114

This table reports the time trend of the differential investment effect on subject firms versus Benchmark2 for the 2002-2007 period. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero from Benchmark1. *YEAR2002* (*2003/2005/2006/2007*) is an indicator variable equal to one for observations in the year 2002 (2003/2005/2006/2007) and zero otherwise. *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an

industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA7

Sensitivity Checks by Excluding Certain Countries

Panel A. Subject Firms vs. Benchmark1

Excluding	UK	Germany	Spain	Sweden	<100 obs	<200 obs
DepVar=ΔFIX_ASSET						
	(1)	(2)	(3)	(4)	(5)	(6)
SUBJECT	0.010***	0.007***	0.006***	0.007***	0.007***	0.007***
	(0.000)	(0.006)	(0.007)	(0.005)	(0.004)	(0.004)
AFTER*SUBJECT	**-0.054*** **	**-0.067*** **	**-0.062*** **	**-0.060*** **	**-0.062*** **	**-0.062*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.112***	0.104***	0.103***	0.107***	0.104***	0.104***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.196***	0.190***	0.196***	0.191***	0.194***	0.194***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.088***	0.064***	0.063***	0.052***	0.063***	0.063***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LN_AT	0.008***	0.007***	0.006***	0.006***	0.007***	0.007***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CASH	0.070***	0.058***	0.057***	0.059***	0.057***	0.057***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HHI	-0.022**	-0.017*	-0.012	-0.006	-0.009	-0.009
	(0.021)	(0.066)	(0.161)	(0.544)	(0.282)	(0.282)
CONSTANT	-0.071***	-0.043***	-0.045***	-0.043***	-0.050***	-0.050***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm	Firm	Firm	Firm
N	56,873	76,783	78,890	69,446	84,228	84,228
adj. R-sq	0.139	0.133	0.131	0.137	0.132	0.132

Panel B. Subject Firms vs. Benchmark2

Excluding	UK	Germany	Spain	Sweden	<100 obs	<200 obs
DepVar=ΔFIX_ASSET						
	(1)	(2)	(3)	(4)	(5)	(6)
SUBJECT	-0.004*	0.000	0.000	0.001	0.000	0.000
	(0.097)	(0.996)	(0.914)	(0.449)	(0.966)	(0.984)
AFTER*SUBJECT	**-0.012*** **	**-0.015*** **	**-0.015*** **	**-0.014*** **	**-0.014*** **	**-0.014*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.099***	0.086***	0.085***	0.088***	0.086***	0.086***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.177***	0.166***	0.167***	0.162***	0.167***	0.167***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.082***	0.059***	0.056***	0.045***	0.057***	0.057***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LN_AT	0.009***	0.008***	0.008***	0.008***	0.008***	0.008***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CASH	0.041***	0.027***	0.027***	0.028***	0.028***	0.028***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HHI	-0.010	0.002	-0.002	0.001	-0.001	-0.001
	(0.279)	(0.825)	(0.800)	(0.956)	(0.930)	(0.951)
CONSTANT	-0.091***	-0.082***	-0.079***	-0.077***	-0.083***	-0.083***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm	Firm	Firm	Firm
N	53,528	74,183	74,425	64,235	79,821	79,649
adj. R-sq	0.112	0.100	0.096	0.102	0.099	0.099

This table reports sensitivity tests after excluding certain countries from the sample. Panels A and B show the results of differential effects on subject firms versus Benchmark1 and Benchmark2, respectively. The countries excluded in respective tests are: the UK, Germany, Spain, Sweden, those countries with less than 100 private-firm observations, and those with less than 200 observations. In both panels, the dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero for Benchmark 1 in Panel A and Benchmark2 in Panel B. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA8

Unregulated Public Firms as a Benchmark

	Subject vs. Unregulated Market		Subject vs. Benchmark1
DepVar=ΔFIX_ASSET			
	(1)		(2)
SUBJECT	-0.005**		0.002
	(0.022)		(0.389)
AFTER*SUBJECT	**-0.035*** **		**-0.064*** **
	(0.000)		**(0.000)**
SALE_GR	0.083***		0.094***
	(0.000)		(0.000)
ROA	0.166***		0.190***
	(0.000)		(0.000)
LEV	0.056***		0.058***
	(0.000)		(0.000)
LN_AT	0.009***		0.006***
	(0.000)		(0.000)
CASH	0.032***		0.040***
	(0.000)		(0.000)
HHI	-0.011		-0.001
	(0.326)		(0.932)
CONSTANT	-0.085***		-0.043***
	(0.000)		(0.000)
Diff in AFTER*SUBJECT (1)-(2)		**0.029*** (p<0.01)**	
Industry FEs	Yes		Yes
*Country*Year FEs*	Yes		Yes
CLUSTER	Firm		Firm
N	52,786		60,256
adj. R-sq	0.099		0.125

This table reports the differential effect on subject firms against either firms listed on unregulated markets or Benchmark1. Firms are from five EU countries (Belgium, France, Germany, Sweden, and the UK) for the period 2002-2007. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from the subject group and zero for firms on unregulated markets (column 1) or from Benchmark1 (column 2). *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA9

Additional Results for Oriana Countries

Panel A. Time Trend of Investment Effects for Oriana Countries from the IL Model

	Oriana Subject vs. Benchmark1	Oriana Subject vs. Benchmark2
DepVar=ΔFIX_ASSET		
	(1)	(2)
*BEFORE3*SUBJECT*	-0.005	-0.000
	(0.533)	(0.946)
*BEFORE2*SUBJECT*	-0.004	-0.008*
	(0.631)	(0.057)
AFTER1*SUBJECT	**-0.031*** **	**-0.017*** **
	(0.000)	**(0.000)**
AFTER2*SUBJECT	**-0.032*** **	**-0.015*** **
	(0.000)	**(0.000)**
AFTER3*SUBJECT	**-0.037*** **	**-0.016*** **
	(0.000)	**(0.003)**
SALE_GR	0.009***	0.008***
	(0.000)	(0.000)
SUBJECT	0.015**	-0.004
	(0.015)	(0.210)
CONSTANT	-0.031*	-0.014
	(0.077)	(0.860)
Controls	Yes	Yes
Industry FEs	Yes	Yes
*Country*Year FEs*	Yes	Yes
CLUSTER	Firm	Firm
N	101,886	130,689
adj. R-sq	0.085	0.074

Panel B. IO Model Results for Oriana Countries

	Subject vs. Benchmark1	Subject vs. Benchmark2
DepVar=ΔFIX_ASSET		
	(1)	(2)
SUBJECT	0.011***	-0.009***
	(0.003)	(0.000)
AFTER*SUBJECT	**-0.026*** **	**-0.012*** **
	(0.000)	**(0.000)**
SALE_GR	-0.051***	-0.011
	(0.004)	(0.597)
*SUBJECT*SALE_GR*	-0.020***	-0.007***
	(0.002)	(0.001)
*AFTER*SALE_GR*	-0.016**	0.015***
	(0.013)	(0.000)
AFTER*SUBJECT*SALE_GR	**0.001**	**-0.013*** **
	(0.908)	**(0.000)**
CONSTANT	-0.039**	-0.003
	(0.018)	(0.967)
Controls	Yes	Yes
*AFTER*Controls*	Yes	Yes
*SALE_GR*Country FEs*	Yes	Yes
*SALE_GR*Industry FEs*	Yes	Yes
Industry FEs	Yes	Yes
*Country*Year FEs*	Yes	Yes

CLUSTER	Firm	Firm
N	101,886	130,689
adj. R-sq	0.118	0.096

This table reports additional results from Oriana countries. Panel A reports the time trends of the subject firm effects from the IL model using the year immediately prior to IFRS adoption as the base year. Panel B reports the IO model results for subject firms against Benchmark1 and Benchmark2. The sample period starts from three years before to three years after a country's IFRS adoption. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for firms from subject group and zero for firms in Benchmark1 or Benchmark2. *BEFORE3* (*BEFORE2*) is an indicator variable for year -3 (year -2) relative to the mandate, and *AFTER1* (*AFTER2, AFTER3*) is an indicator variable for year 1 (year 2, year 3) into the mandate. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period and zero for observations before the IFRS mandate. *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA10

Time Trend of Differential Investment Effects for Australia and New Zealand

DepVar=ΔFIX_ASSET	
	(1)
*BEFORE3*SUBJECT*	-0.078*
	(0.068)
*BEFORE2*SUBJECT*	0.066**
	(0.022)
AFTER1*SUBJECT	**0.014**
	(0.528)
AFTER2*SUBJECT	**-0.037**
	(0.107)
AFTER3*SUBJECT	**0.047****
	(0.040)
SALE_GR	0.027***
	(0.000)
SUBJECT	-0.183***
	(0.000)
CONSTANT	-0.141***
	(0.006)
Controls	Yes
Industry FEs	Yes
*Country*Year FEs*	Yes
CLUSTER	Firm
N	8,853
adj. R-sq	0.132

This table reports the time trend of differential investment results for private versus public firms in Australia and New Zealand, using the year prior to the IFRS mandate as the baseline. The sample period starts from three years before to three years after a country's IFRS adoption. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT* is an indicator variable equal to one for private firms and zero for public firms from Australia and New Zealand. *BEFORE3* (*BEFORE2*) is an indicator variable for year -3 (year -2) relative to the mandate, and *AFTER1* (*AFTER2, AFTER3*) is an indicator variable for year 1 (year 2, year 3) into the mandate. *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA11

Subject Firms from the UK versus Other EU Countries

DepVar=ΔFIX_ASSET	
	(1)
AFTER	0.000
	(0.886)
AFTER*UK	**0.010*** **
	(0.000)
SALE_GR	0.088***
	(0.000)
ROA	0.169***
	(0.000)
LEV	0.056***
	(0.000)
LN_AT	0.008***
	(0.000)
CASH	0.040***
	(0.000)
HHI	-0.004
	(0.622)
CONSTANT	-0.089***
	(0.000)
Country FEs	Yes
Industry FEs	Yes
CLUSTER	Firm
N	70,890
adj. R-sq	0.095

This table reports the results for subject firms in the UK against other EU countries for the 2002-2007 period using the IL model. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *UK* is an indicator variable equal to one for subject firms from the UK and zero for subject firms from other EU countries. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.

Table IA12

Private Firms without Consolidated Accounts

Panel A. Results for All Subject Firms Using the IL and IO Models

	Subject_UA vs. Benchmark1		Subject_UA vs. Benchmark2_UA	
DepVar=ΔFIX_ASSET				
	(1)	(2)	(3)	(4)
SUBJECT_UA	0.005**	0.010***	0.003***	0.005***
	(0.030)	(0.000)	(0.000)	(0.000)
AFTER*SUBJECT_UA	**-0.068*** **	**-0.043*** **	**-0.014*** **	**-0.020*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.061***	0.121***	0.052***	-0.015
	(0.000)	(0.000)	(0.000)	(0.630)
*SUBJECT_UA*SALE_GR*		-0.100***		0.039***
		(0.000)		(0.000)
*AFTER*SALE_GR*		0.041***		0.018***
		(0.002)		(0.000)
AFTER*SUBJECT_UA*SALE_GR		**-0.047*** **		**-0.025*** **
		(0.000)		**(0.000)**
ROA	0.113***	0.123***	0.105***	0.113***
	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.048***	0.036***	0.048***	0.034***
	(0.000)	(0.000)	(0.000)	(0.000)
LN_AT	0.006***	0.004***	0.006***	0.005***
	(0.000)	(0.000)	(0.000)	(0.000)
CASH	0.006***	0.005**	-0.001	0.000
	(0.000)	(0.014)	(0.380)	(0.939)
HHI	-0.006	-0.007	-0.005	-0.006
	(0.118)	(0.121)	(0.148)	(0.195)
CONSTANT	-0.006*	-0.026***	-0.042***	-0.040***
	(0.062)	(0.000)	(0.000)	(0.000)
*AFTER*Controls*	No	Yes	No	Yes
*SALE_GR*Country FEs*	No	Yes	No	Yes
*SALE_GR*Industry FEs*	No	Yes	No	Yes
Industry FEs	Yes	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm	Firm
N	506,090	506,090	558,627	558,627
adj. R-sq	0.091	0.078	0.076	0.069

Panel B. Results by Firm Size Quintiles (Benchmark1) Using the IL Model

	Quintile 1 (large)	*Quintile 2*	*Quintile 3*	*Quintile 4*	*Quintile 5 (small)*
DepVar=ΔFIX_ASSET					
	(1)	(2)	(3)	(4)	(5)
SUBJECT_UA	-0.001	0.010***	0.013***	0.015***	0.019***
	(0.556)	(0.000)	(0.000)	(0.000)	(0.000)
AFTER*SUBJECT_UA	**-0.071*** **	**-0.069*** **	**-0.068*** **	**-0.066*** **	**-0.059*** **
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
SALE_GR	0.090***	0.090***	0.090***	0.093***	0.103***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.155***	0.126***	0.146***	0.134***	0.119***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LEV	0.046***	0.050***	0.059***	0.063***	0.051***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LN_AT	0.007***	0.009***	0.009***	0.009***	0.010***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CASH	0.030***	0.031***	0.024***	0.023***	0.037***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HHI	-0.017*	-0.023**	-0.024**	-0.016	-0.019*
	(0.063)	(0.013)	(0.014)	(0.110)	(0.069)
CONSTANT	-0.022**	-0.052***	-0.059***	-0.057***	-0.071***
	(0.012)	(0.000)	(0.000)	(0.000)	(0.000)
Industry FEs	Yes	Yes	Yes	Yes	Yes
*Country*Year FEs*	Yes	Yes	Yes	Yes	Yes
CLUSTER	Firm	Firm	Firm	Firm	Firm
N	89,007	88,063	87,475	85,556	80,309
adj. R-sq	0.119	0.122	0.124	0.122	0.131

This table reports the results on EU private firms without consolidated accounts for the 2002-2007 period. Panel A shows the differential effects for the overall subject firm group (Subject_UA) against Benchmark1 and Benchmark2_UA using the IL and IO models. Panel B shows the results of the IL model by size partitions against Benchmark1. The dependent variable is *ΔFIX_ASSET*, calculated as the change in fixed assets in year t scaled by total assets in year t-1. *SUBJECT_UA* is an indicator variable equal to one for firms from the subject group (without consolidated accounts) and zero from either Benchmark1 or Bechmark2_UA. *AFTER* is an indicator variable equal to one for observations in the IFRS mandate period (2005-2007) and zero for observations before the IFRS mandate (2002-2004). *SALE_GR* is sales growth, measured as the change in sales from year t-1 to year t, scaled by sales in year t-1. *ROA* is return on assets, defined as profit and loss after tax in year t, scaled by total assets in year t-1. *LEV* is the leverage ratio, defined as the sum of loans and long-term debt, scaled by total assets in year t. *LN_AT* is firm asset size, defined as the natural logarithm of total assets in year t. *CASH* is cash holding, defined as the amount of cash and cash equivalents scaled by total assets in year t. *HHI* is the Herfindahl-Hirschman Index, defined as the sum of the squared market shares across firms within an industry, where industry is defined as a two-digit NACE. Standard errors are clustered at the firm level, with p-values reported in parentheses beneath the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. All continuous variables are winsorized at the 1st and 99th percentiles.