When Presentation Matters: The "Real" Effects of Income Statement Presentation on Pension Plan Asset Allocations

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ABSTRACT

This study examines whether income statement *presentation incentives* influence firms' real economic decisions. We exploit two recent changes in accounting standards that differentially altered the presentation and measurement of pension costs. ASU 2017-07 changed only the income statement presentation of pension cost components under U.S. GAAP, while IAS 19R changed both presentation and measurement under IFRS. Using difference-in-differences designs, we find that U.S. GAAP firms with stronger presentation incentives significantly de-risked their defined benefit pension portfolios following ASU 2017-07, reallocating approximately 5% of plan assets from higher-risk to lower-risk investments — a market-wide shift of roughly $74 billion. This response is concentrated among firms with stronger pre-period presentation incentives and weaker competing plan-management incentives. In contrast, while IFRS firms generally reduced pension investment risk following IAS 19R, we find no evidence of an incremental presentation effect among firms with stronger operating income presentation incentives. This pattern suggests that although income statement presentation incentives can independently influence real economic behavior, their effects are dominated in this setting when accounting changes simultaneously alter underlying measurement.

Keywords: presentation; measurement; real effects; defined benefit pension plans

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1. INTRODUCTION

This study examines whether income statement presentation incentives influence firms' real economic decisions. We use the term "presentation incentives" to refer to incentives to present income statement items within or outside income statement subtotals. Prior research documents that managers utilize accounting discretion to manage income statement subtotals, particularly net income (NI) and operating income (OI), in response to incentives to meet analyst forecasts, smooth volatility, or maximize compensation (e.g., Healy 1985; Lipe 1986; Degeorge, Patel, and Zeckhauser 1999; Bradshaw and Sloan 2002; McVay 2006; Bennett, Bettis, Gopalan, and Milbourn 2017). Additional research indicates that changes in measurement (e.g., Anantharaman and Chuk 2018; Barthelme, Kiosse, and Sellhorn 2019) and disclosure transparency (Chuk 2013; Monsen, Sheneman, and Van Buskirk 2025) can induce real effects (Kanodia 2007). However, these studies have not established whether simply altering the presentation of items within the income statement can also induce real effects.

Defined benefit pension accounting offers a powerful setting to examine this question for two reasons. First, prior research documents that accounting incentives arising from pension measurement and disclosure guidance influence how plan assets are invested: a real effect (Chuk 2013; Anantharaman and Chuk 2018; Monsen et al. 2025). Accordingly, we examine changes in asset allocations, a known channel for real effects tied to pension accounting, to provide evidence on an unstudied reporting incentive (i.e., presentation incentives tied to income statement subtotals).

Second, annual pension cost is comprised of five economically distinct components that have characteristics of operating, investing, and/or financing activities. These components include current service cost (an operating activity), interest cost (a financing activity), the expected return on plan assets (an investing activity), and prior service costs and actuarial gains and losses/remeasurements (that can contain investing and financing activities). Prior to recent changes in U.S. GAAP and IFRS, all five components were aggregated and presented as a single net figure within operating expense line items (cost of goods sold and/or compensation expense). Financing and investing amounts were, therefore, reported within OI. Recent changes under U.S. Generally Accepted Accounting Principles (GAAP) and International

Financial Reporting Standards (IFRS) limited the annual pension cost components that can be presented within OI. We exploit these changes (described later) to study how income statement presentation incentives influence real economic decisions.

Among these components, ER is unique in that it reduces total pension cost by producing a predictable, positive effect on earnings subtotals and is based on a firm-selected expected rate of return on assets rather than actual returns. A higher assumed rate of return, therefore, translates directly into higher reported performance. Prior research shows that incentives to justify higher ER to enhance reported earnings encouraged firms to make real economic decisions to take on greater pension investment risk (e.g., Gold 2005; Bergstresser, Desai, and Rauh 2006). This runs contrary to economic theory that suggests firms should allocate a large portion of their pension assets toward low-risk, fixed-income securities for tax and risk-management reasons (Black 1980; Tepper 1981; Exley, Mehta, and Smith 1997).[1]

Two recent accounting standards substantially altered these incentives. Accounting Standards Update (ASU) 2017-07, effective after December 15, 2017, changed only the *presentation* of pension cost components under U.S. GAAP. Firms continue to report current service cost within operating expenses, but ER and all other non-service components must now appear outside the OI subtotal. Importantly, ASU 2017-07 did not change how ER is *measured*, so incentives to hold riskier assets to support a high assumed return remain to boost the NI subtotal. Thus, any firm response to the standard change can be attributed to incentives tied to the OI subtotal rather than NI. International Accounting Standard 19 Revised (IAS 19R), effective January 1, 2013, resulted in similar presentation changes but went further by eliminating managerial discretion over ER *measurement*.[2] Under IAS 19R, firms must determine ER using the same

[1]While plan asset selection is typically the direct responsibility of a separate plan custodian and not the employer sponsoring firm, there are several mechanisms for the pension sponsoring firm (i.e., the employer) to influence the asset allocation mix of the pension plan. For these reasons, and like prior research, we describe these two legal entities as if they are one in the remainder of the paper and predict that income statement presentation incentives of the pension plan sponsoring firm are associated with changes in plan asset allocation decisions.

[2]The mechanisms through which the two standards affect presentation differ. ASU 2017-07 explicitly prohibits presenting non-service pension cost components within the OI subtotal. In contrast, IAS 19R restructured pension cost into service cost, net interest cost, and remeasurement components. In practice, IFRS firms classify the net interest cost component (which includes the former ER component) outside OI as a financing item.

bond-linked rate applied to discount pension obligations, removing the ability to increase NI by supporting a higher ER by investing in riskier assets.[3]

ASU 2017-07 and IAS 19R also offer a unique and powerful setting to disentangle the real effects of changes in income statement subtotal presentation from those arising from changes in measurement. Due to changes in both measurement and presentation, IAS 19R changes the amount reported for both OI and NI subtotals. In contrast, ASU 2017-07's presentation-only change modifies the amount reported for OI but leaves NI unchanged. Prior research examines how ER measurement influences pension investment decisions (Anantharaman and Chuk 2018). In contrast, we provide the first evidence on whether restricting *presentation* alone alters firms' real economic decisions, and how presentation and measurement effects interact when both change simultaneously.

We first examine U.S. GAAP firms affected by ASU 2017-07 and predict that firms with stronger incentives to increase OI will reduce pension investment risk more after they lose the ability to include ER in the OI subtotal. Before the standard, these firms had the greatest incentive to allocate pension assets toward higher-return securities (i.e., equity) to support higher ER and enhance OI. To test this prediction, we employ a difference-in-differences design comparing changes in pension asset allocations of firms with stronger versus weaker OI presentation incentives around the adoption of ASU 2017-07. Our analysis compares changes in the percentage of plan assets allocated to low-risk (fixed income) and higher-risk (equity) asset types across these two samples. We identify firms with stronger OI presentation incentives as those for which analysts have issued an OI forecast.

Prior research illustrates that DB pension accounting incentives can drive changes in firm activities, albeit when those incentives are tied to (1) ER measurement (e.g., Gold 2005; Bergstresser et al. 2008; Anantharaman and Chuk 2018) or (2) more transparent pension footnote disclosures (Chuck 2013; Monsen

[3] We do not study effects related to the disaggregation of net pension costs into its five components. Both standards we study induced changes in which income statement subtotals pension cost components are presented, while providing no new information about pension component disaggregation because information about the five pension cost components was provided in footnotes before and after both accounting changes.

et al. 2025). Presentation is more visible than disclosure and receives more attention from users (e.g., Schipper 2007). That reasoning predicts that firms with stronger OI presentation incentives may reduce pension risk when the expected return leaves the subtotal, and that they will do so under both standards we examine. However, two countervailing incentives may have stronger effects on real decisions than those tied to the presentation of income statement subtotals. First, DB sponsoring firms face plan management incentives when making asset allocation decisions. Underfunded plans are incentivized to pursue higher expected returns to close funding gaps and reduce required cash contributions (Amir and Benartzi 1999). Second, ASU 2017-07 removed ER presentation from OI but did not change the measurement of ER. Thus, existing measurement incentives to take on portfolio risk to increase NI remain and may be stronger than the OI presentation incentive.

Our results suggest that U.S. firms with stronger OI presentation incentives engaged in an economically meaningful reduction in investment risk-taking following ASU 2017-07 relative to U.S. firms with weaker OI presentation incentives. Specifically, when compared to firms with weaker OI incentives, U.S. GAAP firms with stronger OI presentation incentives increased their low-risk asset allocations and reduced higher-risk allocations following ASU 2017-07 by 4.5 and 5.1 percentage points, respectively. Importantly, these investment reallocations in the post-period are economically meaningful, reducing investments in higher-risk assets by 11.6% on average. This represents $145 million per firm on average ($73.8 billion in total), which is equivalent to approximately 6% of the $1.3T aggregate U.S. DB outstanding benefit obligation. Cross-sectional tests reinforce this interpretation across two partitions. First, among firms with stronger OI presentation incentives, allocations to lower-risk assets are concentrated among firms that derived the largest pre-period OI reporting benefit from risk-taking. Second, reallocations to lower-risk assets are concentrated among stronger OI incentive firms with well-funded plans, which lack competing plan management incentives to pursue higher returns. Firms with stronger OI presentation incentives with underfunded plans show limited response to changes in OI presentation incentives, consistent with ongoing plan management incentives to close funding gaps (Amir and Benartzi 1999).

Following our U.S. GAAP analysis, we examine IFRS firms surrounding the adoption of IAS 19R to assess the combined effects of changes in both ER presentation and measurement. First, IAS 19R eliminated the measurement discretion to assume a higher ER and increase earnings by investing in higher-risk assets. In response, we predict a broad reduction in pension investment risk-taking among all IFRS firms. Second, IFRS reporting practice has resulted in firms reporting net interest cost (which includes the former ER component) outside OI. We predict that this creates incentives like those provided by ASU 2017-07, inducing firms with stronger OI presentation incentives to further reduce plan investment risk-taking. Therefore, we predict that IFRS firms with stronger OI presentation incentives will incrementally reduce their pension investment risk relative to those with weaker OI presentation incentives.

To provide evidence on the effects of IAS 19R's changes in ER presentation and measurement on pension plan investment decisions, we utilize a cross-country difference-in-differences analysis comparing post-IAS 19R changes in pension plan asset allocations for IFRS reporting firms in Canada to changes in plan asset allocations for a control sample of U.S. GAAP firms over the same time period. U.S. GAAP firms serve as an appropriate control group because U.S. GAAP guidance had not made changes in either ER presentation or measurement when IAS 19R became effective in 2013. In addition, the U.S. and Canadian financial reporting environments and regulatory frameworks are sufficiently similar to attribute observed differences to the accounting changes (e.g., Burnett, Gordon, Jorgensen, and Linthicum 2015). Further, to test whether IAS 19R induced an incremental presentation incentive effect, we also conduct a within-IFRS-firm analysis comparing changes in plan asset allocations for IFRS Canadian firms with stronger vs. weaker OI presentation incentives.

Results indicate that IFRS firms generally reduced plan asset risk-taking following IAS 19R's changes to presentation and measurement. Relative to U.S. GAAP firms, IFRS firms reduced higher-risk (equity) asset allocations by an average of approximately 3 percentage points. In economic terms, this represents a 6% relative decrease from average baseline equity allocations and equates on average to approximately $50 million per firm in plan assets reallocated away from equity securities ($5.2B in aggregate across all Canadian plans). This shift is economically meaningful and suggests that, compared

with U.S. GAAP firms, IFRS firms reallocated a material portion of their pension plan asset portfolios away from higher-risk securities in the post-19R period. In contrast, we find no evidence of incremental shifts within the IFRS sample in pension plan asset allocations between firms with stronger vs. weaker OI presentation incentives. Cross-sectional analyses provide additional support for these findings. Overall, we interpret these results to indicate that the IAS 19 *measurement* change dominated the *presentation* effect in driving overall shifts in plan asset allocation among IFRS firms.

Our study makes several contributions. First, we provide evidence that presentation incentives for income statement subtotals alone affect real economic decisions. This evidence extends academic research and may be relevant to standard setters. While it is generally understood that accounting standards generally do not directly affect firm cash flows, prior research shows that reporting incentives can indirectly influence real economic decisions. However, prior research on the real effects of accounting standards focuses on accounting measurement (Anantharaman and Chuk 2018), recognition (Kanodia 2006; Donovan, McMartin, and Phillips 2024), and disclosure (Chuk 2013; Monsen et al. 2025), but not financial statement presentation. We provide evidence that presentation of financial statement line items alone, which have historically received limited attention from standard setters (Libby and Emett 2014), can alter real economic decisions. This evidence is also timely. IFRS 18, effective for annual reporting periods beginning on or after January 1, 2027, will require firms to present income and expenses as operating, investing, and financing activities, each with a defined subtotal (IASB 2024a). This reform aims to improve financial performance reporting, including the comparability and understandability of subtotals in the statement of profit or loss (IASB 2024b, BC3). Our setting offers early insights that could inform future research exploring the consequences of this reform, and suggests that presentation changes may have real effects, a consideration standard setters may want to consider in evaluating the potential benefits and costs of guidance affecting statement subtotals.[4]

[4] Our findings also complement insights from the classification shifting literature. This literature shows that presentation incentives influence discretionary reporting decisions to reclassify items within the income statement and statement of cash flows (e.g., McVay 2006; Lee 2012). We show that the presentation incentives can also influence managers' real economic decisions.

Second, our study provides initial evidence on how changes in presentation and measurement interact to influence real economic decisions. Our unique setting allows us to disentangle the effects of presentation and measurement. ASU 2017-07 changed OI presentation only, while leaving NI unchanged. In contrast, IAS 19R changed both OI presentation and OI and NI measurement. By studying these standards together, we compare responses to a presentation-only change against responses to a change in measurement and presentation. Our findings that presentation effects are significant in isolation (ASU 2017-07) but not significant when accompanied by measurement changes (IAS 19R) provide initial evidence that measurement changes primarily influence firm responses when both occur together. This provides further insights into the mechanisms by which accounting standards affect real economic behavior. Presentation and measurement are not strictly additive, and the salience of presentation effects may depend on whether underlying measurement rules change simultaneously. By demonstrating that income statement presentation requirements (often viewed as secondary to recognition and measurement) can meaningfully affect firm behavior, this study contributes to the literature and provides timely evidence relevant to standard setters evaluating the economic implications of presentation-focused reforms.

2. BACKGROUND AND HYPOTHESES

2.1 Asset Allocation Decisions

Prior research suggests that absent other incentives and frictions, DB pension plans have strong incentives to allocate assets to low-risk, fixed-income securities for tax and risk-management reasons. Black (1980), Tepper (1981), and Exley, Mehta, and Smith (1997) argue that because plan investments act as tax shelters, plans should maximize funding with heavily taxed securities (i.e., fixed income) while minimizing investment risk.[5] Rauh (2006, 2009) emphasizes related risk-management incentives, noting that higher required pension contributions under ERISA can increase financial distress risk and depress firm investment, thereby discouraging excessive risk-taking in pension asset allocations. Evidence from the

[5] Because bond interest is taxed annually at ordinary rates, whereas equity returns are taxed upon realization and often at lower capital gains/dividend rates, sheltering bonds in the tax-exempt DB plan yields larger incremental tax savings.

public sector is consistent with this view, as municipal plans that assume greater investment risk tend to perform worse over time (Andonov, Bauer, and Cremers 2017).

Regulatory and plan-specific factors also have been shown to create incremental incentives to include some higher-risk equity investments in plan asset allocations to mitigate funding shortfalls. Sharpe (1976) and Treynor (1977) show that Pension Benefit Guarantee Corporation insurance can incentivize risk-taking. In addition, lower bond yields and longer horizons (e.g., among plans with younger participants) increase the appeal of equities as an inflation hedge (Rauh 2009). Finally, greater labor unionization is associated with lower funding levels (Mitchell and Smith 1994), consistent with collective bargaining, increasing average salaries and retirement benefits (Freeman 1983).

Despite these incremental incentives to take risk, unexplained equity "overinvestment" persists (e.g., Gold 2005; Rauh 2009). For example, the Milliman 100 Study reports that in 2007 plans invested 55% of assets in equities on average (Erhardt and Morgan 2009), far exceeding typical fixed-income allocations. Motivated by explaining overinvestment in equity securities, a prominent line of accounting research (discussed in Section 2.2.2) examines whether and how accounting standards shape pension investment risk-taking by influencing plan managers' incentives to support sponsors' financial reporting objectives.

While pension plan assets are held separately in a trust and subject to fiduciary standards, governance rules and practices provide mechanisms for the sponsoring firm's management to define the strategic asset investment mix of the pension plan. ERISA §402 requires plan sponsors (i.e., employers) to designate plan fiduciaries, commonly through an investment committee that includes a mix of external parties and senior sponsoring firm officers (e.g., the CFO, treasurer, and other executives). This committee sets the Investment Policy Statement, which establishes target asset allocation ranges and approved asset classes (U.S. Department of Labor 2016). Plan managers then invest within these constraints, preserving the sponsoring firm's influence over strategic asset allocation while delegating individual security selection to plan managers (CFA Institute 2010).

Consistent with sponsor influence, Cocco and Volpin (2007) find that a higher proportion of corporate insiders on U.K. pension boards is associated with riskier investment allocations among sponsors with higher leverage. Related work examining financial reporting incentives likewise assumes that sponsors can affect allocation decisions and provides evidence consistent with this practice (e.g., Bergstresser, Desai, and Rauh 2006; Chuk 2013; Anantharaman and Chuk 2018; Monsen et al. 2025). Bergstresser et al. (2006) show that plans use higher expected rates of asset returns when sponsors are near critical earnings thresholds, preparing acquisitions, or when managers are exercising stock options. They further document that these assumptions map into actual allocation changes: a 25-basis-point increase in the expected rate of return is associated with a 5% increase in equity allocations.

2.2 Pension Accounting and Managerial Reporting Incentives

2.2.1 Incentives when Reporting OI and NI

Income reporting choices are influenced by managerial incentives to meet market expectations, reduce volatility, and increase compensation.[6] Prior research shows that managers engage in earnings management to meet or beat analyst forecasts (Degeorge, Patel, and Zeckhauser 1999) and to avoid losses or earnings declines (Burgstahler and Dichev 1997), outcomes that are associated with positive stock price reactions and perceptions of managerial competence. The market also values earnings stability (Cao and Narayanamoorthy 2012), and firms with more volatile earnings are shown to be more likely to disaggregate earnings components to help investors identify and adjust for transitory items (Francis, Schipper, and Vincent 2002). These pressures are reinforced by compensation contracts tied to accounting performance, with evidence linking earnings management to bonus contract thresholds and measures (e.g., Healy 1985; Holthausen, Larcker, and Sloan 1995).

[6] We focus on income statement presentation incentives because ASU 2017-07 did not affect the balance sheet presentation of DB pension assets and liabilities. In contrast, IAS 19R did affect balance sheet presentation for some firms by removing the corridor approach. Barthelme, Kiosse, and Sellhorn (2019) document that this is associated with changes in managerial decision-making to achieve balance sheet reporting incentives. We isolate the income statement-specific effect in the IFRS setting by controlling for plan funded status and sponsor leverage.

Prior research highlights two subtotals (NI and OI) as particularly susceptible to these incentives and finds that market prices and returns are associated with both measures (Cheng, Cheung, and Gopalakrishnan 1993; Lipe 1986). Both also are prominent benchmarks in compensation contracts (Bennett et al. 2017; Bloomfield, Gipper, Kepler, and Tsui 2021). The salience of OI has increased with the growth of non-GAAP reporting, as investors respond strongly to non-GAAP earnings measures that emphasize OI-type metrics over NI (Bradshaw and Sloan 2002; Garavaglia, Gee, and Whipple 2025).

2.2.2. Historical Pension Accounting

Before the adoption of IAS 19R and ASU 2017-07, IFRS reporters applied IAS 19 (IASB 1999), while U.S. GAAP reporters accounted for pension costs under ASC Topic 715: Compensation—Retirement Benefits (FASB n.d.). This guidance prescribed the reporting for annual pension cost, which is comprised of five major components: (1) current service costs, (2) prior service costs, (3) interest costs, (4) actuarial gains and losses (known as remeasurements under IFRS), and (5) ER.

Notably, neither U.S. GAAP nor IFRS prescribed a specific income statement location for pension cost before the recent accounting changes; the guidance instead implied that the five components should be reported in the aggregate as a single net amount, with the individual amount of each component disclosed in the footnotes to the financial statements. In practice, this aggregate amount was presented within two income statement line items that affected NI and OI (if that subtotal is presented): cost of goods sold and compensation expense. When the pension obligations were owed to labor that produced inventory, the aggregate of the five components was capitalized in inventory and later expensed through cost of goods sold. Alternatively, the aggregate of the five components was expensed immediately as compensation expense when the pension obligations were owed to labor not producing inventory.[7] Under either approach,

[7] Under both standards, firms previously had the option either to immediately recognize actuarial gains and losses and prior service costs within the income statement or to recognize those items in other comprehensive income and amortize them to the income statement using the corridor method. Regardless of the approach, however, the income statement amounts of all components were typically aggregated within OI in the period prior to IAS 19R and ASU 2017-07. In addition, the pension accounting guidance is described as relating to pension costs rather than pension expense because pension costs generally were aggregated and reported together with other costs as part of inventory/cost of goods sold or compensation expense.

aggregate net periodic pension cost affected NI for all firms and OI for firms that reported that income statement subtotal. As a result, pension cost could materially affect both OI and NI even when it was not presented in a separate pension expense line item.

Presenting net periodic pension cost within line items that affect OI reduces the clarity of operating performance because the five components differ in persistence, which, when reported together, hinders assessments of its predictive value. In addition, several components are commonly viewed as investing or financing-related rather than operating. As a result, including all five components within OI limited financial statement users' ability to assess operating performance. The FASB expounds on these points in ASU 2017-07's basis for conclusions:

> "Stakeholders have raised concerns that the presentation of defined benefit cost on a net basis combines elements that are distinctly different in their predictive value, resulting in a presentation that has more limited value for financial statement users (BC6)."
>
> "In general, the Board believes that these components [prior service costs, interest cost, actuarial gains and losses, and ER] either are related to an entity's financing or investing activities or are driven by the effects of recycling prior periods' changes and results in subsequent periods. Therefore, the majority of the effect in these components would not be directly relevant for assessing an entity's continuing operating costs and should not be included in the operating metric, if one is presented (BC11)." (FASB 2016)

We posit that among the five pension cost components, ER is the primary mechanism firms use to increase or smooth the generally negative effects of net periodic pension cost on reported earnings because it is the only component that consistently increases earnings. The other pension cost components either reduce OI and NI on average or produce offsetting gains and losses that often are immaterial. ER is calculated as the fair value of plan assets multiplied by a self-selected expected asset return rate; it reduces total pension cost each period and thereby increases earnings.

ER is intended to reflect expected annual returns on plan assets, but in practice, it can serve as a lever to increase income statement subtotals such as OI and NI. Because investments in higher-risk equities generally have higher expected returns than investments in fixed income, firms seeking larger income-increasing ER effects have incentives to shift allocations toward equities. Bergstresser, Desai, and Rauh (2006) find that firms increase ER when facing incentives to boost reported income.

Previous U.S. GAAP and IFRS guidance allowed aggressive ER assumptions to increase reported earnings with few immediate consequences. Although this assumption was eliminated under IAS 19R, it remains under U.S. GAAP. Prior to SFAS 132R under US GAAP (and prior to IAS 19R under IFRS), firms could select the expected rate of asset returns with little visibility into the underlying considerations given in selecting a specific rate. Thus, firms could improve earnings by selecting overly optimistic rates of asset return. Consistent with concerns about this potential manipulation, the Securities and Exchange Commission (SEC) warned firms against assuming expected returns exceeding 9% following periods of poor market performance (Bloomberg 2004). As illustrated in the first panel of Figure 1, prior to the effective date of SFAS 132R in 2004 ER regularly exceeded realized returns by 5-10%, indicating that firms potentially employed overly optimistic or aggressive return assumptions as an income-increasing tool.

Importantly, however, SFAS 132R (FASB 2003) required new disclosures about the mix of plan asset investments providing a basis for evaluating the reasonableness of the ER assumption starting in 2004. Chuk (2013) documents that after these disclosures were provided there has been an increased alignment between firm-selected expected asset returns and actual returns. Figure 1 documents this relationship post 2004 (Panel A) and during our sample period (Panel B) and suggests that firms no longer use overly optimistic rates of asset returns in determining ER under US GAAP. Instead, increases in ER are supported by investments in riskier assets.

Although some DB plans have been discontinued (i.e., frozen) and few new DB plans are being established, reported plan liabilities remain substantial. The top 100 U.S. plans report more than $1.3 trillion in unfunded liabilities (Wadia and Perry 2024), and firms offering DB plans typically experience a 35% increase in leverage when pension obligations are included in capital structure (Shivdasani and Stefansescu 2010). In our U.S. and Canadian samples, average annual gross net periodic pension cost is 5% of total revenue—several times greater than standard audit materiality thresholds (0.5–2.0%). DB plans also must maintain regulator-specified funding levels, requiring sponsors to make cash contributions as plans approach underfunding thresholds. Deterioration in funded status and plan performance is therefore linked to bond rating downgrades (Wang and Zhang 2013) and lower stock returns relative to firms with better-

funded plans (Franzoni and Marín 2006). Given the continuing economic significance of DB pension plans, we expect that the income effects of DB pension plans (including ER) are material to both internal and external users of financial information.

2.3 Recent Accounting Changes and Hypothesis Development

2.3.1. ASU 2017-07 Changes to ER Presentation

We exploit ASU 2017-07's revisions to U.S. GAAP pension accounting to study how income presentation incentives alone affect pension asset allocation decisions. ASU 2017-07 restricts current service cost to be the only pension component included in OI and requires all other components to be reported outside OI in NI (FASB 2017).[8] ASU 2017-07's stated objective is to improve the transparency and decision usefulness of financial reporting (FASB 2016). Accordingly, any changes in investment decisions that we document represent consequences of the standard that naturally arise from it providing a more relevant and faithful representation of the economics of pension plan investments.

Importantly, ASU 2017-07 changes the presentation of pension cost components within or outside OI, not their disaggregation or the information disclosed about them. Regarding disaggregation, firms continue to aggregate DB pension costs within existing line items and firms have been required to disclose the individual components of net periodic pension cost in the pension footnote both before and after ASU 2017-07 (in accordance with ASC 715-20). Thus, there was no change in the level of information available to users.[9] Regarding presentation, ASU 2017-07 specifies where each component must be presented in the income statement relative to the OI subtotal. Specifically, service costs remain within operating expense line items, while all other components (including ER) are now required exclusions from OI. Because the standard changed only the income statement presentation of pension cost components, any responses we document are attributable to the presentation change itself rather than to disclosures of new information.

[8] ASU 2017-07 retains the option to report actuarial gains and losses first in other comprehensive income (OCI) and later amortize them from accumulated other comprehensive income into NI.

[9] See Appendix A for an illustration of the income statement presentation and related footnote disclosures of annual DB pension costs under U.S. GAAP before and after ASU 2017-07. Presentation and disclosures for the prior service cost and actuarial gains and loss components have been omitted for simplicity.

The FASB explicitly limited the project's scope to income statement presentation, leaving measurement conventions unchanged (FASB 2016). Firms therefore continue to use a self-selected expected asset return rate assumption when calculating ER, and the corridor method remains available for smoothing actuarial gains and losses into NI when those amounts are first recognized in OCI. Nonetheless, by restricting the income statement presentation of pension cost components, ASU 2017-07 eliminates the OI reporting benefit previously generated by ER and materially alters the level and volatility of that subtotal while leaving the effects on NI unchanged. This setting allows us to test whether and how changes in presentation alone influence plan sponsors' strategic investment allocation decisions. We expect firms with stronger OI presentation incentives to adjust allocations more in response to the standard.

We predict that these presentation changes will reduce plan asset risk-taking among firms with stronger OI presentation incentives, leading them to decrease (increase) allocations to more (less) risky assets relative to firms with weaker OI incentives. Before ASU 2017-07, firms typically included all components in OI through compensation expense or cost of goods sold (FASB 2017). This practice reduced OI unless firms offset the effects with a higher ER, creating incentives to assume a higher ER and allocate more to equities, contrary to other economic incentives that favor investments in lower-risk fixed-income investments to minimize taxes and investment risk. Because OI is more relevant for some firms than others, the benefit from leveraging a high expected return should be greater for firms with stronger OI presentation incentives than for those with weaker incentives. Accordingly, any pre-period benefit derived from leveraging a high expected asset return would be greater for firms with stronger OI presentation incentives vs. weaker OI presentation incentives.

Consistent with this prediction, market participants anticipated that ASU 2017-07 would accelerate pension investment de-risking for certain plan sponsors. Goldman Sachs Asset Management (2017) and Shumsky (2017) argue that because ER will no longer be presented in OI, some sponsors may be more inclined to shift plan assets toward fixed-income investments. Such a shift would be consistent with economic incentives that favor investments in lower-risk fixed income securities to minimize taxes and investment risk. Importantly, they also predict that any response likely would depend on which performance

metrics a firm's management prioritizes, suggesting that firms focused on OI metrics have the strongest incentives to de-risk, while firms focused on NI or earnings per share (which are still affected by ER) have weaker incentives to do so. We state our first hypothesis in alternative form:

> **H1**: *Ceteris paribus*, following ASU 2017-07, U.S. GAAP reporting firms that have stronger OI presentation incentives will reduce pension investment risk-taking to a greater extent than firms with weaker OI presentation incentives.

Whether firms respond to ASU 2017-07 by de-risking is not obvious *ex ante*, because of countervailing incentives. First, ASU 2017-07 does not change pension cost measurement leaving NI unaffected. ER continues to reduce total pension cost and increase NI after the standard. Accordingly, firms that prioritize NI or earnings-per-share metrics retain existing reporting incentives to hold higher-return, higher-risk plan assets. Second, underfunded plans face plan-management incentives to pursue higher expected returns to close funding gaps and reduce required cash contributions (Amir and Benartzi 1999). This makes de-risking costly for these firms, regardless of reporting considerations. Such countervailing forces imply that firms may not uniformly respond to the standard and that any response should be concentrated among firms for which OI is a salient performance metric and for which competing considerations are weak. Thus, whether OI presentation incentives are sufficiently strong to outweigh the retained NI reporting benefit and plan-management considerations is ultimately an empirical question. We examine these countervailing incentives directly in cross-sectional analyses (See Section 4.4).

2.3.2. IAS19R Changes to ER Presentation and Measurement

Unlike ASU 2017-07, which changed presentation only, IAS 19R changed both the measurement and presentation of ER for IFRS reporting firms. This setting enables us to test the combined effect of measurement and presentation changes on plan investment decisions (H2a) and whether the presentation change has an incremental effect beyond the measurement change (H2b).

With respect to measurement, IAS 19R significantly limits firms' discretion in calculating the ER component of pension cost. The standard removes the ability to self-select an expected return on plan assets and instead requires ER to be measured using the same bond-linked discount rate used to discount pension

liabilities (IASB 2011). Because bond-linked discount rates typically fall several hundred basis points below long-run equity return expectations, this amendment eliminates firms' ability to increase ER by changing their mix of plan assets. As a result, IAS 19R removes an income-reporting benefit that all firms (regardless of OI incentives) could obtain previously by increasing the portion of their assets invested in riskier assets (e.g., equities). Consistent with this interpretation, Anantharaman and Chuk (2018) find that Canadian IFRS firms generally reduced equity investment allocations following IAS 19R, with the largest reductions among firms that used aggressive pre-IAS 19R ER assumptions, consistent with a *measurement-driven* effect.

With respect to presentation, IAS 19R reclassified pension cost into three groups of components: (1) service costs (prior and current); (2) net interest cost, calculated as the difference between interest costs and the remeasured ER; and (3) remeasurements, which must be recognized in OCI (IASB 2011). Unlike ASU 2017-07, however, IAS 19R does not prescribe where service cost and net interest are classified within profit or loss (IASB 2011 Paragraph 134). Presentation instead follows IAS 1, and in practice, net interest cost is presented outside OI (when such a figure is reported) within finance costs, consistent with its financing character (KPMG 2019).[10] With ER's income effect no longer included in OI, a key channel through which firms could previously influence reported operating performance is removed (e.g., Bergstresser et al. 2006). For firms with stronger OI presentation incentives, the standard further reduces the reporting benefits previously associated with pension investment risk-taking.

Because both these changes eliminate the income-reporting benefits of increasing allocations to riskier assets, we predict that IAS 19R's measurement and/or presentation amendments will motivate firms to reduce investment risk-taking among IFRS firms, consistent with economic incentives that favor investments in lower-risk fixed-income securities to minimize taxes and investment risk. Accordingly, we state our first IAS 19R-related hypothesis in alternative form:

[10] Appendix A illustrates the income statement presentation and related disclosures of pension costs under IFRS before and after IAS 19R, which indicates the effect on ER presentation parallels that of ASU 2017-07 by no longer being presented in OI. Presentation and disclosures of the prior service cost and actuarial gains and loss (remeasurements) components have been omitted for simplicity.

H2a: *Ceteris paribus*, following IAS19R, IFRS reporting firms will reduce pension investment risk-taking.

In line with our research objective, we also test whether IAS 19R's presentation changes have an incremental effect on pension asset allocation decisions beyond the measurement effect. Although all IFRS firms experienced the measurement change, presentation-related changes should affect only firms with OI presentation incentives. We isolate this incremental presentation effect by comparing post-IAS 19R asset allocation changes for IFRS firms with stronger versus weaker OI incentives. However, given prior evidence that the pension measurement change affects asset allocation choices (Anantharaman and Chuk 2018), it is unclear *ex ante* whether the presentation change will have a significant incremental effect, particularly because the measurement change affects both OI and NI, whereas the presentation change affects OI only. If presentation incentives matter incrementally, we expect IFRS firms with stronger OI presentation incentives to reduce risk-taking more than those with weaker incentives. Accordingly, we state our second IAS 19R-related hypothesis in alternative form:

H2b: *Ceteris paribus*, following IAS 19R, IFRS firms with stronger OI presentation incentives will reduce pension investment risk-taking to a greater extent than those with weaker OI presentation incentives.

3. RESEARCH DESIGN

We use equation (1) below to test our prediction about the effect that ASU 2017-07's change in ER presentation will have on plan asset risk-taking. The dependent variable across all tests, *Asset Risk-Taking*, is either *%Equity*, *%Low Risk*, or *Risk Spread*, which are based on disclosures from plan sponsors' annual reports and were collected from the LSEG Worldscope Pension and Postretirement dataset.[11] *%Equity*

[11] Due to historical issues with pension asset allocation and expense data (discussed in Anantharaman and Chuk 2018), we performed multiple validations of the LSEG dataset. Initial data cleaning included filtering firm-year observations in which pension asset allocations did not sum to 100%. We also hand-collected asset allocation and annual expense data for approximately 20% of the population, finding a high overall level of accuracy. Identified discrepancies, such as instances where asset allocation percentages or expense amounts from LSEG did not match footnote disclosures, were corrected to align with firm financial statements. When a discrepancy was identified, a full review of all firm-year observations for that firm was performed to identify any pervasive measurement error. Missing pension variables were hand-collected wherever possible and excluded if no relevant footnote disclosure could be identified. The most common issue was missing ER and interest cost data for IFRS firms post-2013, due to the shift to reporting aggregate NPIC under IAS 19R. We imputed ER and interest cost amounts for these observations based on disclosed plan asset balances, PBO, and discount rate information.

and *%Low Risk* capture allocations to equity securities and debt/cash investments, respectively, as a percentage of total plan assets.[12] *Risk Spread* is calculated as the difference between *%Equity* and *%Low Risk* and, therefore, captures variation in general risk-taking across the major categories of plan assets. A negative *Risk Spread* indicates a more conservative investment allocation (more low-risk assets than equities), while a positive *Risk Spread* indicates a riskier portfolio.

$$\begin{aligned} \textit{Asset Risk-Taking} = {} & \beta_0 + \beta_1 \textit{PostASU*OI Forecast} + \beta_2 \textit{PostASU} + \beta_3 \textit{OI Forecast} + \beta_4 \textit{Leverage} \\ & + \beta_5 \textit{Size} + \beta_6 \textit{FundedStatus} + \beta_7 \textit{FundedStatus}^2 + \beta_8 \textit{Horizon} + u + \lambda + \varepsilon \end{aligned} \quad (1)$$

The difference-in-differences design in equation (1) allows us to isolate the post-standard change effect on firms with stronger OI presentation incentives. *PostASU* is a binary indicator set equal to one for fiscal periods beginning after December 15, 2017, the effective date of ASU 2017-07 for publicly traded firms. *OI Forecast* is a binary indicator set equal to one in periods in which a firm had an identified OI analyst forecast based on available forecasting information via Bloomberg. All firms in the sample are affected by ASU 2017-07. We assign treatment based on the relative strength of firms' OI reporting incentives, using *OI Forecast* as the variable to identify firms for which the OI subtotal is more relevant. The interacted term (β_1), therefore, captures the post-ASU 2017-07 effect for treated firms (those with OI forecasts). When analysts issue OI forecasts, they create explicit capital market expectations tied to this specific subtotal. Prior research documents that firms face significant pressure to meet or exceed analyst expectations (Degeorge et al. 1999), with firms that fall short experiencing negative stock price reactions and perceived declines in managerial competence. Thus, firms with OI forecasts face direct external scrutiny of their operating performance, creating incentives to manage reported OI.

[12] A potential concern related to the *%Low Risk* measure is measurement error due to inclusion of private credit investment as a fixed-income asset in pension portfolios. We have concluded that this does not affect our inferences for two reasons. First, private credit investment was likely immaterial for DB sponsors over our 2011–2019 sample period. Although the asset class has since grown, this growth occurred predominantly after our sample window, and meaningful allocations by public and corporate pension plans are a comparatively recent phenomenon (Su 2024). Second, any higher risk private credit investment would likely bias *against* our findings. Consistent with this, our risk-shifting results are strongest in the equity allocation, corroborating that the effect we identify reflects genuine portfolio reallocation across risk categories.

Importantly, the incentive effect of an OI forecast holds regardless of whether the forecast is based on a GAAP or non-GAAP measure of OI. If analysts forecast GAAP OI, the effect of applicable pension cost components is directly embedded in the number under external scrutiny, giving firms explicit incentives to manage them. Conversely, if analysts forecast non-GAAP OI, this signals that OI is a performance measure the market considers decision-relevant for that firm. In either case, the presence of an OI forecast indicates that OI is a salient metric facing external pressure and that said firms have meaningful incentives to manage the operating income subtotal. Thus, while the mechanism differs slightly across these cases, the conclusion for our research design is the same: analyst OI forecast status captures the subsample of firms for whom the operating income subtotal is most consequential. Importantly, we identified some firms within our sample whose OI forecast coverage varies from year to year. Accordingly, our analyses of H1 and H2b are performed on both a "Full Sample" allowing for within-firm variation in analyst OI forecasts over time and a "Restricted Sample", which limits the sample to only those firms that consistently had (or consistently lacked) analyst OI forecasts throughout the entire sample period.

In line with H1, we use the coefficient of interest (β_1) to provide evidence on whether there were reductions in plan asset risk-taking following ASU 2017-07. Because equity securities typically represent higher-risk investments compared to fixed-income investments and cash, we expect the estimated coefficient β_1 to be negative when *%Equity* is the dependent variable. Conversely, we expect a positive coefficient for β_1 when *%Low Risk* is the dependent variable, indicating firms shifted plan asset composition toward these asset types following the standard change. Finally, we predict a negative β_1 coefficient estimate when *Risk Spread* is the dependent variable, indicating an overall shift from equity toward low-risk assets.

We use equations (2) and (3) below to test predictions about the effects of IAS 19R on plan investment risk-taking. Equation (2) tests H2a by estimating the joint effect of IAS 19R's presentation and measurement changes, while equation (3) tests H2b by isolating just the presentation effect.

$$\begin{aligned} \textit{Asset Risk-Taking} = {} & \beta_0 + \beta_1 \textit{PostIAS*IFRS} + \beta_2 \textit{PostIAS} + \beta_3 \textit{IFRS} + \beta_4 \textit{Leverage} + \beta_5 \textit{Size} \\ & + \beta_6 \textit{FundedStatus} + \beta_7 \textit{FundedStatus}^2 + \beta_8 \textit{Horizon} + u + \lambda + \varepsilon \end{aligned} \quad (2)$$

$$\textit{Asset Risk-Taking} = \beta_0 + \beta_1 \textit{PostIAS*OI Forecast} + \beta_2 \textit{PostIAS} + \beta_3 \textit{OI Forecast} + \beta_4 \textit{Leverage} + \beta_5 \textit{Size} + \beta_6 \textit{FundedStatus} + \beta_7 \textit{FundedStatus}^2 + \beta_8 \textit{Horizon} + \mu + \lambda + \varepsilon \quad (3)$$

We again leverage the difference-in-differences design to isolate post-IAS 19R changes in plan asset risk-taking. *PostIAS* is set equal to one for fiscal periods beginning on or after January 1, 2013, the effective date of IAS 19R. In equation (2), *IFRS* is a binary indicator set equal to one for firms reporting under IFRS and zero for firms reporting under US GAAP. This specification compares changes in plan asset allocations for IFRS firms to a control sample of US GAAP firms, capturing the general effect of IAS 19R's changes to both presentation and measurement. In equation (3), *OI Forecast* is again a binary indicator that captures IFRS firms for which analysts issue forecasts and zero for IFRS firms without OI forecasts. Similar to our test of H1, all firms are affected by IAS 19R for the purposes of our test of H2b. Thus, our coefficient of interest again captures the post standard effect among firms with stronger OI reporting incentives ("treated" firms).

Our predictions about the sign of the β_1 coefficients in equations (2) and (3) for H2a and H2b follow the same reasoning as the tests of H1 described above. Specifically, we predict that for equations (2) and (3), the estimated coefficient β_1 will be positive when *%Low Risk* is the dependent variable and negative when *%Equity* and *Risk Spread* are the dependent variables, indicating that firms reduced plan asset risk-taking following the standard change.

All multivariate specifications include controls for firm and plan characteristics likely to influence asset allocation decisions. *Size* captures differences in resources and sophistication as well as variation in investment opportunities. *Leverage* captures the effects of capital structure and financial constraints, including debt covenants, that may influence pension investment strategy (Rauh 2006). *Funded Status* controls for plan health, as prior research shows that overfunded plans tend to invest in bonds while moderately funded plans tend to invest in equities (Amir and Benartzi 1999; Bader 1991). We include $\textit{Funded Status}^2$ to allow for nonlinear effects, as asset allocation incentives may differ across the funding spectrum. Finally, *Horizon* proxies for the pension plan's investment time horizon (Rauh 2009). See Appendix B for detailed variable definitions.

Across all three hypotheses, our identification strategy relies on a difference-in-differences design that exploits the adoption of ASU 2017-07 and IAS 19R as shocks to pension presentation incentives.[13] The key identifying assumption is that, absent the accounting changes, treatment and control groups would have followed parallel trends in asset allocation. This assumption is plausible in our setting because the timing and content of both standards were determined by standard setters rather than by firm-level characteristics, and because our treatment and control groups operated within the same economic and regulatory environments during the sample period.

To validate the parallel trends assumption, we re-estimate each multivariate model after replacing *PostASU* and *PostIAS* with indicator variables for each year of the sample period except 2012 (IAS 19R) and 2018 (ASU 2017-07), which serve as our base years (Roberts and Whited 2013). All fiscal-year indicators are interacted with our treatment indicator (*OI Forecast* or *IFRS*) to determine whether pre-period trends in asset allocation were consistent across treated and control firms. Appendix C present the results of this analysis for our tests of H1 and H2a, respectively, across all three dependent variables. In all instances, the coefficients for each interaction term prior to the issuance of ASU 2017-07 and IAS 19R are statistically insignificant, indicating that asset allocation levels did not differ significantly between firms with stronger OI reporting incentives and the control sample during the pre-period.

All models include firm (u) and year (λ) fixed effects and are estimated using entropy balanced samples to mitigate bias from observable differences between treatment and control groups (Hainmueller 2012). Firm fixed effects ensure that we estimate within-firm changes in asset allocation by eliminating

[13] The Federal Reserve increased interest rates from 1.50% to 2.50% during 2018. If plan funding positions improved mechanically because of the higher discount rate, firms may have responded by de-risking. However, we have determined it is not an alternative explanation for our findings. Our design entropy balances firms on funded status, which should control for any differences in asset allocations due to changes in funding over time. As an additional verification, we examined average funded status across plans in our sample by year (untabulated), noting that average funded status increased more during 2018 among control firms than those with stronger OI reporting incentives, biasing *against* interest rate-based funding relief as an alternative explanation.

time-invariant firm-level confounds, while year fixed effects absorb aggregate trends common to all firms.[14] This ensures that our estimates reflect firm-specific, differential responses to the accounting changes rather than broader market movements. Further, we employ entropy balancing to reweight control group observations such that the weighted covariates match those of the treatment group, creating an economically comparable control sample across firm size, leverage, funded status, and plan characteristics. Together, this combination of fixed effects and entropy balancing provides the cleanest identification of each standard's effect on asset allocation decisions. Covariate balance statistics prior to and following these balancing procedures are reported in Appendix D.

4. SAMPLE, DESCRIPTIVE STATISTICS, AND EMPIRICAL RESULTS

4.1. Sample Selection

Table 1, Panel A, summarizes the sample selection process. Our primary source for pension asset allocation data is the LSEG Worldscope Pension and Postretirement dataset. The initial sample comprises 19,040 U.S. and Canadian firm-year observations with DB pension plans between 2011 and 2019. We exclude 8,746 observations due to missing asset-allocation or firm-identification data. An additional 84 observations are removed because they lack observations for projected benefit obligation (PBO), plan asset fair value (FVPA), or annual pension cost component data required for our cross-sectional analyses. We further exclude 1,863 observations that are either singletons (to facilitate fixed effect estimation) or lack the necessary covariates. We utilize the Bloomberg analyst forecast database to identify whether firms have stronger or weaker OI presentation incentives, which resulted in us omitting another 634 observations not covered by Bloomberg. Finally, we exclude 1,412 firm-year observations associated with frozen plans, as

[14] We include firm fixed effects in all regression specifications for two reasons. First, within-firm variation is the theoretically motivated identifying variation in our setting. Our hypotheses test how changes in income statement presentation and measurement influence each firm's plan asset risk-taking decisions. This is a within-firm behavioral change by design. As Breuer and deHaan (2024) note, researchers should assess whether within-firm variation is cleaner and more interpretable than raw variation; here, within-firm changes in asset risk-taking decisions following an exogenous standard-setting shock are the specific variation of interest. Second, pension asset risk-taking decisions are influenced by numerous time-invariant firm-specific characteristics (investment committee composition, board risk preferences, and plan governance structures) that are difficult to measure and likely represent correlated omitted variables (Roberts and Whited 2014).

asset allocation incentives differ significantly for such plans. This results in a final sample of 6,301 firm-year observations with active pension plans during the sample period.

Table 1, Panel B, presents the annual distribution of our sample across US GAAP and IFRS reporting standards. The sample period begins in 2011, coinciding with the mandatory adoption of IFRS in Canada and providing two years of data before the effective date of IAS 19R. While Canadian firms were generally required to adopt IFRS in 2011, the Canadian Accounting Standards Board (AcSB) permitted U.S.- cross-listed Canadian firms to report under either U.S. GAAP or IFRS. Similarly, U.S. multi-national firms are allowed to report using IFRS. As such, to ensure accurate classification across both samples, we use the accounting-standard variable (acctstd) in Compustat to assign firms to each standard. As a validation check, we hand-collected the reporting standards for a random subsample of 20% of the observations, showing full agreement with Compustat's classification.[15]

Finally, Panel C of Table 1 partitions the sample based on the availability of analyst OI forecasts. As discussed in Sections 2 and 3, we use the presence of at least one analyst OI forecast during the fiscal year as a proxy for heightened OI presentation incentives. Out of the 6,301 firm-year observations, 5,159 (82%) had OI forecast coverage. This coverage is slightly higher for firms reporting under U.S. GAAP (83%) compared to those under IFRS (73%). The 1,142 observations lacking OI forecasts serve as control samples in two of our main tests to isolate the effects of IAS 19R and ASU 2017-07 on income statement presentation incentives.

-- Insert Table 1 Here --

4.2. Descriptive Statistics

Table 2 Panels A and B present descriptive statistics for the variables used in our primary analyses. All continuous variables are winsorized at the 1st and 99th percentiles to mitigate the influence of outliers.

[15] Based on this analysis, we identified 12 U.S.-based firm-year observations applying IFRS reporting standards and 121 Canadian-based firm-year observations applying U.S. GAAP reporting standards. Because of similarities across the two reporting and regulatory environments these observations have been included in our IFRS and U.S. GAAP samples, respectively. Untabulated robustness tests confirm that our inferences are unchanged when these observations are excluded across all tests of H1, H2a, and H2b.

Our tests of H1 center on the adoption of ASU 2017-07, effective for fiscal years beginning after December 15, 2017. Our tests on US GAAP firms compare the effects of ASU 2017-07 across two windows: two years pre-and post- adoption in 2018 and four years pre- and two years post-adoption. Due to pre-period presentation incentive differences between IFRS and U.S. GAAP, following IAS 19R, our tests of H1 utilize a within-US GAAP sample, comparing changes in investment risk for firms with stronger vs. weaker OI presentation incentives. Panel A reports statistics for US GAAP firms over 2014–2019, the relevant years over the two windows for our ASU 2017-07 analyses (H1). As discussed in Section 3, our tests of H2a and H2b center on the 2013 adoption of IAS 19R and compare the effects of IAS 19R across two windows: two years pre-and post-adoption in 2013 and two years pre- and four years post-adoption.[16] Panel B reports statistics for IFRS firms over 2011–2016, corresponding to the relevant years in the two windows relating to our IAS 19R analyses (H2a and H2b). Because pension accounting rules under U.S. GAAP and IFRS were largely consistent before IAS 19R, our test of H2a focuses on a cross-standard comparison of changes in investment risk for IFRS firms versus U.S. GAAP firms.

As shown in Panels A and B of Table 2, firms reporting under U.S. GAAP and IFRS exhibit broadly similar fundamental characteristics. Both groups are of comparable size (mean *Size* of 8.74 and 8.38, respectively), exhibit identical mean levels of *Funded Status* (0.81 for both), and report similar average *Leverage* ratios (0.30 for U.S. GAAP vs. 0.27 for IFRS). These similarities reinforce the prevailing view that firms in the U.S. and Canada face comparable economic environments and have similar pension plans (Burnett, Gordon, Jorgensen, and Linthicum 2015), providing a stable foundation for our cross-standard analysis. Notably, the mean *Funded Status* of 0.81 indicates that the average plan operates just above the standard regulatory threshold for funded status penalties in both the U.S. and Canada, which are described later. Pension plan size (*FVPA*) exhibits substantial cross-sectional variation but remains consistent with

[16] We do not utilize consistent four-year time horizons pre- and post- both accounting changes due to data limitations and significant changes in the economic environment. For the IAS 19R analysis, the pre-period time horizon is limited to two years because Canada only required IFRS adoption for fiscal years beginning on or after January 1, 2011. For the ASU 2017-07 analysis, extending the post-period beyond 2019 would include years affected by the COVID-19 pandemic, exposing our analysis to confounding factors such as changes to long-term mortality assumptions, market volatility, and interest rate fluctuations.

expectations for large-cap sponsors. Collectively, these figures suggest our sample captures firms with significant pension reporting exposure suitable for both within-US and cross-standard analyses.

Panels C and D of Table 2 provide pre- and post-period descriptive statistics for our dependent variables, offering preliminary insights into the effects of the standard changes. The dependent variables, focused on asset allocation percentages relating to different asset classes (*%Low Risk*, *%Equity*), do not sum to 100%, as pension asset allocations also include asset classes such as real estate that are outside the scope of our analysis.[17] For both U.S. GAAP and IFRS firms, changes from the pre- to post-periods in mean investments in low-risk assets and equity are largely symmetrical, representing 7 and 5 percentage point reallocations from equity to lower-risk securities, respectively. The mean *Risk Spread* for US GAAP firms decreased from −10.48 to −25.01 following the standard change, further illustrating a marked shift toward de-risking. Although the firms in the IFRS sample exhibit a positive mean *Risk Spread* of 4.42 in the pre-period, the descriptive statistics also show significant de-risking after the adoption of IAS 19R evidenced by a negative mean *Risk Spread* of -5.35 in the post-period.

Panels C and D also report pre- and post-period expected rate of return assumptions for both samples. The mean expected return declines in each, but the magnitudes and their interpretation differ in line with the differences in the two standards. For IFRS firms, the mean expected rate of return falls 2.29 percentage points (6.14 to 3.85). This decline is largely mechanical: IAS 19R eliminated the separately estimated expected return assumption and requires firms to apply the discount rate to plan assets. For U.S. GAAP firms, which retain discretion over the assumption, this figure falls 0.54 percentage points (6.39 to 5.85). Because the expected rate of return assumption reflects both assumed asset-class returns and the allocation across those classes, we consider this decline consistent with the descriptive evidence of portfolio de-risking described above for the dependent variables.

-- Insert Table 2 Here --

[17] Investments in other categories, namely real estate, are immaterial in our analysis. Across both the U.S. GAAP and IFRS samples, average plan allocations to these assets are approximately 1.5-3% of total plan assets.

4.3. Difference-in-Difference Test of the Presentation Effect of ASU 2017-07

Table 3 presents the results of estimating equation (1), examining the effects of ASU 2017-07 on the investment risk-taking of US GAAP reporting firms with stronger OI presentation incentives. Each panel reports results for one of our three dependent variables: *%Low Risk* (Panel A), *%Equity* (Panel B), and *Risk Spread* (Panel C). Within each panel, Columns 1 and 2 report Full Sample and Restricted Sample results for a 2016–2019 horizon, while Columns 3 and 4 utilize an extended 2014–2019 horizon. Inferences are similar across both horizons; therefore, for brevity we discuss the results for the extended horizon only.

Across all dependent variables and model specifications, we find evidence that US GAAP-reporting firms with stronger OI presentation incentives significantly de-risked their pension portfolios following the adoption of ASU 2017-07. Our 2014-2019 Full Sample (Restricted Sample) specification estimates a 4.53 (3.81) percentage point increase in the amounts allocated to low-risk investments *(*$p < 0.01$) and a 5.08 (4.46) percentage point decrease in amounts allocated to equity securities *(*$p < 0.01$). Relative to pre-period levels of investment, these shifts constitute an economically significant increase of 8.4% (7.0%) and decrease of 11.6% (10.2%) in low-risk investments and equity investments, respectively. Further, based on the mean fair value of plan assets for our treatment sample, the reduction in equity allocations estimated using the Full Sample equates to approximately $145 million per firm reallocated toward lower-risk asset classes.[18] The net impact is estimated in Panel C, where the *Risk Spread* decreases by an estimated 9.53 (8.19) percentage points *(*$p < 0.01$), indicating a comprehensive decrease in plan risk-taking for firms with stronger OI presentation incentives, on average. Overall, the results in Table 3 provide evidence consistent with H1 and are robust across Full Sample and Restricted Sample specifications.

Our difference-in-differences design controls for alternative economic and regulatory explanations, as both the treatment (firms with OI forecasts) and control group (firms without OI forecasts) operated within the same market and regulatory environment. The absence of significant de-risking in the control

[18] Because our coefficient represents the average effect on the treatment firms (i.e., firms with stronger OI incentives), we quantify the estimated economic magnitude using the treatment sample's mean FVPA. This also avoids introducing entropy balancing weights into the calculation, as only the control sample is affected by that procedure.

group, relative to firms with stronger OI presentation incentives, suggests that our results are attributable to the change in income statement presentation rather than broader pension de-risking trends. When estimating the Full Sample model the coefficient on *OI Forecast* is small and statistically insignificant across all dependent variable specifications (untabulated), indicating that the treatment and control groups exhibited similar baseline asset allocation levels before the standard change.[19] Further, coefficient estimates are relatively stable across the Full Sample and Restricted Sample specifications, suggesting that our results are not sensitive to within-firm variation in analyst OI forecasts over time.[20]

As additional validation, we examine pre-period trends in asset allocations across all three dependent variables to assess the validity of the parallel trends assumption. Appendix C, Panel A presents the event study analysis used to examine the year-by-year pre-trends prior to and following ASU 2017-07's effective date. Across all dependent variables, the coefficients of each interaction term prior to 2018 are statistically insignificant, indicating that asset allocation levels did not differ significantly between firms with stronger OI reporting incentives and the control sample during the pre-period. This result is consistent across both the Full Sample and Restricted Sample specifications.[21]

-- Insert Table 3 Here --

4.4. Cross-sectional Analyses of ASU 2017-07 Presentation Incentives

To strengthen our inferences regarding the effect of ASU 2017-07's change in presentation on pension investment allocation decisions, we perform two cross-sectional analyses. First, we partition the U.S. GAAP sample by the degree of NPIC benefit and re-perform our H1 test. This analysis tests whether the estimated effect, measured using *Risk Spread*, is concentrated among firms with the strongest pre-period

[19] We are unable to estimate the coefficient on OI Forecast using the Restricted Sample model, as restricting the sample to only those firms with consistent OI Forecast presence/absence results in perfect multi-collinearity between the OI Forecast variable and our firm fixed effects.

[20] As illustrated in Gaertner, Lynch, and Vernon (2020), the Tax Cuts and Jobs Act (TCJA) induced a spike in voluntary pension contributions in 2017. To account for any potential indirect effects that this contribution behavior had on plan asset allocations, we performed the following untabulated robustness tests: (1) we include a control variable for unexpected pension contributions, following the procedure outlined by Gaertner et al. (2020) and (2) we re-perform our main analyses while omitting fiscal years 2017 and 2018, as these periods were likely the most influenced by any potential TCJA effects. Our inferences are unchanged across both procedures.

[21] We find similar results, both in terms of direction and magnitude, to those in Anantharaman, Chuk, and Kamath (2026) who examine plan asset allocation among U.S. plans compared to Canadian plans following ASU 2017-07.

incentives to take on risk.[22] High NPIC firms are those in the top third of the sample based on having a positive NPIC, calculated as ER minus pension-related interest costs, scaled by total assets.[23] A higher positive NPIC indicates that a firm's ER more than offsets its interest costs, resulting in a pre-period net reporting benefit to OI. This measure, therefore, captures firms that derived the strongest pre-period financial reporting benefit from risk-taking and, accordingly, firms we expect held the greatest pre-period equity allocations. Following ASU 2017-07, we expect these firms to engage in the most significant de-risking.

Second, we examine whether the effects of ASU 2017-07 vary across plans with different funding levels, which captures different plan-specific asset allocation incentives. Firms with well-funded plans often hold more fixed-income securities, all else equal, while underfunded plans more often engage in investment risk-taking as a means of closing the funding gap (Amir and Benartzi 1999; Bader 1991). Accordingly, we expect the strongest de-risking will occur among well-funded plans, given their pre-period incentives toward risk-taking were most strongly tied to financial reporting. Conversely, we expect limited-to-no de-risking among firms with underfunded plans (<80%), as they still face strong plan management incentives to take on risk to close the funding gap.

4.4.1. Cross-sectional Analysis Across NPIC Levels

Table 4 presents the results of our cross-sectional analysis testing whether the de-risking behavior identified in Table 3 is concentrated among firms that derived the greatest pre-period benefit from the effects of ER, as measured by NPIC. As shown in Table 4, we provide evidence that the observed de-risking is concentrated among firms with high NPIC. For this subgroup, across all specifications, the β_1 coefficient is negative, as predicted, suggesting an estimated 8.15 and 8.59 percentage point decrease in *Risk Spread*

[22] We utilize *Risk Spread* as the dependent variable in all cross-sectional analyses across both our U.S. GAAP and IFRS samples because it captures the net reallocation between equity and low-risk assets in a single measure, providing a comprehensive assessment of changes in plan asset risk-taking. In untabulated tests, we draw the same inferences when using *%Low Risk* and *%Equity* as dependent variables for all U.S. GAAP and IFRS cross-sectional analyses.
[23] For our cross-sectional analyses, we partition our sample based on firms in the top third of NPIC as a percentage of total assets. This threshold was selected as the top third cutoff was approximately 0.6% of total assets, in line with standard cutoffs for audit materiality

(p < 0.01) in our 2014–2019 Full Sample and Restricted Sample specifications, respectively. This aligns with our expectation that firms deriving the largest pre-period reporting benefit from aggressive asset allocations engaged in the most significant de-risking once ASU 2017-07 removed the ability to use ER to increase OI.

Conversely, we find no significant shift in investment risk for firms with low NPIC. Across all specifications, the interaction coefficient is statistically insignificant *(p* > 0.10). Taken together, this pattern of results suggests that when net pension-related benefits in OI are low, managers lack sufficient incentive to incur the real economic costs of shifting asset allocations. The concentration of de-risking behavior among firms with high reporting exposure provides further evidence consistent with a response to changes in OI presentation incentives under ASU 2017-07.

-- Insert Table 4 Here –

4.4.2. Cross-sectional Analysis Across Varying Pension Funding Levels

Using funded status, we partition the sample into two groups: firms with well-funded plans (>80% funded status) and firms with underfunded plans (<80% funded status). These partitions correspond to thresholds that U.S. regulators use to impose penalties and constraints on plan payments.[24] Results of these cross-sectional analyses are reported in Table 5.

In Panel A, we observe that firms sponsoring well-funded plans engaged in substantial de-risking across all specifications and time horizons. Notably, the coefficients are comparable in magnitude to our Table 3 estimates, suggesting that well-funded plans drive much of the aggregate effect. We interpret this concentrated shift as consistent with our prediction that well-funded plans had minimal pre-period incentives to take on risk linked to plan management incentives. These results suggest pre-period risk-taking was primarily motivated by financial presentation incentives for firms with well-funded plans. With the removal of this reporting incentive, plan management considerations dominate, leading to the strongest

[24] In the U.S., the Pension Protection Act of 2006 (PPA) imposes benefit restrictions (e.g., lump-sum payout limitations) when a plan's regulatory funding level falls below 80% (IRC Section 436).

de-risking across all groups.

Panel B of Table 5 presents results for underfunded plans, which suggest the presentation effects of ASU 2017-07 on risk-taking diminish. While we observe a significant negative coefficient in the extended Full Sample specification in column (3) (−7.91, $p < 0.05$), the coefficients are not significantly different from zero across all other specifications. This pattern is consistent with underfunded firms retaining plan management incentives to pursue higher returns to close the funding gap, partially offsetting any response to the removal of previous presentation incentives.

-- Insert Table 5 Here –

Taken together, the cross-sectional results in Tables 4 and 5 paint a consistent picture: the de-risking response to ASU 2017-07 is concentrated among firms for whom the presentation change was most consequential and for whom competing risk-taking incentives were weakest. Firms with high NPIC had the strongest pre-period presentation incentives to hold risky assets and, thus, responded most strongly when those incentives were removed. Similarly, well-funded plans, which lacked plan management and regulatory pressures to engage in risk-taking as a means of reducing funding deficits, had the flexibility to de-risk once presentation incentives disappeared. Conversely, the results for firms with low NPIC or underfunded plans documented little-to-no evidence of effects, consistent with either weak pre-period presentation incentives and/or countervailing economic pressures. These patterns provide confirming evidence that ASU 2017-07's presentation change, rather than concurrent economic factors, drove the observed shifts in pension plan asset allocations.

4.5 Difference-in-Differences Test of the Presentation and/or Measurement Effects of IAS 19R

Table 6 presents the results of estimating equation (2), examining the effects of IAS 19R on investment risk-taking for IFRS reporting firms relative to U.S. GAAP firms. IAS 19R changed both the presentation and measurement of annual pension cost components. Thus, this analysis tests whether IFRS firms generally adjusted their asset allocation strategies relative to U.S. GAAP firms to estimate the combined presentation and measurement effects of IAS 19R. In subsequent analyses (Section 4.6), we

isolate just the presentation effect.

Like our results relating to the effects of ASU 2017-07, each panel reports results for one of our three dependent variables: *%Low Risk* (Panel A), *%Equity* (Panel B), and *Risk Spread* (Panel C). Within each panel, Column 1 reports the results for the 2011–2014 sample, while Column 2 reports the results for the extended 2011–2016 horizon. While the coefficients on *PostIAS*IFRS* are not significantly different from zero in Panel A ($p > 0.10$), the results in Table 6, Panels B and C, provide evidence that IFRS reporting firms significantly de-risked their pension portfolios compared to U.S. GAAP firms following the adoption of IAS 19R. Specifically, the 2011–2014 sample results in Panel B indicate that IFRS reporters reduced their equity allocations by 2.69 percentage points ($p < 0.10$) in the periods immediately following the standard change. Coefficient estimates in Panel C, column (1), where Risk Spread is the dependent variable, show a significant reduction in allocations to risky assets (−5.32%, $p < 0.10$), illustrating the overall shifts in plan asset strategy. Importantly, the results become stronger as we extend the post-period, indicating a long-term shift in plan strategy. The extended horizon specification (column 2) estimates a 3.13 percentage-point decrease in investments allocated to equity securities ($p < 0.10$). In economic terms, this reduction in equity allocations equates to a 6% relative decrease compared to pre-period equity investment levels and a per-firm average reallocation of approximately $50 million away from equity assets. Similar to our H1 results, the estimated change in *Risk Spread* corroborates a comprehensive reduction in risk-taking: IFRS reporting firms reduced their average *Risk Spread* by an estimated 6.02 percentage points ($p < 0.10$) following the standard change.

Interestingly, the IFRS coefficient is statistically significant across some specifications, indicating that the treatment and control groups had different baseline asset allocations prior to the standard change. Because our difference-in-differences design estimates group changes rather than levels, these baseline differences do not confound our estimates, provided parallel trends hold. We again analyze the potential significance of pre-period interaction terms as evidence of valid parallel trends between our treatment (IFRS) and control (U.S. GAAP) groups using an event study analysis. Appendix C, Panel B presents this analysis. Similar to our test of H1, the event study analysis indicates that across all three dependent

variables, pre-period trends are insignificant, reinforcing the validity of our inferences.

Taken together, these results provide evidence following IAS 19R that IFRS reporting firms reduced their pension risk-taking compared to a sample of unaffected U.S. GAAP firms. Because this analysis captures the response to all ER changes made by IAS 19R, it cannot distinguish whether the effects are attributable to the measurement change, presentation change, or both. We perform further analysis to determine whether the estimated effect is attributable to the change in presentation in Section 4.6.

-- Insert Table 6 Here –

4.6 Difference-in-Differences Test Isolating the Presentation Effect of IAS 19R

Table 7 presents the results of estimating equation (3), examining the effects of IAS 19R on investment risk-taking among IFRS firms with stronger vs. weaker OI presentation incentives. Using this within-IFRS sample approach allows us to test whether IFRS firms incrementally adjusted their asset allocation strategy in response to the presentation effect of IAS 19R, holding the measurement effect constant. Because IAS 19R applied to all IFRS-reporting firms simultaneously, all firms in this sample experienced the same measurement change (specifically, the elimination of a self-selected rate of asset return in the ER calculation). Consequently, any difference in de-risking behavior can be attributed to changes in the presentation incentives from this new standard.

Results are again reported for all three dependent variables: *%Low Risk* (Panel A), *%Equity* (Panel B), and *Risk Spread* (Panel C), utilizing both Full Sample and Restricted Sample specifications for a 2011–2014 sample period and an extended 2011–2016 period. In contrast to our previous results, Table 7 indicates no incremental shifts in investment risk-taking for IFRS firms with stronger OI presentation incentives *($p >$* 0.10). Further, unlike our previous tests, results weaken as we extend the time horizon in the full sample,

despite the increased sample size.[25]

Taken together, the results in Tables 6 and 7 allow us to decompose both aspects of IAS 19R's effect on pension risk-taking. Table 6 documents a significant effect of IAS 19R's changes to presentation and/or measurement, while Table 7 finds no incremental effect attributable to the presentation change alone. This pattern suggests that IAS 19R's impact on firms' pension risk-taking is primarily driven by the measurement change (i.e., the elimination of the self-selected expected rate of asset return from the ER calculation) rather than the reclassification of pension costs within the income statement from operating to non-operating income. This finding contrasts with our H1 results, in which ASU 2017-07's presentation-only change led to significant de-risking among US GAAP firms. We posit that this asymmetric reaction to the two presentation changes provides an important insight into the interaction between these different types of accounting changes. Specifically, our results indicate that when presentation and measurement changes occur simultaneously, the measurement change dominates firm responses, but when a presentation change occurs in isolation, it independently influences real economic decisions.

-- Insert Table 7 Here –

4.7. Cross-sectional Analysis of IAS 19R Presentation Incentives

To strengthen our inferences regarding IFRS reporters' responses to IAS 19R's presentation change and the differing responses to changes in presentation only versus changes to both presentation and measurement, we conduct two cross-sectional analyses. First, in line with the H1 cross-sectional analysis, we partition our within-IFRS sample by high vs. low NPIC (using the top one-third of sample firms based on pre-period NPIC as a cutoff) and re-run our tests of H2b.

This partition takes on a different interpretation in the IAS 19R setting than it did under ASU 2017-

[25] Although the within-IFRS sample is smaller than the samples used to test H1 and H2a, further analysis suggests that failing to reject the null hypothesis for H2b is due to insignificant effect sizes rather than low statistical power. An untabulated "effect size confidence" (ESC) analysis (Burks 2023) shows in our full-sample %Equity specifications, the probability of a modest plan asset reallocation exceeding 3% is only 45–50%. We interpret this ESC analysis to suggest there is a low probability of a modest reallocation effect. In addition, we find both statistically and economically significant effect sizes in corresponding cross-sectional analyses using even smaller sub-samples (see sections 4.7.1 and 4.7.2).

07. Under ASU 2017-07's presentation-only change, the NPIC partition isolates the strength of pre-period presentation incentives: high NPIC firms derived the largest pre-period OI benefit from risk-taking and, accordingly, de-risked the most when that benefit was removed. Under IAS 19R, however, the NPIC partition also now simultaneously captures exposure to IAS 19R's measurement change. Firms with high NPIC had large ER that more than offset pension interest costs, producing an OI and NI increasing effect each period. Following IAS 19R's measurement change, these firms lose that ER advantage but continue to face large interest costs flowing through NI. This creates a countervailing incentive to maintain risk-taking to support increased actual asset returns, thereby reducing any funding gap. Conversely, firms with low NPIC face smaller interest costs relative to ER and, therefore, experience less NI disruption from the measurement change, providing greater flexibility to de-risk. If the presentation effect were the dominant mechanism, we would expect the high NPIC subsample to exhibit the strongest response, as was the case under ASU 2017-07. If instead the measurement change dominates, we would expect the opposite pattern: limited response among high NPIC firms (due to countervailing NI incentives) and a stronger potential response among low NPIC firms (for whom de-risking is least costly in terms of NI effects).

Second, we examine whether the effects of IAS 19R vary across plans with different percentage funding levels. In this instance, we partition our sample into two subsamples based on Canadian-specific funding thresholds, which are similar to those in the US: Well-Funded plans (>80% funded status) and Underfunded plans (<80% funded status).[26] We again expect that if firms are responding to disruptions in presentation incentives, the strongest de-risking will be concentrated among well-funded plans and that underfunded plans will have more static responses, given continued plan management incentives toward

[26] Canadian pension regulations are administered at the provincial level for most firms, except federally regulated financial institutions which are regulated by the Office of the Superintendent of Financial Institutions (OSFI). OSFI guidelines indicate plan solvency below 80% triggers heightened supervisory intervention and more frequent reporting (OSFI Instruction Guide, 2016). The Financial Services Regulatory Authority of Ontario (FSRA), the Ontario pension plan regulator, uses the same thresholds. We selected the 80% funding threshold cutoff used in our research for IFRS firms because most Canadian firms in our sample are Ontario-based and additional reading suggests provincial funding regulation thresholds are generally consistent across provinces (Pension Benefits Standards Act 1985; Pension Benefits Act 1990). Importantly, however, our funded status measure, based on financial statement disclosures, may not perfectly align with pension regulations, which are based on a different regulatory funding measure – solvency – that could be measured differently across regulators and provide a source of measurement error in the proxy we use to identify well-funded and underfunded IFRs firms.

risk-taking.

4.7.1 Cross-sectional Analysis Across NPIC Levels

Table 8 presents the results of our cross-sectional analysis of H2b, partitioned by the pre-period NPIC. The results contrast strongly with our ASU 2017-07 cross-sectional findings. Under ASU 2017-07, de-risking was concentrated among high NPIC firms. Under IAS 19R, this pattern reverses: we find little evidence of incremental de-risking among high NPIC firms (Panel A), but significant de-risking among firms with low NPIC (Panel B).

In Panel A, coefficients for high NPIC firms are statistically insignificant across most specifications ($p > 0.10$), with only the 2011–2014 Full Sample specification in column (1) reaching marginal significance. These null results stand in contrast to the strong, consistent de-risking observed among high NPIC firms under ASU 2017-07, where the presentation-only change generated effects exceeding the full-sample estimates. We interpret this difference as evidence that high NPIC firms face countervailing incentives under IAS 19R that are absent under ASU 2017-07 to maintain investment risk-taking to support actual asset returns that can help reduce interest costs and offset downward effects on NI. Thus, even though the presentation change removes the OI benefit from risk-taking, the measurement change simultaneously introduces NI-related pressures that discourage de-risking for these firms reporting under IAS 19R.

In contrast, Panel B indicates significant de-risking among low NPIC firms. These effects strengthen as the time horizon extends, consistent with a sustained shift in plan investment strategy rather than a transitory response. We interpret this as evidence that firms with lower pension interest costs relative to ERs experience less NI disruption from IAS 19R's measurement change, providing greater flexibility to adjust asset allocations. For these firms, the measurement change does not generate countervailing pressure to maintain risk-taking, allowing them to de-risk in response to the combined effects of IAS 19R and other incentives to de-risk to minimize taxes and plan risk.

Importantly, this pattern provides additional evidence that IAS 19R's measurement change dominated firm responses. If the presentation effect were the primary mechanism, we would expect the high NPIC subsample to exhibit the strongest de-risking, mirroring our ASU 2017-07 results. The reversal

indicates that firms' asset allocation responses under IAS 19R are shaped primarily by the magnitude of their exposure to the measurement change, not by the strength of their pre-period presentation incentives. We interpret the findings to suggest that despite having the strongest presentation incentives, high NPIC firms are constrained from de-risking by the NI consequences of IAS 19R's measurement change, while low NPIC firms, with less measurement-related exposure, retain the flexibility to adjust.

-- Insert Table 8 Here --

4.7.2 Cross-sectional Analysis Across Varying Pension Funding Levels

Results in Table 9 provide estimates among IFRS firms with stronger OI presentation incentives, partitioned by plan funding status. Similar to our H1 cross-sectional analysis, we would expect any presentation effect to be concentrated in well-funded plans, which lack competing plan management incentives to increase risk-taking to reduce underfunding. Yet we again fail to find consistent significant incremental de-risking among well-funded IFRS plans (coefficients $p > 0.10$) in all but one specification with marginal significance (column 4 in Panel A). Further, our underfunded analysis (Panel B) documents no significant shifts among underfunded plans, consistent with our expectations that these firms retain plan management incentives that offset any response to the accounting change.

-- Insert Table 9 Here –

The cross-sectional results across Tables 8 and 9 reinforce the conclusion that IAS 19R's measurement change drove plan asset allocation responses. The NPIC cross-sectional tests reveal a pattern that is particularly informative; rather than finding uniform null results, we observe significant de-risking among low NPIC firms and null effects among high NPIC firms. This reversal from our ASU 2017-07 cross-sectional results, where high NPIC firms exhibited the strongest de-risking, provides additional evidence that the nature of the accounting change (presentation-only versus combined presentation and measurement) fundamentally alters the effects that drive firm responses. Together with the funding-level results, these cross-sectional findings provide additional evidence in our setting that presentation effects are observable in isolation but are dominated when accompanied by measurement changes.

5. CONCLUSION

This study investigates how income statement presentation incentives to manage earnings subtotals affect real economic decisions. Exploiting recent FASB and IASB changes to pension accounting standards, our analyses reveal two important findings. First, we provide evidence that U.S. GAAP firms with stronger OI presentation incentives reduced plan asset risk-taking to a greater extent than firms with weaker OI presentation incentives in response to ASU 2017-07 eliminating the ability to report ER in OI. These reductions are concentrated amongst firms whose ER had the most positive effect on OI and firms with well-funded plans. Second, while we find evidence that IFRS firms generally reduced risk-taking in response to IAS 19R's combined changes to presentation and measurement, we fail to find evidence of an incremental presentation effect. Cross-sectional results consistent with a measurement-dominated response further underscore this conclusion, as even in subsamples where pre-period presentation incentives were likely strongest, we find no incremental response. Together, these findings illustrate an important insight into the interaction between presentation and measurement changes in this setting: when both occur simultaneously, measurement dominates, and when presentation changes occur in isolation, they can independently influence firms' real economic decisions.

Our study makes several contributions. We extend the literature on "real" accounting effects by demonstrating that presentation incentives, independent of measurement, can affect real economic decisions and provide the first evidence that financial statement presentation alone influences firms' economic decisions. Further, by studying ASU 2017-07 and IAS 19R together, we provide new evidence on how presentation and measurement changes interact. Our finding that presentation effects are significant in isolation but undetectable when accompanied by measurement changes suggests these effects are not strictly additive. Instead, the salience of presentation may depend on whether underlying measurement rules change simultaneously.

Our study is subject to limitations that suggest avenues for future research. Our sample is limited to U.S. and Canadian firms, and the generalizability of our findings to other reporting environments is unclear. Further, while pension reporting standards provided an ideal setting to test our research objective,

whether similar presentation and measurement effects emerge in other accounting contexts remains an open question. Future research could examine whether the effects we document extend to other presentation-oriented settings. Most immediately, IFRS 18 (IASB 2024a), effective in 2027, requires all IFRS reporters to present an operating profit subtotal, classifying income and expenses into defined operating, investing, and financing categories while leaving recognition and measurement unchanged. IFRS 18 thus provides a broad presentation-only change well suited to testing whether the real effects of classification generalize beyond pension reporting.

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Appendix A. Income Statement and Footnote Disclosure Conventions of Pension Cost Components

Panel A: Recreated Income Statement Presentation of Pension Cost Components – U.S GAAP and IFRS

	BCE (2013) *Reported as if U.S. GAAP ($M)*			BCE (2013) *Reported under IFRS ($M)*		
	Pre 2017-07	**2017-07**	**Change**	**Pre IAS 19R**	**IAS 19R**	**Change**
Operating P&L:[a]						
Service Cost	(252)	(252)	–	(252)	(252)	–
Interest Cost	(850)	–	+850	(850)	–	+850
ER	1,205	–	−1,205	1,205	–	−1,205
Operating Income	**8,444**	**8,089**	**−355**	**8,444**	**8,089**	**−355**
Non-Operating P&L:						
Interest Cost	–	(850)	−850	–	(850)	−850
ER[b]	–	1,205	+1,205	–	763	+763
Net Income	**2,810**	**2,810**	**–**	**2,810**	**2,388**	**−442**

This panel illustrates the income statement presentation of pension cost components before and after ASU 2017-07 (U.S. GAAP) and IAS 19R (IFRS) using amounts disclosed in BCE Inc.'s fiscal 2013 annual report. All columns hold BCE's fiscal 2013 amounts fixed. The "Pre" columns are counterfactual presentations of the same amounts under prior guidance, not BCE's historical filings. Thus, any differences across columns reflect only the accounting changes. Under both standards, the presentation change moves the non-service components outside the operating income subtotal, reducing operating income identically (−355). Net income is unchanged under ASU 2017-07, which altered presentation only, but declines under IAS 19R (−442) because the standard also changed the measurement of the return-on-assets component. Prior service cost and actuarial gains and loss components have been omitted for simplicity.

[a] The components are displayed as individual line items here for illustration. As noted, in practice the components are aggregated within other line items (e.g., Cost of Goods Sold, Compensation Expense, Interest Expense).

[b] Under IAS 19R, the ER concept is subsumed. Interest cost on the benefit obligation and interest income (ER) on plan assets (calculated using the liability discount rate) are reported as a single net interest cost of $(87)M. The components are displayed separately and labeled as ER across all conventions to maintain comparability across panels.

Panel B: Recreated Pension Footnote Disclosure — U.S. GAAP, Before and After ASU 2017-07

	BCE (2013), *as if* U.S. GAAP ($M)	
Components of net periodic benefit cost (income):	Pre 2017-07	2017-07
Current service cost	252	252
Interest cost	850	850
Expected return on plan assets	(1,205)	(1,205)
Net periodic benefit cost (income)	**(103)**	**(103)**
Accompanying narrative disclosure:	None	See below

> *"The service cost component of net periodic benefit cost is included in operating expenses. All other components of net periodic benefit cost are presented in Other (income) expense in the consolidated income statements."*

This panel recreates the components-of-net-periodic-benefit-cost disclosure in the pension footnote under U.S. GAAP (ASC 715-20), holding BCE's fiscal 2013 amounts fixed. The component amounts, structure, and level of disaggregation are identical before and after ASU 2017-07: each component, including ER, was separately disclosed in both periods. The only disclosure added by ASU 2017-07 is a narrative sentence reproduced above (illustrative of typical post-adoption language), which identifies the income statement line item(s) in which the non-service components are presented when they are not reported as a separate line item.

Panel C: Recreated Pension Footnote Disclosure — IFRS, Before and After IAS 19R

BCE (2013), IFRS ($M)			
Pre IAS 19R		*IAS 19R*	
Current service cost	252	Current service cost	252
Interest cost	850	Net Interest Cost[d]	87
Expected return on plan assets	(1,205)		
Defined benefit cost recognized in P&L	(103)	Defined benefit cost recognized in P&L	339

This panel recreates the pension expense disclosure under IFRS before and after IAS 19R, holding BCE's fiscal 2013 amounts fixed. Unlike U.S. GAAP (Panel B), the disclosure itself is restructured: the interest cost and expected return components are eliminated and replaced by a single net interest cost. Holding the underlying plan constant, the expense recognized in profit or loss changes from net income of $103M to a net cost of $339M due to the change in ER measurement.

[d] Net interest cost is measured by applying the liability discount rate to the net defined benefit position: interest cost on the benefit obligation ($850M) less interest income on plan assets of $763M (4.9% discount rate × plan assets, per BCE's 2013 annual report), for a net cost of $87M. Notably, in its reconciliation disclosures, BCE labels the $763M using the legacy caption "expected return on plan assets" but the amount is measured using IAS 19R's convention.

Appendix B. Variable Definitions

Variable	Definition
Dependent Variables	
%Low Risk	Percentage of defined benefit pension plan assets allocated to fixed-income securities, cash, and cash-equivalent securities.
%Equity	Percentage of defined benefit pension plan assets allocated to equity securities.
Risk Spread	The difference between percent allocations to equity securities and percent allocations to fixed-income securities, cash, and cash-equivalent securities. A positive risk spread indicates increased risk-taking in plan asset allocations; a negative risk spread indicates reduced risk-taking in plan asset allocations.
Independent Variables	
OI Forecast	An indicator variable set equal to 1 in fiscal years when OI was forecasted by analysts, based on the following variable from Bloomberg Professional Services (BPS): BEST_OPP: Reflects the consensus estimate for operating income. The consensus estimate is the mean of sell-side analyst estimates in millions. It is calculated as the mean of sell-side analyst estimates contributed by various brokers and analysts. Bloomberg aggregates these external broker estimates to provide a standardized consensus figure for each metric. These are not the company's own projections or Bloomberg's internal forecasts. It serves as the baseline group in our test of the effects of changes in presentation incentives under ASU 2017-07 (H1) to identify US GAAP firms with OI presentation incentives.* *Due to potential data attrition issues identified after reviewing the BEST_OPP data, we have supplemented missing observations using IBES Detail's Operating Profit forecast observations.
Post ASU	An indicator variable set equal to 1 in fiscal years beginning on or after January 1, 2018, and 0 for fiscal years beginning before January 1, 2018.
Post IAS	An indicator variable set equal to 1 in fiscal years beginning on or after January 1, 2013, and 0 for fiscal years beginning before January 1, 2013.
IFRS	An indicator variable equal to one for firms reporting under IFRS and set equal to 0 for firms reporting under U.S. GAAP. It is used as the baseline group in our test of the presentation and/or measurement effects of IAS 19R (H2) to identify IFRS reporting firms.
Control Variables and Covariates Used for Entropy Balancing	
Funded Status	Calculated as the fair value of all plan assets divided by the reported plan's projected benefit obligation.
$Funded\ Status^2$	Funded status squared
Horizon	Pension plan investment horizon, measured as the natural log of the ratio of the projected benefit obligation to current period pension service costs.
Leverage	Financial leverage, measured as long-term debt divided by total firm assets.
Size	The natural log of total firm assets.
FVPA	Aggregate fair value of all plan assets held by firm pension plans at the end of the fiscal year.
Variables used to Partition Samples in Cross-Sectional Analysis	
Funded Status	Calculated as the fair value of all plan assets divided by the reported plan's projected benefit obligation.
Expected Returns (ER)	Annual pension expected return income included in Net Income as reported and disclosed in the footnotes to the financial statements. Calculated as the

	expected asset rate of return (or discount rate post IAS 19R) times beginning FVPA.
Pension Interest Cost	Annual pension interest expense included in Net Income as reported and disclosed in the footnotes to the financial statements. Calculated as selected plan discount rate times the beginning value of the PBO.
Net Pension Interest Cost	Annual pension expected return income less pension interest cost. This is a standard disclosure for IFRS firms following IAS 19R and has been imputed for U.S. GAAP reporting firms.

Appendix C. Parallel Trend Analysis

To validate the parallel trends assumption (e.g., Roberts and Whited 2013) of our difference-in-differences design, we re-estimate Equations 1 and 2 including an interaction term for each period in our sample. Coefficient estimates for each interaction term are outlined in the table below, with periods following the effective date of the standard change shaded. Across all dependent variables, we consistently observe insignificant pre-trends, validating this assumption for our analysis.

ASU 2017-07 applies to annual reporting periods beginning after December 15, 2017. Therefore, we begin the sample in 2014 and 2014 through 2016 are reported in Panel A as pre-treatment years. IAS 19R applies to annual periods beginning on or after January 1, 2013. Therefore, the sample period begins in 2011 coinciding with the mandatory adoption of IFRS in Canada. 2011 and 2012 are reported in Panel B as pre-treatment years.

Panel A: Within-U.S. GAAP Analysis

	(1)		(2)		(3)	
	% Low Risk	*t-statistic*	*% Equity*	*t-statistic*	*Risk Ratio*	*t-statistic*
Pre-Period						
***OI Forecast* * 2014**	-2.183	(-1.07)	2.239	(1.18)	4.420	(1.12)
***OI Forecast* * 2015**	-1.580	(-1.00)	1.342	(0.92)	2.909	(0.96)
***OI Forecast* * 2016**	0.974	(0.83)	-1.400	(-1.34)	-2.408	(-1.09)
***OI Forecast* * 2017 (base)**	-	-	-	-	-	-
Post-Period						
***OI Forecast* * 2018**	3.723***	(4.03)	-4.467***	(-4.50)	-8.151***	(-4.35)
***OI Forecast* * 2019**	4.384***	(4.02)	-5.370***	(-4.97)	-9.700***	(-4.54)
Controls	Yes		Yes		Yes	
Fixed Effects?	Firm and Year		Firm and Year		Firm and Year	
N (Firm-Year Obs.)	3,063		3,063		3,063	
Adj. R^2	0.858		0.873		0.865	

Panel B: U.S. GAAP vs. IFRS Analysis

	(1)		(2)		(3)	
	% Low Risk	*t-statistic*	*% Equity*	*t-statistic*	*Risk Ratio*	*t-statistic*
Pre-Period						
***IFRS* * 2011**	0.490	(0.25)	-0.729	(-0.39)	-1.218	(-0.32)
***IFRS* * 2012**	-1.168	(-0.92)	1.549	(1.28)	2.730	(1.12)
Post-Period						
***IFRS* * 2013 (base)**	-	-	-	-	-	-
***IFRS* * 2014**	3.168**	(2.13)	-3.350**	(-2.19)	-6.558**	(-2.19)
***IFRS* * 2015**	4.328**	(2.34)	-4.557**	(-2.46)	-8.909**	(-2.42)
***IFRS* * 2016**	2.874	(1.34)	-3.233	(-1.52)	-6.097	(-1.44)
Controls	Yes		Yes		Yes	
Fixed Effects?	Firm and Year		Firm and Year		Firm and Year	
N (Firm-Year Obs.)	3,247		3,247		3,247	
Adj. R^2	0.690		0.716		0.703	

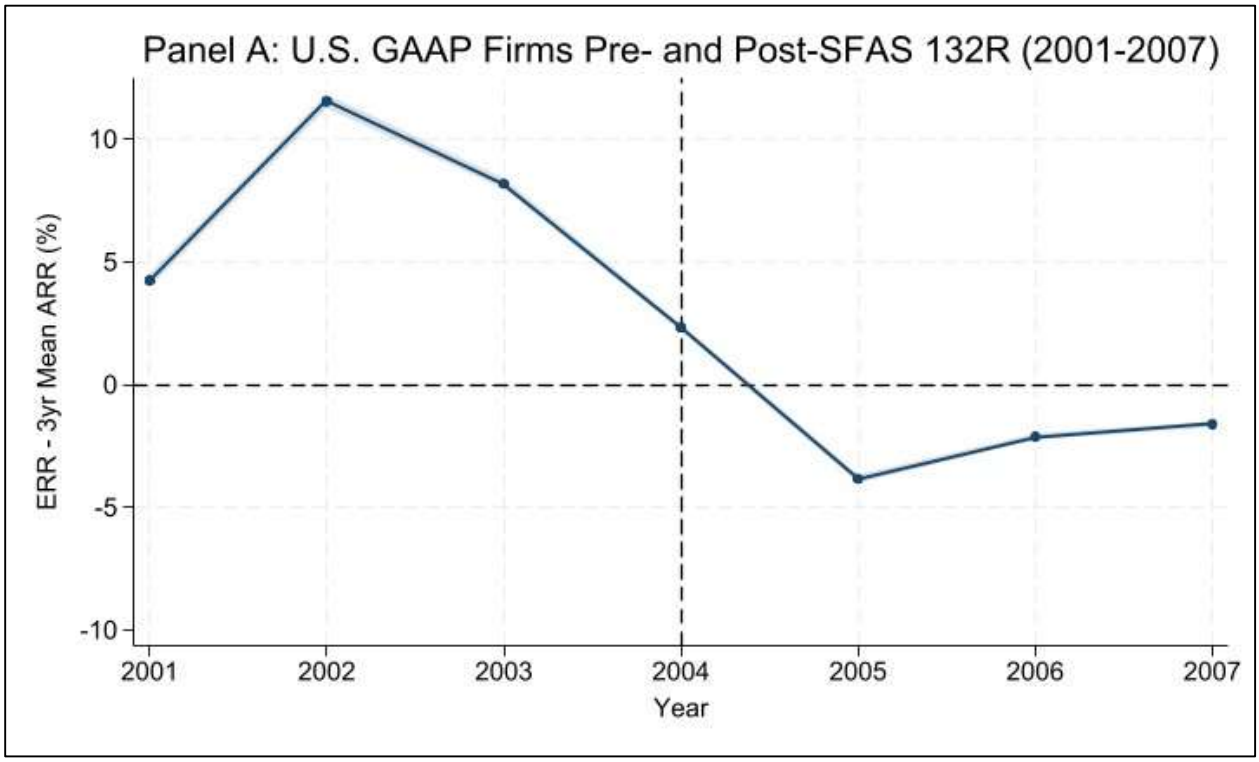
Appendix D. Entropy Balancing Procedures

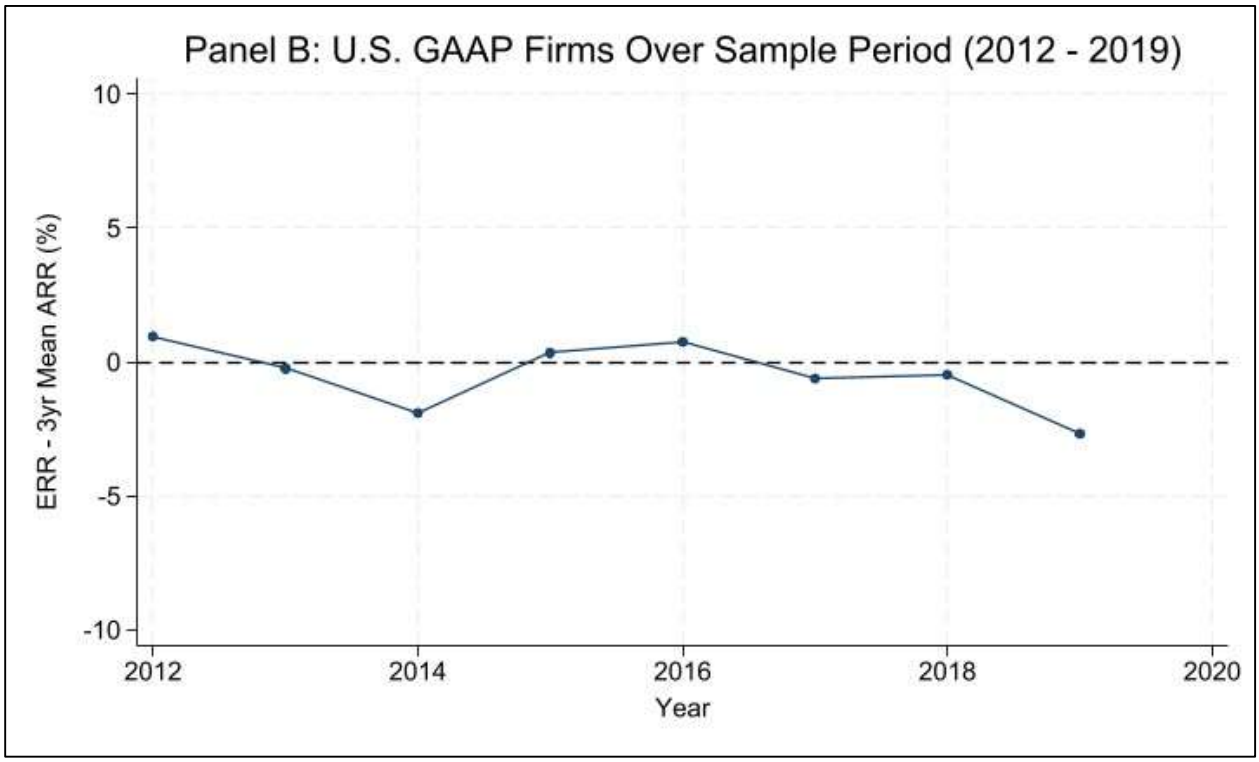
To address potential selection bias arising from observable differences between treatment and control groups, we employ entropy balancing (Hainmueller 2012). This reweighting approach adjusts the distribution of control group observations such that their covariate moments match those of the treated group, achieving balance without discarding observations or relying on parametric assumptions about the selection process. We balance on firm size, leverage, funded status (Amir and Bentarzi 1999; Bader 1991), funded status squared, the fair value of plan assets (Anantharaman and Chuk 2018), and investment horizon (Rauh 2009), all of which are characteristics likely to influence both treatment assignment and pension asset allocation decisions.

Weights are estimated using pre-treatment period data (2012 for analyses involving Canadian firms; 2017 for within-US analyses) and held constant across the panel to avoid introducing post-treatment bias. The table below reports covariate balance statistics before and after reweighting. Across all three samples, entropy balancing eliminates meaningful covariate imbalances, with standardized bias reduced by 96–100% and post-weighting standardized differences effectively zero for all covariates.

Panel A: H1 Within-US GAAP Sample – Pre and Post Covariate Balance Statistics						
Variable	**OI Forecast**	**Control (Pre-EB)**		**Control (Post-EB)**		**Bias Reduction**
	Mean	Mean	St. Bias	Mean	St. Bias	
Size	8.95	7.58	0.85***	8.95	0.00	99.9%
Leverage	0.32	0.19	0.75***	0.32	0.00	100%
Funded Status	0.81	0.85	-0.22**	0.81	0.01	97.2%
Funded Status^2	0.69	0.78	-0.31***	0.69	0.00	100%
FVPA ($M)	2.48K	0.33K	0.45***	2.47K	0.00	99.5%
Horizon	4.52	4.31	0.17**	4.52	0.00	100%
Panel B: H2a IFRS and US GAAP Sample – Pre and Post Covariate Balance Statistics						
Variable	**IFRS**	**US GAAP (Pre-EB)**		**US GAAP (Post-EB)**		**Bias Reduction**
	Mean	Mean	St. Bias	Mean	St. Bias	
Size	8.17	8.30	-0.07	8.17	0.00	100.0%
Leverage	0.26	0.26	0.01	0.26	0.00	100.0%
Funded Status	0.77	0.74	0.15*	0.77	0.00	100.0%
Funded Status^2	0.63	0.58	0.16**	0.63	0.00	100.0%
FVPA ($M)	1.09K	1.55K	-0.13*	1.09K	0.00	100.0%
Horizon	3.85	4.27	-0.39***	3.85	0.00	100.0%
Panel C: H2b Within-IFRS Sample – Pre and Post Covariate Balance Statistics						
Variable	**OI Forecast**	**Control (Pre-EB)**		**Control (Post-EB)**		**Bias Reduction**
	Mean	Mean	St. Bias	Mean	St. Bias	
Size	8.60	7.18	0.69***	8.60	0.00	100.0%
Leverage	0.25	0.27	-0.06	0.25	0.00	99.7%
Funded Status	0.76	0.78	-0.12	0.76	0.00	99.9%
Funded Status^2	0.61	0.66	-0.14	0.61	0.00	99.9%
FVPA ($M)	1.37K	0.54K	0.37**	1.37K	0.00	100.0%
Horizon	3.89	3.69	0.19	3.89	0.00	99.9%

Figure 1: Difference between Expected Rate of Return and Actual Rate of Return





IFRS firms follow a similar pattern to U.S. firms in Panel B over our sample window used to test H2a and H2b. Visualizations of these trends for IFRS firms are available upon request of the co-author team.

Table 1. Sample Composition

Panel A: Sample Selection

	# of Obs.
Total U.S. and Canadian DB Plan Firm Sponsor Years from 2011-2019	19,040
Less: Observations with missing asset allocation and firm identification data	-8,746
Less: Observations with missing PBO, plan asset, and annual pension component data	-84
Less: Observations missing all controls and singletons	-1,863
Less: Observations not covered by Bloomberg analyst/management forecasting data	-634
Less: Frozen-plan year observations	-1,412
	6,301

Panel B: Sample by Accounting Standard and Year

Standard	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
US GAAP	712	740	666	642	582	569	561	532	482	5,486
IFRS	112	118	93	94	87	87	80	79	65	815
Total	824	858	759	736	669	656	641	611	547	**6,301**

Panel C: OI Forecast Coverage

Standard	Analysts Forecast OI	No OI Forecast	Total
US GAAP	4,561	925	5,486
IFRS	598	217	815
Total	5,159	1,142	**6,301**

Table 2. Descriptive Statistics

Panel A: 2014-2019 US GAAP Sample (N= 3,081)					
	Mean	Std Dev	P25	P50	P75
%Low Risk	56.51	20.01	40.97	54.00	70.00
%Equity	41.44	19.68	28.00	43.00	57.00
Risk Spread	-15.09	39.51	-42.00	-10.67	16.05
Size	8.74	1.63	7.63	8.59	9.78
Leverage	0.30	0.19	0.16	0.30	0.40
Funded Status	0.81	0.18	0.71	0.80	0.90
Funded Status^2	0.68	0.30	0.51	0.65	0.82
Horizon	4.46	1.21	3.67	4.17	5.00
FVPA ($ in Millions)	2,110	4,410	128	454	1,760
Panel B: 2011 – 2016 IFRS Sample (N = 586)					
%Low Risk	49.94	16.10	39.00	47.00	59.90
%Equity	48.38	16.57	38.00	50.50	60.00
Risk Spread	-1.59	32.39	-22.00	4.00	20.00
Size	8.38	2.12	6.73	8.04	9.65
Leverage	0.27	0.18	0.13	0.25	0.40
Funded Status	0.81	0.21	0.73	0.85	0.94
Funded Status^2	0.71	0.31	0.53	0.72	0.88
Horizon	3.82	0.78	3.36	3.75	4.22
FVPA ($ in Millions)	1,660	3,670	44	159	1,260
Panel C: U.S. GAAP Sample Pre-and-Post Comparisons					
%Low Risk (Pre-Period)	54.20	19.40	39.70	51.23	67.00
%Equity (Pre-Period)	43.75	19.16	30.97	46.00	58.40
Risk Spread (Pre-Period)	-10.48	38.33	-36.00	-5.65	19.00
ERR (Pre-Period)	6.39	1.31	5.80	6.70	7.28
%Low Risk (Post)	61.49	20.41	44.70	61.34	76.00
%Equity (Post)	36.48	19.87	22.54	36.28	53.00
Risk Spread (Post)	-25.01	40.20	-52.20	-24.26	8.00
ERR (Post)	5.85	1.42	5.00	6.04	7.00
Panel D: IFRS Sample Pre-and-Post Comparisons					
%Low Risk (Pre-Period)	47.05	14.06	39.00	45.00	54.00
%Equity (Pre-Period)	51.41	14.89	44.00	53.00	60.00
Risk Spread (Pre-Period)	4.42	28.58	-8.00	9.40	20.00
ERR (Pre-Period)	6.14	1.03	6.00	6.30	6.90
%Low Risk (Post)	51.75	17.02	39.15	50.21	63.00
%Equity (Post)	46.48	17.29	33.23	47.21	59.00
Risk Spread (Post)	-5.35	34.06	-30.00	-2.00	20.00
ERR (Post)	3.85	1.30	3.00	3.70	4.70

All variables are defined in Appendix B

Table 3. H1 Difference-in-Differences Regressions using Within-US Sample

Panel A: Dependent Variable: %Low Risk

		2016-2019		2014-2019	
		Full Sample	Restricted Sample	Full Sample	Restricted Sample
	H1 Prediction	(1)	(2)	(3)	(4)
*Post ASU*OI Forecast*	+	3.18***	2.75***	4.53***	3.81***
		(3.20)	(2.82)	(4.01)	(3.48)
Funded Status		-30.83	-53.30**	-34.10	-32.25
		(-0.72)	(-2.37)	(-1.11)	(-1.56)
Funded Status^2		25.30	36.97***	26.87	25.96**
		(1.04)	(2.66)	(1.49)	(2.03)
Horizon		-0.67	1.86*	1.04	2.39**
		(-0.27)	(1.91)	(1.04)	(2.38)
Leverage		0.27	-3.16	-4.33	-7.50**
		(0.10)	(-1.59)	(-1.00)	(-2.02)
Size		-0.38	1.01	-0.73	0.67
		(-0.21)	(0.63)	(-0.64)	(0.44)
Firm and Year FE		Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes
Adjusted R^2		0.889	0.894	0.857	0.870
# of obs.		2,059	1,841	3,063	2,568

Panel B: Dependent Variable: %Equity

		2016-2019		2014-2019	
		Full Sample	Restricted Sample	Full Sample	Restricted Sample
	H1 Prediction	(1)	(2)	(3)	(4)
*Post ASU*OI Forecast*	-	-3.54***	-3.19***	-5.08***	-4.46***
		(-3.45)	(-3.20)	(-4.72)	(-4.24)
Funded Status		18.40	37.27**	26.30	22.13
		(0.47)	(2.07)	(0.90)	(1.18)
Funded Status^2		-18.10	-28.34**	-22.01	-20.12*
		(-0.81)	(-2.45)	(-1.29)	(-1.74)
Horizon		0.37	-1.79*	-1.03	-2.44**
		(0.27)	(-1.84)	(-1.04)	(-2.47)
Leverage		-0.71	1.11	3.93	6.40*
		(-0.31)	(0.54)	(1.01)	(1.79)
Size		0.53	-1.04	0.93	-0.30
		(0.30)	(-0.66)	(0.84)	(-0.21)
Firm and Year FE		Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes
Adjusted R^2		0.892	0.896	0.873	0.884
# of obs.		2,059	1,841	3,063	2,568

Table 3. Continued

Panel C: Dependent Variable: Risk Spread

		2016-2019		2014-2019	
		Full Sample	Restricted Sample	Full Sample	Restricted Sample
	H1 Prediction	(1)	(2)	(3)	(4)
*Post ASU*OI Forecast*	-	-6.64***	-5.86***	-9.56***	-8.19***
		(-3.30)	(-2.98)	(-4.32)	(-3.81)
Funded Status		49.59	91.30**	60.72	54.87
		(0.61)	(2.34)	(1.01)	(1.41)
Funded Status^2		-43.29	-65.35***	-48.73	-46.01*
		(-0.93)	(-2.64)	(-1.39)	(-1.91)
Horizon		0.69	-3.70*	-2.08	-4.85**
		(0.25)	(-1.92)	(-1.05)	(-2.44)
Leverage		-0.83	4.53	8.02	13.56*
		(-0.17)	(1.13)	(0.97)	(1.84)
Size		0.87	-2.08	1.55	-1.13
		(0.25)	(-0.65)	(0.69)	(-0.38)
Firm and Year FE		Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes
Adjusted R^2		0.889	0.895	0.864	0.876
# of obs.		2,059	1,841	3,063	2,568

This table reports the full sample (columns 1 and 3) and restricted sample (columns 2 and 4) regression results of the within-US test of H1. Our coefficient of interest is *PostASU*OIForecast*, which captures shifts in asset allocation by firms with stronger OI presentation incentives, following ASU 2017-07. We utilize two time horizons to test our results: 2016-2019 (columns 1 and 2) and 2014-2019 (columns 3 and 4). All continuous variables (including all three dependent variables) are winsorized at the 1st and 99th percentiles. *T*-statistics are reported in parentheses. All regressions are based on an entropy-balanced sample, including weights for appropriate treatment and control group comparisons. Significance levels are based on robust standard errors clustered at the firm level and are two-tailed for robustness. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. To validate the parallel trends assumption, we re-estimate all models after replacing *PostASU* with indicator variables for each year of the sample period except 2018, which serves as our base year (Roberts and Whited 2013). All year indicators are interacted with our treatment indicator (*OI Forecast*) to confirm that pre-period trends in asset allocation were consistent across treated and control firms. See Appendix C, Panel A.

Table 4. Within-US GAAP Regressions Partitioned by NPIC Level

Panel A: High NPIC

	2016-2019		2014-2019	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
DV: Risk Spread	(1)	(2)	(3)	(4)
*Post ASU*OI Forecast*	-6.10**	-8.11***	-8.15***	-8.59***
	(-2.20)	(-4.27)	(-3.58)	(-4.01)
Firm and Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.943	0.945	0.917	0.931
# of obs.	700	640	1,136	982

Panel B: Low NPIC

	2016-2019		2014-2019	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
DV: Risk Spread	(1)	(2)	(3)	(4)
*Post ASU*OI Forecast*	-4.01	-2.85	-3.26	-1.99
	(-0.96)	(-0.53)	(-0.65)	(-0.29)
Firm and Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.840	0.835	0.808	0.800
# of obs.	1,260	1,119	1,804	1,493

This table reports the within-U.S. regression results for subsamples split by annual Net Pension Interest Cost. Our coefficient of interest is *PostASU*OIForecast*, which captures shifts in asset allocation by firms with OI presentation incentives, following ASU 2017-07. We utilize two time horizons to test our results: 2016-2019 (columns 1 and 2) and 2014-2019 (columns 3 and 4). Controls utilized in columns 2 and 4 include: *Funded Status, Funded Status*^{2}*, Horizon, Size,* and *Leverage*, in line with our main tests in Table 3. T-statistics are reported in parentheses. All regressions are based on an entropy balanced sample, including weights for appropriate treatment and control group comparisons. Significance levels are based on robust standard errors clustered at the firm level and are two-tailed. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5. Within-US GAAP Regressions Partitioned by Plan Funded Status

Panel A: Well-Funded Plans (>80% Funded Status)

	2016-2019		2014-2019	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
DV: Risk Spread	(1)	(2)	(3)	(4)
*Post ASU*OI Forecast*	-8.99**	-9.30***	-8.63***	-7.27***
	(-3.80)	(-4.21)	(-4.12)	(-3.32)
Firm and Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.919	0.912	0.904	0.914
# of obs.	1,062	957	1,517	1,281

Panel B: Underfunded Plans (<80% Funded Status)

	2016-2019		2014-2019	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
DV: Risk Spread	(1)	(2)	(3)	(4)
*Post ASU*OI Forecast*	-4.81	0.81	-7.91**	-2.83
	(-1.22)	(0.20)	(-2.10)	(-0.69)
Firm and Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.829	0.832	0.789	0.779
# of obs.	887	781	1,447	1,203

This table reports the within-U.S. regression results for subsamples split as follows by pension funded status: Well-Funded plans with >80% funded status (Panel A) and Underfunded Plans with < 80% funded status (Panel B). Our coefficient of interest is *PostASU*OI Forecast*, which captures shifts in asset allocation by firms with OI presentation incentives, following ASU 2017-07. We utilize two time horizons to test our results: 2016-2019 (columns 1 and 2) and 2014-2019 (columns 3 and 4). Controls utilized in columns 2 and 4 include: Funded Status, Funded Status^2, Horizon, Size, and Leverage, in line with our main tests in Table 3. T-statistics are reported in parentheses. All regressions are based on an entropy balanced sample, including weights for appropriate treatment and control group comparisons. Significance levels are based on robust standard errors clustered at the firm level and are two-tailed. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 6. H2 Difference-in-Differences Regressions using IFRS-US GAAP Sample

Panel A: Dependent Variable: %Low Risk

		2011-2014	2011-2016
		Full Sample	Full Sample
	H2a Prediction	(1)	(2)
*Post IAS*IFRS*	+	2.60	2.87
		(1.63)	(1.59)
IFRS		2.66	3.14**
		(1.65)	(2.04)
Funded Status		40.61	48.12
		(1.39)	(1.31)
Funded Status^2		-25.53	-29.31
		(-1.60)	(-1.44)
Horizon		2.98**	0.93
		(2.08)	(0.95)
Leverage		-3.24	1.15
		(-0.41)	(0.16)
Size		-3.92	0.25
		(-1.19)	(0.10)
Firm and Year FE		Yes	Yes
Controls		Yes	Yes
Adjusted R^2		0.697	0.689
# of obs.		2,315	3,247

Panel B: Dependent Variable: %Equity

		2011-2014	2011-2016
		Full Sample	Full Sample
	H2a Prediction	(1)	(2)
*Post IAS*IFRS*	-	-2.69*	-3.13*
		(-1.73)	(-1.79)
IFRS		-2.04	-3.06*
		(-1.17)	(-1.74)
Funded Status		-40.99	-46.28
		(-1.44)	(-1.29)
Funded Status^2		25.31*	28.22
		(1.65)	(1.44)
Horizon		-2.95**	-1.13
		(-2.12)	(-1.18)
Leverage		2.32	-3.73
		(0.31)	(-0.53)
Size		3.15	-0.25
		(1.03)	(-0.11)

Table 6. Continued

Firm and Year FE		Yes	Yes
Controls		Yes	Yes
Adjusted R^2		0.724	0.714
# of obs.		2,315	3,247

Panel C: Dependent Variable: Risk Spread

		2011-2014	2011-2016
		Full Sample	Full Sample
	H2a Prediction	(1)	(2)
*Post IAS*IFRS*	-	-5.32*	-6.02*
		(-1.70)	(-1.70)
IFRS		-4.70	-6.19*
		(-1.49)	(-1.95)
Funded Status		-80.78	-94.12
		(-1.41)	(-1.30)
Funded Status^2		50.36	57.38
		(1.62)	(1.44)
Horizon		-5.93**	-2.07
		(-2.11)	(-1.08)
Leverage		5.57	-4.80
		(0.36)	(-0.34)
Size		7.04	-0.49
		(1.12)	(-0.10)
Firm and Year FE		Yes	Yes
Controls		Yes	Yes
Adjusted R^2		0.712	0.702
# of obs.		2,315	3,247

This table reports the full sample (columns 1 and 3) and restricted sample (columns 2 and 4) regression results for the cross-reporting test of H2a comparing IFRS firms to U.S. GAAP firms before and after IAS 19R. Our coefficient of interest is *PostIAS*IFRS*, which captures shifts in asset allocation by firms reporting under IFRS following IAS 19R. We utilize two time horizons to test our results: 2011-2014 (columns 1 and 2) and 2011-2016 (columns 3 and 4). All continuous variables (including all three dependent variables) are winsorized at the 1st and 99th percentiles. T-statistics are reported in parentheses. All regressions are based on an entropy balanced sample, including weights for appropriate treatment and control group comparisons. Significance levels are based on robust standard errors clustered at the firm level and are two-tailed. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. To validate the parallel trends assumption, we re-estimate each multivariate model after replacing PostIAS with indicator variables for each year of the sample period except 2012, which serves as our base year (Roberts and Whited 2013). All year indicators are interacted with our treatment indicator (*IFRS*) to determine if pre-period trends in asset allocation were consistent across treated and control firms. See Appendix C, Panel B.

Table 7. H2 Difference-in-Differences Regressions using Within-IFRS Sample

Panel A: Dependent Variable: %Low Risk

		2011-2014		2011-2016	
		Full Sample	Restricted Sample	Full Sample	Restricted Sample
	H2b Prediction	(1)	(2)	(3)	(4)
*Post IAS*OI Forecast*	+	2.78	3.94	2.40	5.33
		(1.15)	(1.18)	(0.99)	(1.53)
Funded Status		3.31	-24.75	6.97	-25.32
		(0.82)	(-0.62)	(0.20)	(-0.61)
Funded Status^2		-2.95	18.92	-7.68	15.77
		(-0.13)	(0.71)	(-0.34)	(0.58)
Horizon		-1.41	-0.83	-1.75	-2.20*
		(-0.81)	(-0.47)	(-1.03)	(-1.72)
Leverage		-1.93	-10.14	10.62	16.62
		(-0.19)	(-0.65)	(1.23)	(1.36)
Size		-7.45*	-6.44	-2.07	-1.35
		(-1.91)	(-1.53)	(-0.57)	(-0.35)
Firm and Year FE		Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes
Adjusted R^2		0.675	0.687	0.661	0.701
# of obs.		410	320	586	417

Panel B: Dependent Variable: %Equity

		2011-2014		2011-2016	
		Full Sample	Restricted Sample	Full Sample	Restricted Sample
	H2b Prediction	(1)	(2)	(3)	(4)
*Post IAS*OI Forecast*	-	-3.04	-4.18	-2.63	-5.58
		(-1.24)	(-1.25)	(-1.04)	(1.56)
Funded Status		-4.75	25.03	-8.01	27.37
		(-0.13)	(0.60)	(-0.22)	(0.65)
Funded Status^2		3.91	-19.31	8.12	-18.26
		(0.16)	(-0.69)	(0.34)	(-0.66)
Horizon		1.55	0.92	1.72	2.34*
		(0.88)	(0.53)	(0.99)	(1.92)
Leverage		1.06	8.92	-11.78	-18.68
		(0.11)	(0.58)	(-1.36)	(-1.53)
Size		6.29*	4.85	1.52	1.24
		(1.65)	(1.23)	(0.43)	(0.34)
Firm and Year FE		Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes
Adjusted R^2		0.720	0.730	0.703	0.733
# of obs.		410	320	586	417

Table 7. Continued

Panel C: Dependent Variable: Risk Spread

		2011-2014		2011-2016	
		Full Sample	Restricted Sample	Full Sample	Restricted Sample
	H2b Prediction	(1)	(2)	(3)	(4)
*Post IAS*OI Forecast*	-	-5.99	-8.31	-5.20	-11.09
		(-1.22)	(-1.25)	(-1.05)	(-1.58)
Funded Status		-7.24	51.26	-28.59	53.89
		(-0.10)	(0.63)	(-0.40)	(0.65)
Funded Status^2		6.19	-39.48	24.38	-35.09
		(0.13)	(-0.73)	(0.56)	(-0.65)
Horizon		2.93	1.72	3.03	4.52*
		(0.84)	(0.49)	(1.04)	(1.81)
Leverage		2.47	18.00	-13.32	-35.88
		(0.12)	(0.58)	(-0.79)	(-1.47)
Size		13.72*	11.25	3.95	2.52
		(1.78)	(1.39)	(0.52)	(0.34)
Firm and Year FE		Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes
Adjusted R^2		0.694	0.706	0.678	0.715
# of obs.		410	320	586	417

This table reports the Full Sample (columns 1 and 3) and Restricted Sample (columns 2 and 4) regression results for the within-IFRS test of H2b. Our coefficient of interest is PostIAS*OI Forecast, which captures shifts in asset allocation by IFRS firms with stronger OI presentation incentives following IAS 19R. We utilize two time horizons to test our results: 2011-2014 (columns 1 and 2) and 2011-2016 (columns 3 and 4). All continuous variables (including all three dependent variables) are winsorized at the 1st and 99th percentiles. T-statistics are reported in parentheses. All regressions are based on an entropy balanced sample, including weights for appropriate treatment and control group comparisons. Significance levels are based on robust standard errors clustered at the firm level and are two-tailed. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 8. Within-IFRS Regressions Partitioned by Plan Management Incentive Strength

Panel A: High NPIC

	2011-2014		2011-2016	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
DV: Risk Spread	(1)	(2)	(3)	(4)
*Post IAS*OI Forecast*	-9.92*	-3.62	-2.84	-8.21
	(-1.87)	(-0.66)	(-0.43)	(-1.13)
Firm and Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.668	0.719	0.613	0.660
# of obs.	139	99	198	138

Panel B: Low NPIC

	2011-2014		2011-2016	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
DV: Risk Spread	(1)	(2)	(3)	(4)
*Post IAS*OI Forecast*	-9.02	-19.05**	-9.79**	-23.47***
	(-1.60)	(-2.32)	(-1.96)	(-3.04)
Firm and Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.727	0.728	0.731	0.764
# of obs.	271	221	388	279

This table reports the within-IFRS regression results for subsamples split by pension interest expense. Our coefficient of interest is *PostIAS*OIForecast*, which captures shifts in asset allocation by firms with stronger OI presentation incentives following IAS 19R. We utilize two time horizons to test our results: 2011-2014 (columns 1 and 2) and 2011-2016 (columns 3 and 4). Controls utilized in columns 2 and 4 include: Funded Status, Funded Status^2, Horizon, Size, and Leverage, in line with our main tests in Table 6 and 7. T-statistics are reported in parentheses. All regressions are based on an entropy balanced sample, including weights for appropriate treatment and control group comparisons. Significance levels are based on robust standard errors clustered at the firm level and are two-tailed. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 9. Within-IFRS Regressions Partitioned by Plan Funded Status

Panel A: Well-Funded Plans (>80% Funded Status)

	2011-2014		2011-2016	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
DV: Risk Spread	(1)	(2)	(3)	(4)
*Post IAS*OI Forecast*	-7.36	-6.91	-8.61	-15.48*
	(-1.06)	(-0.90)	(-1.33)	(-1.91)
Firm and Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.722	0.733	0.750	0.773
# of obs.	230	176	348	245

Panel B: Underfunded Plans (<80% Funded Status)

	2011-2014		2011-2016	
	Full Sample	Restricted Sample	Full Sample	Restricted Sample
DV: Risk Spread	(1)	(2)	(3)	(4)
*Post IAS*OI Forecast*	1.30	-1.18	-1.57	-6.25
	(0.20)	(-0.14)	(-0.27)	(-0.73)
Firm and Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.708	0.704	0.668	0.728
# of obs.	154	126	216	156

This table reports the within-IFRS regression results for subsamples split as follows by pension funded status: Well-Funded plans with >80% funded status (Panel A) and Underfunded Plans with < 80% funded status (Panel B). Our coefficient of interest is PostIAS*OI Forecast, which captures shifts in asset allocation by firms with stronger OI presentation incentives following IAS 19R. We utilize two time horizons to test our results: 2011-2014 (columns 1 and 2) and 2011-2016 (columns 3 and 4). Controls utilized in columns 2 and 4 include: Funded Status, Funded Status^2, Horizon, Size, and Leverage, in line with our main tests in Table 6 and 7. T-statistics are reported in parentheses. All regressions are based on an entropy balanced sample, including weights for appropriate treatment and control group comparisons. Significance levels are based on robust standard errors clustered at the firm level and are two-tailed. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.