Income Statement Presentation and Information Asymmetry: International Evidence

Ahmet C. Kurt
Associate Professor of Accounting
Bentley University
Waltham, MA
akurt@bentley.edu

ABSTRACT: This study investigates how income statement presentation format affects information processing by financial analysts and investors. While many jurisdictions around the world permit firms to classify expenses either by function or by nature, the capital market consequences of this presentation choice remain unclear. I predict that the nature-of-expenses format, which omits cost of sales, imposes greater information acquisition and processing costs on analysts. Consistent with this view, the results show that fewer analysts provide gross profit margin forecasts for firms using the nature-of-expenses format, and that these forecasts exhibit lower accuracy and greater dispersion compared to those for firms using the function-of-expenses format. In contrast, evidence also indicates that a nature-based breakdown of expenses is associated with lower information uncertainty among investors. Bid-ask spreads, idiosyncratic risk, and short interest are lower for firms that classify expenses by nature rather than by function. Collectively, these findings suggest that although the nature-of-expenses format may obscure cost of sales information, the more detailed breakdown of expenses under this approach helps investors more effectively process firm-specific information.

Keywords: financial statement presentation; income statement; expense classification; analyst forecasts; information asymmetry

1. Introduction

This study examines the effect of income statement presentation format on information processing by financial analysts and investors. In the United States, the standard income statement format requires the classification of expenses by function (SEC 2001).[1] In contrast, International Financial Reporting Standards (IFRS) allow firms to choose between two presentation styles: categorizing expenses either by function or by nature (IASB 2024). The efficient markets hypothesis posits that income statement presentation should be irrelevant, as market participants can recast financial statements and process the relevant information regardless of the disclosure format (e.g., Al Jifri and Citron 2009; Altamuro et al. 2014; Kraft 2015). However, if information is lost or additional detail is introduced as a consequence of the presentation format, it may affect information asymmetry in capital markets. Using a large global data set, I test the capital market consequences of firms' use of the nature-of-expenses versus function-of-expenses format.

A standard item in the income statement prepared using the function-of-expenses method is cost of sales, with other expenses appearing under relevant functional categories such as selling, general, and administrative (SG&A) expenses, research and development (R&D) expenses, and administrative expenses (PwC 2023). Under this approach, firms report subtotals that facilitate the calculation of commonly used performance metrics such as gross margin. IAS 1 states: "This method can provide more relevant information to users than the classification of expenses by nature but allocating costs to functions may require arbitrary allocations and involve

[1] KPMG (2023) highlights: "Unlike IFRS, US GAAP has no requirement for expenses to be classified according to their nature or function. SEC regulations [Regulation S-X 210.5-03] prescribe expense classification requirements, unlike IFRS." Starting with annual reporting periods beginning after December 15, 2026, listed firms in the United States will be required to disclose information regarding the nature of expenses in the notes to the financial statements (FASB 2024).

considerable judgment." (IASB 2024, p. 1007). Although the standard acknowledges the potential informational impact of presentation format, it does not provide a detailed discussion. A key distinction is that, unlike the function-of-expenses method, firms do not report cost of sales when presenting income statements under the nature-of-expenses approach (PwC 2024). Instead, major expenses are categorized by type such as materials, personnel, and depreciation, without distinguishing between operational and administrative functions.

Interestingly, while a firm that categorizes expenses by function is required to disclose supplementary information on the nature of expenses, the same requirement does not apply under the nature-of-expenses method (IASB 2024).[2] When a firm classifies expenses by nature, it is not obligated to separately disclose information about cost of sales or to present a functional breakdown of operating costs. As a result, financial statement users have to rely on assumptions or estimates to infer cost of sales and gross margin.

Take Südzucker AG, a German sugar manufacturer, for example. The company uses the nature-of-expenses method and does not disclose its cost of sales in the financial statements. A search across major financial databases reveals notable discrepancies: Südzucker's 2024 cost of sales is reported as €6.80 billion in Compustat, €7.34 billion in IBES, and €8.36 billion in FactSet.[3] These figures, while all intended to capture the same economic construct, vary by a sizable amount. The discrepancy arises because each data provider applies its own methodology to estimate cost of sales based on available line items such as raw material costs, inventory changes, and personnel expenses. As this example illustrates, the estimated cost of sales under

[2] This requirement is not strictly followed in practice. Based on its analysis of 183 companies, the SEC (2011, p. 17) notes: "About one-third of companies that presented expenses by function did not disclose the nature of the amounts classified by function, as required by IFRS […] many companies did not disclose the nature of the costs included in cost of goods sold. Others disclosed the nature of some, but not all, costs included in cost of goods sold."
[3] In other databases, such as Mergent Online, cost of sales information for Südzucker AG is not presented within the standardized income statement, and the company's gross profit margin is reported as missing.

the nature-of-expenses method can vary depending on the assumptions made regarding the proportion of reported expenses allocated to operational versus administrative functions. This variation in assumptions may limit comparability across firms and lead to inconsistencies in financial analysis.

One view is that the absence of explicit cost of sales information may be inconsequential due to the wisdom of crowds (e.g., Da and Huang 2020; Da, Huang, and Jin 2021). When a sufficiently large number of estimates converge, they may collectively yield a reliable and meaningful consensus figure for analysis. Proponents of this perspective argue that market participants can infer missing information through alternative disclosures and estimation methods (e.g., Freyberger et al. 2025; Bryzgalova et al. 2025). However, this view is at odds with the extant literature on financial statement presentation and disaggregation (e.g., Riedl and Srinivasan 2010; Bartov and Mohanram 2014; Enache and Srivastava 2018). This stream of literature suggests that whether and how a particular financial statement information is presented (e.g., reporting advertising expense separately from SG&A expenses) affects information processing by capital market participants.

While the nature-of-expenses format likely changes the information available to market participants, it seems implausible to assume that it provides an inferior information set for investors. From a rational economic perspective, one could argue that firms would not adopt the nature-of-expenses method unless it offers certain informational benefits (Verrecchia 2001). Firms may prefer this method because it provides a more transparent view of the underlying economic drivers of performance, such as labor, materials, and amortization of intangibles rather than aggregating these items into functional categories that may obscure cost behavior. In fact, despite the lack of information on cost of sales, IAS 1 emphasizes that detailed information on

material costs, personnel expenses, and other items is helpful for predicting future cash flows (IASB 2024). In line with this view, Financial Accounting Standards Board (FASB) issued an accounting standards update in November 2024, requiring firms to disclose the disaggregation of expenses included in cost of sales and SG&A by their nature (FASB 2024). The Board highlights:

> […] investors observed that expense information is critically important in understanding a company's performance, assessing its prospects for future cash flows, and comparing its performance over time and with that of other companies. They indicated that more granular expense information would assist them in better understanding an entity's cost structure and forecasting future cash flows.

Given the plausibility of these alternative perspectives, it remains an empirical question whether classifying expenses by nature versus function affects information processing by capital market participants, and if so, in what manner. To address this question, I first examine the impact of income statement presentation format on analysts' forecasts of various financial statement items, including gross profit and stock price. I then investigate whether income statement presentation format has implications for information asymmetry in equity markets, as measured by bid-ask spread, idiosyncratic risk, and short interest. These metrics capture different facets of market participants' responses, including information uncertainty surrounding a stock and the processing of firm-specific information.

I obtained company, analyst, and market data from the following sources: Compustat Global, LSEG IBES International, and Global Stock Returns and Characteristics (Jensen, Kelly, and Pedersen 2023; hereafter JKP). The sample period for the stock characteristics tests spans fiscal years 1993-2023 and includes 116,322 firm-year observations across 30 countries. The financial analyst sample covers the period 2006-2023 and consists of 22,913 firm-year observations. By design, the sample includes only countries where firms present income

statements using either the function-of-expenses or the nature-of-expenses method. Among the largest markets represented are Australia, France, Germany, Sweden, and the United Kingdom. Across the sample, 34.9% of firms report their income statements under the nature-of-expenses approach, although this proportion varies substantially across countries.

My first set of tests examines the processing of gross profit margin (GPM) information by financial analysts, focusing on analyst coverage, forecast accuracy, and forecast dispersion. The results indicate that analyst coverage for GPM is 12.1% lower for firms that prepare their income statements using the nature-of-expenses method compared to the function-of-expenses method. In addition, the accuracy of analysts' GPM forecasts is 29.6% lower, while forecast dispersion is 37.7% higher under the nature-of-expenses approach. These findings suggest that the absence of explicit cost of sales disclosure impairs analysts' ability to process GPM information. Placebo tests reveal no comparable effects for other types of estimates (e.g., revenue forecasts), indicating that the documented results are not attributable to broader differences in the information environments of firms that use different income statement presentation formats. Moreover, the results remain robust to alternative estimation approaches, including propensity score matching and entropy balancing.

The second set of tests examines information processing by stock market participants, as reflected in bid-ask spreads, idiosyncratic risk, and short interest. I find that bid-ask spreads are 10.1% lower for firms that prepare their income statements using the nature-of-expenses method compared to the function-of-expenses method. This effect is more pronounced when expense salience is high, as proxied by the presence of losses or high expense uncertainty. Additionally, these firms exhibit 6.4% lower idiosyncratic risk and 16.2% lower short interest. These findings suggest that, despite the absence of explicit cost of sales disclosure, firms that classify expenses

by nature experience lower information asymmetry than those that classify expenses by function. Thus, consistent with standard setters' arguments, presenting the income statement under the nature-of-expenses method may provide informational benefits. In fact, IASB (2022) notes that while the board explored the idea of requiring issuers to disaggregate specified nature expenses by functions, it points out that doing so would be challenging for many issues as their accounting reporting systems are not suitable for this task and there is no such demand from investors. The Board writes (2022, p. 3.):

> The IASB also considered requiring an entity that presents its primary analysis of expenses using the nature of expense method to disclose in the notes an analysis of expenses using the function of expense method. However, it rejected such a requirement because there was no evidence of demand from users of financial statements for this disclosure.

My research provides evidence consistent with this view and contributes to the literature in three important ways. First, I extend prior research on financial statement presentation by examining the informational effects of firms' use of different income statement presentation formats. Existing studies primarily focus on the presentation of items within the face of the financial statements versus the notes, and on the disaggregation of specific expense categories such as SG&A (e.g., Riedl and Srinivasan 2010; Enache and Srivastava 2018), but offer limited insight into the implications of the overarching format used to classify operating expenses. Although the two presentation formats are permitted under IFRS, they remain largely unexplored in empirical capital markets research despite their potential to influence how users access and interpret core financial metrics. I document evidence suggesting that firms using the nature-of-expenses method do not experience significant adverse market outcomes, although they tend to receive less extensive and less accurate analyst coverage for gross margin forecasts.

Second, this study enhances the field's understanding of financial statement comparability. At first glance, one might assume that the lower comparability associated with the

nature-of-expenses approach would lead to negative capital market consequences. While this approach limits analysts' ability to forecast gross margin, it is nevertheless associated with positive stock market outcomes. These results indicate that enhanced transparency and granularity (Barth and Schipper 2007), particularly in the disaggregation of input costs like raw materials and personnel, can partially offset, or even outweigh, the drawbacks associated with the lack of uniformity in income statement presentation.

Third, my research informs practice by providing timely empirical evidence relevant to standard setters. The findings support the rationale behind FASB's (2024) recent decision to enhance disclosures regarding the nature of expenses and highlight the potential benefits of allowing flexibility in income statement presentation, as permitted under IFRS. Using the nature-of-expenses method may enhance informativeness of the income statement for some firms, and the ability to choose between the two income statement formats may help mitigate information asymmetry in capital markets.

The remainder of the paper is organized as follows. Section 2 provides institutional background on income statement presentation formats, reviews the relevant literature, and develops the hypotheses. Sections 3 and 4 describe the data sources and sample construction. Section 5 presents the empirical models and main results. Section 6 discusses a series of robustness tests, including subsample analyses and alternative specifications. Section 7 concludes with a discussion of the theoretical and practical implications of the findings.

2. Background and Hypothesis Development

A fundamental question in the disclosure literature is whether the way financial information is presented matters (e.g., Maines and McDaniel 2000; Schipper 2007). While existing frameworks provide guidance on what firms must disclose in their financial statements

and accompanying notes, there is no truly uniform structure for how that information should be organized or displayed (Ball 2006; Isidro, Nanda, and Wysocki 2016; Leuz and Wysocki 2016). As a result, financial statement comparability varies considerably both within and across jurisdictions (De Franco, Kothari, and Verdi 2011; Barth et al. 2012; Hoitash et al. 2023). This raises important questions about the role of presentation format in shaping users' interpretation and decision-making. Differences in presentation formats may impose additional costs on analysts and other users who need to adjust or recast financial information to facilitate analysis.

A notable example of diversity in global financial reporting practices is the income statement presentation format (e.g., Ding, Jeanjean, and Stolowy 2008; Hossfeld 2011; Nobes and Parker 2020), wherein many jurisdictions allow firms discretion in classifying operating expenses either by function (e.g., cost of sales, SG&A) or by nature (e.g., changes in inventory, raw materials, personnel expenses). Examples of such jurisdictions include Australia, Germany, France, Singapore, and the United Kingdom. In contrast, some countries mandate a single approach (PwC 2017), permitting only the function-of-expenses method (e.g., the United States) or the nature-of-expenses method (e.g., India). This diversity, which extends beyond IFRS and shaped by national regulatory standards, introduces variation in how firms communicate financial performance to users.

There are historical roots to this diversity. Different legal, economic, and institutional traditions have shaped national preferences for income statement presentation formats (Alexander and Archer 2003; Lourenço et al. 2018; Doupnik, Finn, and Gotti 2020). For instance, countries with strong tax-book alignment or code-law traditions, such as Italy, have historically required the nature-of-expenses method, which aligns more closely with statutory reporting requirements (Rocchi 1996; Riva 2022). Reporting expenses in their original categories

rather than by functional allocations makes it easier for tax authorities to track, verify and ensure compliance from a taxation perspective (Gavana, Guggiola, and Marenzi 2013). In contrast, common-law countries including the United Kingdom, Australia, and Singapore have emphasized the function-of-expenses method, reflecting a greater focus on performance measurement (Nobes and Parker 2020).

Two types of income statement formats, as suggested and simplified by the IASB (2024), are presented in Appendix A, with actual examples provided in Appendix B. Fundamentally, there is no difference between the two methods in the presentation of bottom-line profitability. Profits before tax, as well as the components needed to calculate net income, are presented separately. The key difference lies in users' inability to calculate a comparable top-line profitability metric. To determine gross profit, information on cost of sales (or cost of goods sold) is required. Under the function-of-expenses method, this information is readily available, along with expenses related to other functional areas such as distribution expenses and administrative expenses. In contrast, under the nature-of-expenses method, expenses are reported by type, such as raw materials, personnel costs, and amortization of intangibles, without allocating them into functional categories. As a result, cost of sales is not explicitly presented, preventing users from deriving gross profit directly from the income statement.

The structural difference in income statement presentation under the nature-of-expenses versus function-of-expenses method may pose a significant challenge for analysts (Nobes and Parker 2020). While analysts most commonly provide estimates for earnings per share, their forecasts of other income statement items, such as revenue and GPM, are also important (Cheng, Chu, and Ohlson 2020; Pope and Wang 2023). However, in the absence of explicit cost of sales information, forecasting top-line profitability becomes difficult. A fundamental issue is that there

is no consensus among data providers on how to define cost of sales under the nature-of-expenses method. While cost of materials and changes in inventory typically form the basis for cost of sales, omitting the proportionate share of operations-related personnel expenses, depreciation, and other expenses (e.g., utilities) results in underestimation. Due to higher information acquisition and processing costs, I predict that fewer GPM estimates, with lower accuracy and higher dispersion, will be available for firms that classify expenses by nature rather than by function. Supporting this prediction, prior research shows that when information processing costs are high, analysts are less likely to issue forecasts and their forecast accuracy tends to be lower (De Franco et al. 2011; Peterson, Schmardebeck, and Wilks 2015; Chychyla, Falsetta, and Ramnath 2022; Hoitash et al. 2023). Building on this literature, I hypothesize that:

H1: Analyst coverage and forecast accuracy for gross profit margin are lower, while forecast dispersion is higher, under the nature-of-expenses method compared to the function-of-expenses method.

A credible null for this hypothesis is that analyst outcomes may not be affected by income statement presentation format for several reasons. First, analysts may elicit information about margins during conference calls and private communication with management (e.g., Brown et al. 2015). Second, they may possess the expertise and resources to adjust for missing data by making reasonable assumptions based on historical patterns and peer disclosures (e.g., Ramnath, Rock, and Shane 2008). Third, the wisdom of crowds argument posits that, even in the presence of incomplete or noisy information, a large number of independent forecasts can converge toward an accurate consensus estimate (e.g., Da and Huang 2020). As a result, the absence of explicitly reported cost of sales under the nature-of-expenses method may not materially impair analysts' forecast performance.

A related question is whether and how investors' information processing is affected by income statement presentation format. In theory, if the underlying economic fundamentals are the same, the specific format of presentation should be inconsequential, assuming that users can recast the necessary information based on disclosures in the financial statements or notes. Although this rational markets-based view posits that information is processed efficiently by market participants regardless of how it is presented (e.g., Gopalakrishnan 1994; Bamber et al. 2010; Bratten et al. 2013; Mohanram et al. 2025), other studies suggest that financial statement presentation influences users' interpretation and decision-making (e.g., Atwood and Reynolds 2008; Hales and Orpurt 2013; Steffen 2022). These effects arise because different presentation formats alter information complexity, cognitive load, and processing costs, particularly for less sophisticated investors (e.g., Hirshleifer and Teoh 2003; Lachmann et al. 2015).

On the one hand, the nature-of-expenses method omits explicit cost of sales information. As discussed earlier, the absence of this subtotal may increase information acquisition and processing costs for market participants, particularly for those seeking to compute gross profit or related metrics (Nobes and Parker 2020). On the other hand, firms that classify expenses by nature provide a more detailed breakdown of operating costs. Unlike the function-of-expenses method, this approach offers disaggregated data on materials and personnel expenses, which are the two largest cost categories for many firms (Blocher, Stout, and Cokins 2010). This added granularity can provide a clearer view of the economic drivers underlying a firm's cost structure (FASB 2024; Chen et al. 2024). Prior research finds that more disaggregated accounting information is associated with lower information asymmetry in capital markets (Anderson 2015; Chen, Miao, and Shevlin 2015), consistent with the view that detailed disclosures enhance the informativeness of financial reports and facilitate decision-making by external users. In line with

this, standard setters argue that the nature-of-expenses method improves transparency by helping users better understand a firm's cost composition and identify trends over time. As the IASB (2017, p. 22) notes:

> Our outreach activities show that in general users favour an analysis of expenses using the 'nature of expense' method because it provides them with more granular information that they could use in their analysis. However, some users also like the 'function of expense' method because this information facilitates the calculation of some relevant performance metrics and margins.

These contrasting effects highlight a central tension in assessing the informational implications of income statement presentation format for investors. While the omission of cost of sales under the nature-of-expenses method may hinder users' ability to compute key performance metrics and increase information processing costs, the granular disaggregation of expense items may simultaneously improve transparency and facilitate a more detailed understanding of a firm's cost structure. Given these dual information effects (i.e., the loss of clarity on top-line profitability but the gain in input-level detail), I do not present a directional prediction and instead state my hypothesis in null form:

H2: Information uncertainty surrounding a firm is not associated with its income statement presentation format.

3. Data and Sample

There are three primary data sources for my empirical tests. First, I obtained financial statement data from Compustat Global, covering more than 48,000 unique publicly traded industrial firms outside the United States and Canada. Compustat Global provides a data item, income statement model number (ISMOD), which captures the income statement presentation format. ISMOD equals "01" for the cost of sales format and "02" for the purchase format.[4] This

[4] Compustat North America reports income statement data in the cost of sales format and does not differentiate between the two presentation methods. Therefore, it is not feasible to include Canadian firms in the sample.

item, as reported prior to fiscal year 2005, serves as the basis for my classification of income statement presentation method as "by function of expenses" and "by nature of expenses" (S&P Global 2021). I will discuss the details of this classification in the methodology section.

Second, I gathered data on stock characteristics, including bid-ask spread, idiosyncratic risk and market equity, from the WRDS Global Stock Returns and Characteristics database created by JKP (2023). This data set includes stock and accounting characteristics constructed based on Compustat Global and CRSP data. Third, I pulled data on analyst forecasts from LSEG IBES Global. My main focus is on gross profit margin estimates, which are available starting fiscal year 2006. For supplementary tests, I use data on analysts' revenue forecasts, book value forecasts, and stock price targets.

Additionally, I obtained information regarding short interest from the WRDS European Short Database, which summarizes significant short positions in European stocks as reported by institutional investors under the EU236 rule. This database covers 19 European countries (e.g., France, Germany, the United Kingdom), with more prevalent coverage starting in 2012.

The main sample period covers fiscal years 1993 through 2023, but the specific period varies across tables depending on data availability. To ensure relevance and reliability, I exclude: (1) financial firms (SIC 6000-6999), (2) firms headquartered in China, India, Italy, or Spain, (3) firms headquartered in countries where fewer than 5% of observations use the nature-of-expenses method or where fewer than 100 total firm-year observations are available for the entire sample period, (4) firms with total assets below $1 million, zero sales, or no common shares outstanding, and (5) firms with missing control variables.[5] The final sample comprises 116,322

[5] The choice of a 5% cutoff to exclude countries based on the usage of the nature-of-expenses method does not materially affect the results. This threshold is intended to ensure that there is sufficient within-country variation in income statement presentation formats to allow for meaningful comparisons. It also helps ensure that countries included in the analysis permit both presentation formats in practice, thereby reducing the likelihood of

firm-year observations for stock characteristics tests and 22,913 firm-year observations for analyst forecasts tests. Table 1 reports the fiscal year distribution.

I applied country filters to allow for meaningful within-country variation in the regression analyses. I excluded firms from India, Italy, and Spain because Indian Accounting Standards, the Italian Civil Code (Art. 2424-2425), and the Spanish National Chart of Accounts permit only the nature-of-expenses method in income statement preparation (Deloitte 2011; PwC 2017; Riva 2022). In contrast, China's Accounting Standards for Business Enterprises (ASBE 30) permit only the function-of-expenses method (Deloitte 2006; Riccardi 2016). Similarly, several other countries, including Japan, Korea, Jordan, and Egypt had no sample observations using the nature-of-expenses method. Given that all models include country fixed effects, these exclusions ensure the identification strategy relies on within-country variation in income statement presentation formats, avoiding potential confounding from cross-country institutional differences.[6]

As shown in Figure 1, there are 30 countries in the sample. The 10 most represented jurisdictions are the United Kingdom, Malaysia, Hong Kong, Australia, France, Germany, Singapore, Sweden, Switzerland, and South Africa, which collectively account for 83.6% of the sample.

4. Methodology

Compustat Global collects and normalizes financial items disclosed by firms using different terminology and presentation formats. Prior to 2005, the database applied limited

inadvertently including jurisdictions that de facto mandate the function-of-expenses method due to tax laws, securities regulations, or other institutional constraints. The conclusions remain robust to alternative cutoffs or removal of this filter.

[6] As a sensitivity, I remove the country filters and rerun the tests using data from all countries. My conclusions remain unchanged.

standardization to cost of sales, often reporting the figure as disclosed, if any, in annual reports (S&P Global 2021). Specifically, for firms preparing their income statements using the nature-of-expenses method, Compustat Global recorded cost of goods sold as zero and flagged ISMOD as "02", reflecting the absence of cost of sales data in the original reports.[7] Conversely, for firms using the function-of-expenses method, where cost of sales is a required line item, ISMOD was coded as "01," confirming the presence of functional classification and the availability of cost of sales data. This classification provides a useful proxy for distinguishing between the two presentation formats and serves as the basis for constructing the independent variable of interest in my empirical analysis.

Starting in 2005, Compustat Global adopted a uniform approach to reporting income statement information for all industrial firms by standardizing to the ISMOD "01" format. Under this approach, the database primarily uses "cost of materials" as a proxy for "cost of sales" for firms that report using the nature-of-expenses method, regardless of their original reporting format. While this change improves comparability for users interested in broader cost of sales data, it also obscures whether firms initially presented their expenses by nature or by function. Consequently, only pre-2005 ISMOD codes in Compustat Global reliably reflect firms' original income statement presentation formats. For the post-2005 period, I use each firm's last observed ISMOD classification prior to 2005 as a proxy for its reporting style. To validate this approach, I randomly selected 200 firm-year observations from this period and manually inspected the 173 available income statements, finding that the historical classification was 91% accurate.

[7] For some companies that follow the nature-of-expenses approach but present their income statements using different line items or structure, Compustat Global codes ISMOD as "04" and reports cost of sales as missing. An example is provided in Appendix C. I classify these firms under the nature-of-expenses category. Excluding these observations, representing 10.2% of the sample, does not alter the study's conclusions.

Table 2 reports the summary statistics. Thirty-five percent of sample firms prepare their income statements using the nature-of-expenses method, with significant variation across countries. As shown in Figure 2, the highest adoption rates are in Norway (75%), Finland (72%), and France (71%). Other continental European countries, such as the Netherlands (62%) and Germany (58%), also display relatively high usage of the nature-of-expenses method. In contrast, other larger economies exhibit lower proportions: Singapore (29%), Australia (25%), and the United Kingdom (16%).

Figure 3 presents the proportion of firms using the nature-of-expenses method across broad industry classifications. Notably, the highest adoption rates are observed in Transportation (48%) and Healthcare (40%) industries. In contrast, industries such as Retail (32%) and Mining, Oil, and Construction (26%) show lower adoption rates.

5. Empirical Tests and Results

5.1. Information processing by financial analysts

I begin by analyzing the implications of using the nature-of-expenses method for information processing by financial analysts. To test H1, I use a model adapted from De Franco et al. (2011). Specifically, I estimate the following OLS regression model using standard errors clustered at the firm level.

$$GPM\ forecast\ metric_{it} = \beta_0 + \beta_1 Nature\text{-}of\text{-}expenses_{it} + \sum \beta_m Controls_{m,it} + \varepsilon_{it} \quad (1)$$

where, the dependent variables are *ln(Coverage)*, *Accuracy* and *Dispersion*. I measure each metric based on the latest consensus estimate reported in IBES Global. *ln(Coverage)* is the natural logarithm of the number of analysts providing a GPM forecast. *Accuracy* is the negative value of the absolute difference between the consensus mean GPM forecast and the actual value, scaled by the actual value. *Dispersion* is the standard deviation of the consensus mean GPM forecast, scaled

by the consensus mean.

The list of control variables includes *ln(Market value)*, *Book-to-market*, *Sales-to-assets*, *Sales growth*, *ROA volatility*, *Return volatility*, *R&D, Depreciation*, *Issue*, *Special items, and ln(Days)*. The models also control industry, year, and country fixed effects. All variables are as defined in Appendix D. I winsorize all continuous variables at the 1% and 99% levels annually. Further, to facilitate the interpretation of estimated coefficients, I standardize continuous variables by subtracting their mean and dividing by standard deviation.

Because GPM estimates are not available prior to 2006, the sample period for this analysis is 2006 through 2023. On average, 2.7 analysts provide GPM forecasts. The mean of forecast accuracy and dispersion is -0.203 and 0.145, respectively. Table 3 presents the regression results. The results show that nature-of-expenses classification has a negative coefficient in the analyst coverage regression (β = -0.1286, $p < 0.01$; Column 1), indicating that fewer analysts provide GPM forecasts for firms using this method compared to the function-of-expenses approach. Economically, this translates to a 12.1% lower analyst coverage for firms classifying expenses by nature. This finding suggests that the lack of explicit cost of sales data may deter analysts from issuing GPM forecasts.

Further, the results reveal that the nature-of-expenses method is associated with less accurate and more dispersed GPM forecasts. In the forecast accuracy model, the variable has a negative coefficient (β = -0.0600, $p < 0.01$; Column 2), while it has a positive coefficient in the dispersion model (β = 0.0547, $p < 0.01$; Column 3). In economic terms, the estimated coefficients translate to a 29.6% lower forecast accuracy and a 37.7% higher forecast dispersion for firms using the nature-of-expenses method compared to the function-of-expenses method, on average. Collectively, these findings suggest that income statements organized according to the

nature-of-expenses approach may increase information processing costs for financial analysts, resulting in fewer GPM forecasts with lower accuracy and greater disagreement among analysts.

As an additional analysis, I conduct placebo tests using two other financial statement items—revenue and book value—whose estimations should theoretically not depend on the availability of cost of sales information and thereby the income statement presentation format. The results appear in Table 4.[8] While the nature-of-expenses method is negatively associated with the number of analysts providing revenue forecasts ($\beta = -0.0414$, $p < 0.05$; Column 1), it is not significantly associated with either revenue forecast accuracy ($\beta = 0.0020$, $p = 0.47$; Column 2) or revenue forecast dispersion ($\beta = -0.0015$, $p = 0.28$; Column 3). Similarly, results show that the expense classification method is not significantly associated with the number of analysts providing book value forecasts ($\beta = -0.0205$, $p = 0.25$; Column 4), book value forecast accuracy ($\beta = -0.0210$, $p = 0.28$; Column 5), or book value forecast dispersion ($\beta = -0.0006$, $p = 0.83$; Column 6).

These findings across both placebo metrics strengthen the conclusion that the primary results reflect specific information processing effects rather than the general difficulty of estimating financial metrics reported by firms using the nature-of-expenses method.[9] Next, I examine whether the use of nature-of-expenses versus function-of-expenses method has any implications for information asymmetry in equity markets.

5.2. Information processing by investors

The effect of income statement classification on investor information processing remains an empirical question. While the nature-of-expenses method obscures information on cost of

[8] Observation counts differ across analyses because data availability varies by forecast item in IBES.
[9] Further supporting this conclusion, I find no significant association of the income statement presentation format with analysts' EPS forecast accuracy ($\beta = 0.0170$, $p = 0.36$) or EPS forecast dispersion ($\beta = -0.0030$, $p = 0.70$).

sales information, it provides more granular expense disclosure (e.g., materials, personnel costs) that may help facilitate investors' analysis and valuation. Standard setters argue this granularity offers helpful insights for investors. To examine the stock market implications of the income statement presentation method (H2), I estimate the following OLS regression model with cluster-robust standard errors:

$$Stock\ characteristic_{it} = \beta_0 + \beta_1 Nature\text{-}of\text{-}expenses_{it} + \sum \beta_m Controls_{m,it} + \varepsilon_{it} \quad (2)$$

where the dependent variable is one of the three stock characteristics: bid-ask spread, idiosyncratic risk, and short interest. *ln(Bid-Ask spread)* is the natural logarithm of the average monthly bid-ask spread for the fiscal year. *ln(Idiosyncratic Risk)* is the natural logarithm of the standard deviation of market model residuals estimated over a five-year window. *Short interest dummy* is an indicator that equals one if institutional investors report having a significant short position (per the EU236 rule) in the company's stock during the fiscal year, and zero otherwise. The models include firm characteristics as well as industry, year, and country fixed effects.

Table 5 reports the results. The nature-of-expenses method is negatively associated with bid-ask spread ($\beta = -0.1063$, $p < 0.01$; Column 1), indicating lower information asymmetry among investors for firms that classify expenses by nature rather than by function. In economic terms, this represents a 10.1% difference in annual bid-ask spread, on average. Similarly, the nature-of-expenses method is negatively associated with idiosyncratic risk ($\beta = -0.0663$, $p < 0.01$; Column 2), highlighting firm-specific information processing benefits under this classification approach.[10] For the average firm in the sample, this translates to a 6.4% lower

[10] I obtain similar results when I re-estimate the regressions separately for the pre-2005 and post-2005 periods. During the pre-2005 period, the nature-of-expenses method is again negatively associated with bid-ask spread ($\beta = -0.0510$, $p < 0.01$) and idiosyncratic risk ($\beta = -0.0283$, $p < 0.01$). During the post-2005 period, this conclusion remains unchanged for both bid-ask spread ($\beta = -0.0808$, $p < 0.01$) and idiosyncratic risk ($\beta = -0.0722$, $p < 0.01$).

idiosyncratic risk. Taken together, these results suggest that nature-based expense classification is associated with lower investor uncertainty and reduced firm-specific risk exposure.[11]

Next, I examine whether a similar effect is observed for short selling. Given the lower information asymmetry, one would expect investors to be less likely to short shares of companies that present their expenses by nature rather than by function. Table 6 presents the results. Consistent with expectations, the findings reveal a negative association between the likelihood of significant short interest and the use of the nature-of-expenses method ($\beta = -0.0285$, $p < 0.01$; Column 1). Institutional investors are 2.85 percentage points less likely to hold significant short positions in shares of companies that classify expenses by nature, representing a 16.2% lower likelihood relative to the average firm in the sample. Using a continuous dependent variable that captures the sum of significant short interest (as a percentage of total shares) yields a similar result ($\beta = -0.1131$, $p < 0.01$; Column 2).[12]

I performed an additional analysis using stock price information provided by financial analysts, namely target stock price estimates. Unlike forecasts of specific items such as GPM, target stock price estimations incorporate a broader range of information, including operating expenses. Therefore, it is useful to examine whether analysts' target price estimates also reflect the positive implications of the nature-of-expenses method. My analysis focuses on the dispersion of target price estimates, which captures price uncertainty among analysts. As in

[11] I perform a robustness test by controlling for financial statement comparability using the measure developed by Hoitash et al. (2023). Their measure captures the ease of understanding financial statements by benchmarking it with industry peers. After including an international version of this measure into the models, the results remain consistent, suggesting that the findings are not driven by cross-sectional differences in overall financial statement comparability.

[12] As a supplementary test, in untabulated results, I examine whether the income statement presentation format also moderates the relationship between investors' short interest and return-on-assets (ROA). I find that the negative association between the short interest likelihood and ROA ($\beta = -0.0129$, $p < 0.01$) is stronger under the nature-of-expenses method ($\beta = -0.0183$, $p < 0.01$), further demonstrating the information-processing benefits of this classification approach.

previous analyses, I measure dispersion as the ratio of the standard deviation to the mean of analysts' consensus forecasts.

The results appear in Table 7. Analysts' target stock price dispersion is negatively associated with the nature-of-expenses method ($\beta = -0.0069$, $p < 0.01$), suggesting a lower degree of disagreement and uncertainty regarding future stock price. In economic terms, the dispersion in analysts' stock price forecasts is 4.3% when firms classify their expenses by nature rather than function, on average. This finding is consistent with the documented information processing benefits for investors.

5.3. Moderation analysis via expense salience

Next, I perform a moderation analysis to shed light on the proposed underlying mechanism. A central rationale for the use of the nature-of-expenses method is that it provides granular, input-level expense data, thereby enhancing users' ability to assess a company's economic fundamentals. Based on this view, the negative association between the nature-of-expenses method and information asymmetry should be more pronounced when expense salience is high. In such contexts, investors are more likely to focus on expense-related information, increasing the value of disaggregated disclosures for decision-making.

I use two proxies for expense salience: (1) loss indicator, and (2) high expense risk. *Loss* equals 1 if income before extraordinary items is negative, and 0 otherwise. *High expense risk* equals 1 if the standard deviation of operating expenses (scaled by sales) over the past five years is above the sample median; and 0 otherwise. To test the proposed moderating effect, I interact both variables separately with the nature-of-expenses method in equation (2).

The results appear in Table 8. Consistent with expectations, the nature-of-expenses method interacts negatively with the loss indicator to predict bid-ask spread ($\beta = -0.1009$, $p <$

0.01; Column 1) and idiosyncratic risk (β = -0.0400, $p < 0.01$; Column 3). Similarly, there is a negative interaction between the nature-of-expenses method and the high expense risk indicator in both the bid-ask spread (β = -0.0755, $p < 0.01$; Column 2) and idiosyncratic risk models (β = -0.0663, $p < 0.01$; Column 4). These results indicate that the effect of income statement presentation format on information uncertainty becomes more pronounced when expense salience is high versus low. This finding supports the notion that disaggregated expense information under the nature-of-expenses method can be particularly informative in settings where investors are likely to focus more closely on cost structure.

6. Robustness Tests

6.1. European Union countries

As a sensitivity test, I limit the sample to firms headquartered in current European Union member states, which accounts for 49.6% of the sample. Doing so presumably yields a more homogenous sample of observations from jurisdictions with more similar economic and institutional characteristics. I rerun the regression models for both analyst GPM forecasts and stock characteristics using this sample. Table 9 presents the results.

Consistent with the main results, in Panel A, I find that the nature-of-expenses method is again negatively associated with analyst coverage (β = -0.1419, $p < 0.01$; Column 1) and analyst GPM forecast accuracy (β = -0.0501, $p < 0.01$; Column 2), while it is positively associated with analyst GPM forecast dispersion (β = 0.0504, $p < 0.01$; Column 3). Similarly, in Panel B, I continue to obtain consistent results for bid-ask spread and idiosyncratic risk, which are both negatively associated with the nature of expenses method (β = -0.0731, $p < 0.01$; Column 1; β = -0.0439, $p < 0.01$; Column 2). In untabulated results, the results remain consistent for the subsample of firms headquartered in non-EU countries.

6.2. Propensity score matching

For robustness, I also run the analyses using a propensity score matching (PSM) approach (e.g., Hoitash, Hoitash, and Kurt 2016). This approach helps ensure that the treatment condition (i.e., the use of nature-of-expenses method) is uncorrelated with pertinent, observable firm characteristics. PSM also helps address a potential functional form misspecification, which is inherent to the multiple regression analysis (Shipman, Swanquist, and Whited 2017).

To calculate propensity scores, I estimate a logistic regression model using the same control variables included in the main models. After calculating propensity scores, I performed a nearest neighbor matching without replacement using a 0.01 caliper. I matched observations within each fiscal year, country, and two-digit SIC industry. The final sample includes 21,514 firm-year observations using the nature-of-expenses method (i.e., the treatment sample) and 21,514 matching observations using the function-of-expenses method (i.e., the control sample). To assess the economic significance of the reported differences, I calculated normalized differences (e.g., the ratio of the difference in means to the combined standard deviation). Because all the normalized differences are less than the suggested cutoff of 0.25 (Imbens and Wooldridge 2009), I conclude that the matching procedure was effective. It is worth noting that the regression estimations for hypothesis testing are “doubly robust” since I control for the full set of matching covariates in the regression models (Shipman et al. 2017).

Table 10 presents the PSM results. Using the matched sample does not change the conclusions. Compared with the control sample, analysts provide fewer GPM estimates for the treatment sample, with lower forecast accuracy and higher dispersion. Nevertheless, the treatment sample exhibits lower bid-ask spread and idiosyncratic risk. These results corroborate with the main findings.

6.3. Entropy balancing

Extant literature increasingly employs entropy balancing to strengthen causal inferences (e.g., Luo, Zhang, and Zhang 2025). This technique constructs comparable treatment and control groups through optimal sample reweighting (Hainmueller 2012). As an additional robustness test, I employed an entropy balancing approach, reweighting the sample so that the two groups of firms—those that classify expenses by nature and those that classify by function—are similar with respect to observed covariates. By preserving the full sample and ensuring covariate balance, entropy balancing enhances the internal validity of the analysis and complements my primary identification strategy.

Table 11 reports the entropy-balanced results. Consistent with the main findings, the nature-of-expenses method is again associated with less favorable analyst outcomes related to GPM forecasts, but also with lower bid-ask spreads and reduced idiosyncratic risk. These results substantiate my primary conclusions while mitigating potential concerns about pre-treatment differences between groups.

7. Conclusion

International accounting standards used in many jurisdictions permit firms to classify expenses by either nature or function. While the proportion of firms that organize their income statements by nature varies across countries, on average, one in three firms in my sample uses this approach. Yet, the informational implications of income statement presentation format are not well understood. Rational economic theory posits that firms select presentation formats that optimally represent their underlying business economics (e.g., Riedl and Srinivasan 2010), thereby maximizing informational utility for external users. This view aligns with the efficient markets hypothesis, which assumes that market participants can efficiently process information

regardless of its presentation format (e.g., Gopalakrishnan 1994; Bratten, Choudhary, and Schipper 2013).

One caveat is that the classification of expenses by nature versus function affects the type of information available to market participants (Nobes and Parker 2020). While the nature-of-expenses method offers more granular cost breakdowns (e.g., materials, personnel), it eliminates the reporting of cost of sales provided under the function-of-expenses approach. The absence of cost of sales data appears to increase information acquisition and processing costs for financial analysts attempting to forecast gross profit margin. The results reveal that when expenses are classified by nature rather than by function, fewer analysts provide gross profit margin forecasts, and the available forecasts tend to exhibit lower accuracy and greater dispersion. Importantly, this finding does not appear to stem from a broader difficulty in forecasting financial items for these firms. No similar patterns are observed in the accuracy or dispersion of forecasts for other metrics, such as revenue or book value.

While the nature-of-expenses method limits financial analysts' ability to process information related to gross profit margin, evidence suggests that breaking down expenses by nature helps investors better process firm-specific information. The results show that firms classifying their expenses by nature, rather than by function, exhibit narrower bid-ask spreads and lower idiosyncratic risk. Additionally, this informational effect of income statement presentation is magnified by expense salience. Hence, consistent with standard setters' arguments, this presentation format also offers certain advantages, with positive implications for information uncertainty. One potential way the nature-of-expenses method facilitates information processing is by enabling investors to better understand the composition of a firm's cost structure and assess firm-specific fundamentals (IASB 2017; FASB 2024).

The present research is not without limitations. The sample excludes countries that mandate the use of either the nature-of-expenses or the function-of-expenses method. This design choice allows for sufficient variation to conduct within-country analyses. While the results remain consistent when all countries are included, the paper does not address the economic or cultural factors that influence jurisdictions' decisions to mandate a particular income statement format or to allow flexibility in presentation. Institutional factors, such as tax reporting alignment, investor protection norms, legal origins, and historical accounting traditions, likely play an important role in shaping national preferences and regulatory frameworks (Alexander and Archer 2003; Nobes and Parker 2020). Understanding these contextual elements could provide richer insight into the cross-country variation in income statement presentation format and its implications for market outcomes. Future research could explore these institutional determinants and examine how regulatory environments shape this process. Also, despite the use of multiple robustness checks and alternative model specifications, endogeneity concerns cannot be fully ruled out. Accordingly, the results should be interpreted with this caveat in mind. Nonetheless, the consistency of findings across various outcome measures, along with supporting evidence from placebo tests and moderation analysis, helps mitigate some of these concerns.

In conclusion, this study extends the literature on financial statement presentation and disaggregation by documenting the implications of income statement expense classification for information processing by financial analysts and investors. Although allowing flexibility in income statement presentation may limit comparability across firms, it can simultaneously enhance the relevance of expense information for investors and help reduce firm-specific information uncertainty.

Appendix A. IAS 1 Presentation of Financial Statements (2024): The Statement of Profit or Loss

IAS 1 (p. 1004) states: "The first form of analysis is the 'nature of expense' method. An entity aggregates expenses within profit or loss according to their nature (for example, depreciation, purchases of materials, transport costs, employee benefits and advertising costs), and does not reallocate them among functions within the entity. This method may be simple to apply because no allocations of expenses to functional classifications are necessary. An example of a classification using the nature of expense method is as follows:"

Nature of Expense		
Revenue		X
Other income		X
Changes in inventories of finished goods and work in progress	X	
Raw materials and consumables used	X	
Employee benefits expense	X	
Depreciation and amortization expense	X	
Other expenses	X	
Total expenses		(X)
Profit before tax		X

IAS 1 (p. 1004) states: "The second form of analysis is the 'function of expense' or 'cost of sales' method and classifies expenses according to their function as part of cost of sales or, for example, the costs of distribution or administrative activities. At a minimum, an entity discloses its cost of sales under this method separately from other expenses. This method can provide more relevant information to users than the classification of expenses by nature, but allocating costs to functions may require arbitrary allocations and involve considerable judgement. An example of a classification using the function of expense method is as follows:"

Function of Expense	
Revenue	X
Cost of sales	(X)
Gross profit	X
Other income	X
Distribution costs	(X)
Administrative expenses	(X)
Other expenses	(X)
Profit before tax	X

Appendix B. Sample income statements for German companies

Nature of Expense: Südzucker AG

€ million	Notes	2023/24	2022/23	+/– in %
Revenues	**(06)**	**10,289**	**9,498**	**8.3**
Change in work in progress and finished goods inventories and internal costs capitalized	(07)	533	544	–2.0
Other operating income	(08)	169	176	–4.0
Cost of materials	(09)	–7,337	–6,951	5.6
Personnel expenses	(10)	–1,192	–1,061	12.3
Depreciation	(11)	–393	–342	14.9
Goodwill impairment	(11)	0	–47	–100.0
Other operating expenses	(12)	–1,157	–1,116	3.7
Result from companies consolidated at equity	(13)	2	30	–93.3
Result from operations	**(14)**	**914**	**731**	**25.0**
Financial income	(15)	82	75	9.3
Financial expense	(15)	–215	–126	70.6
Earnings before income taxes		**781**	**680**	**14.9**
Taxes on income	(16)	–133	–151	–11.9
Net earnings	**(18)**	**648**	**529**	**22.5**
of which attributable to Südzucker AG shareholders[1]		589	412	43.0
of which attributable to other non-controlling interests		59	117	–49.6
Earnings per share (€) – undiluted	**(18)**	**2.72**	**1.93**	**40.9**
Earnings per share (€) – diluted	**(18)**	**2.72**	**1.93**	**40.9**

Function of Expense: Henkel AG

in million euros		Note	2023	%	2024	%	+/-
Sales		24	**21,514**	**100.0**	**21,586**	**100.0**	**0.3%**
Cost of sales		25	-11,853	-55.1	**-10,765**	**-49.9**	-9.2%
Gross profit			**9,661**	**44.9**	**10,820**	**50.1**	**12.0%**
Marketing, selling and distribution expenses		26	-5,764	-26.8	**-6,132**	**-28.4**	6.4%
Research and development expenses		27	-587	-2.7	**-634**	**-2.9**	8.0%
Administrative expenses		28	-1,102	-5.1	**-1,176**	**-5.4**	6.7%
Other operating income		29	127	0.6	**111**	**0.5**	-12.9%
Other operating expenses		30	-324	-1.5	**-159**	**-0.7**	-50.9%
Operating profit (EBIT)			**2,011**	**9.3**	**2,831**	**13.1**	**40.8%**
Interest income			73	0.3	**101**	**0.5**	38.5%
Interest expense			-106	-0.5	**-113**	**-0.5**	6.9%
Other financial result			-90	-0.4	**-96**	**-0.4**	7.4%
Investment result			0	0.0	**0**	**0.0**	>100%
Financial result		31	**-122**	**-0.6**	**-108**	**-0.5**	**-11.8%**
Income before tax			**1,888**	**8.8**	**2,723**	**12.6**	**44.2%**
Taxes on income		32	-549	-2.6	**-691**	**-3.2**	25.9%
Tax rate	in %		29.1		**25.4**		
Net income			**1,340**	**6.2**	**2,032**	**9.4**	**51.7%**
Attributable to non-controlling interests		33	22	0.1	**25**	**0.1**	14.8%
Attributable to shareholders of Henkel AG & Co. KGaA			1,318	6.1	**2,007**	**9.3**	52.3%
Earnings per ordinary share – basic and diluted	in euros		3.13		**4.78**		52.7%
Earnings per preferred share – basic and diluted	in euros		3.15		**4.80**		52.4%

Appendix C. Sample nature-of-expenses income statement with different line items

consolidated income statement

for the financial year ended 30 April 2005

Freight Links Express Holdings Limited
annual report 2005

	Notes	2005 $'000	2004 $'000
Revenue	3	**86,776**	65,806
Other operating income	3	**361**	197
Freight and related costs		**(51,359)**	(38,758)
Rental expenses	6	**(5,973)**	(2,834)
Warehouse upkeep and related costs		**(3,958)**	(2,156)
Exhibition design and build costs		**(2,674)**	(2,432)
Depreciation and amortisation expenses	6	**(3,392)**	(2,644)
Staff costs	4	**(11,400)**	(7,032)
Other operating expenses		**(5,633)**	(5,593)
Amortisation of deferred revenue	24	**997**	-
Exceptional items	5	**7,208**	2,732
Profit from operations	6	**10,953**	7,286
Finance cost	7	**(1,728)**	(1,854)
Profit before tax		**9,225**	5,432
Income tax credit/(expense)	8	**1,634**	(533)
Profit from ordinary activities after tax		**10,859**	4,899
Minority interests		**(1,360)**	(235)
Net profit for the financial year		**9,499**	4,664
Earnings per share	9		
- Basic		**0.73 cents**	0.67 cents
- Diluted		**0.73 cents**	0.32 cents

Appendix D. Variable definitions

Dependent variables	
ln(Coverage)	Natural log of the number analysts providing a gross profit margin estimate. [IBES: numest]
Accuracy	Absolute value of the actual value of gross profit margin minus the consensus forecast scaled by the actual value. Multiplied by -1 for ease of interpretation. [IBES: actual and meanest]
Dispersion	Standard deviation of analysts' consensus gross profit margin forecast scaled by the consensus forecast. [IBES: stdev and meanest]
ln(Bid-Ask spread)	Natural log of average monthly bid-ask spread. [JKP (2023): Bidaskhl_21d]
ln(Idiosyncratic risk)	Natural log of idiosyncratic volatility. [JKP (2023): ivol_camp_60m]
Short interest dummy	Dummy equal to 1 if institutional investors report significant short position in the company's stock per the EU236 rule; 0 otherwise. [WRDS]
Short interest %	Sum of the % of significant short positions in the company's stock. [WRDS]
Independent variables	
Nature-of-expenses	Dummy equal to 1 if the firm prepares its income statement according to the nature-of-expenses method (i.e., purchase format); 0 otherwise. [Compustat Global: ismod]
ln(Market value)	Natural log of the market value of equity. [JKP (2023): me]
Book-to-market	Ratio of the book value of equity to the market value of equity [JKP (2023): be_me]
Sales-to-assets	Ratio of revenue to total assets. [Compustat Global: sale / at]
Sales growth	Ratio of change in revenue to lagged revenue. [Compustat Global: sale]
ROA	Ratio of net income to total assets. [Compustat Global: ib / at]
ROA volatility	Standard deviation of ROA over the past 5 years.
Return volatility	Standard deviation of stock returns during the year. [JKP (2023): rvol_252d]
R&D	Ratio of research and development expense to revenue, less the respective two-digit SIC industry mean [Compustat Global: xrd / sale]
Depreciation	Ratio of depreciation expense to revenue, less the respective two-digit SIC industry mean [Compustat Global: dp / sale]
Issue	Dummy equal to 1 if the firm issues debt or equity during the preceding, current, or following year; 0 otherwise. [Compustat Global: dltis or sstk]
ln(Days)	Natural log of the number of days from the forecast date to actual announcement date [IBES: statpers and anndats_act]
Special items	Absolute value of the ratio of special items to total assets. Missing values are set to zero. [Compustat Global: abs(spi) / at]
Beta	Market beta obtained from a CAPM model. [JKP (2023): beta_60m]
Asset tangibility	Almeida and Campello's (2007) tangibility measure. [JKP (2023): tangibility]
Leverage	Ratio of total debt to total assets. [JKP (2023): debt_at]
Loss	Dummy equal to 1 if the firm reports negative income; 0 otherwise. [Compustat Global: ib]
High expense risk	Dummy equal to 1 if the standard deviation of operating expenses (scaled by sales) over the past 5 years is above the sample median; 0 otherwise. [Compustat Global: xopr / sale].

References

Al Jifri, K., & Citron, D. (2009). The value-relevance of financial statement recognition versus note disclosure: Evidence from goodwill accounting. *European Accounting Review*, *18*(1), 123-140.

Alexander D., & Archer, S. (2003). *European Accounting Guide*. New York, NY: Aspen Publishers.

Almeida, H., & Campello, M. (2007). Financial constraints, asset tangibility, and corporate investment. *The Review of Financial Studies*, *20*(5), 1429-1460.

Altamuro, J., Johnston, R., Pandit, S., & Zhang, H. (2014). Operating leases and credit assessments. *Contemporary Accounting Research*, *31*(2), 551-580.

Anderson, J. D. (2015). *Disaggregated financial statement information in an unregulated environment.* Doctoral dissertation, Massachusetts Institute of Technology.

Atwood, T. J., & Reynolds, J. K. (2008). The pricing of realized tax benefits from NOL carryforwards: Effect of income statement presentation. *Journal of the American Taxation Association*, *30*(1), 1-27.

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

Bamber, L. S., Jiang, J., Petroni, K. R., & Wang, I. Y. (2010). Comprehensive income: Who's afraid of performance reporting? *The Accounting Review*, *85*(1), 97-126.

Barth, M. E., Landsman, W. R., Lang, M., & Williams, C. (2012). Are IFRS-based and US GAAP-based accounting amounts comparable? *Journal of Accounting and Economics*, *54*(1), 68-93.

Barth, M. E., & Schipper, K. (2008). Financial reporting transparency. *Journal of Accounting, Auditing & Finance*, *23*(2), 173-190.

Bartov, E., & Mohanram, P. S. (2014). Does income statement placement matter to investors? The case of gains/losses from early debt extinguishment. *The Accounting Review*, *89*(6), 2021-2055.

Blocher, E. J., Stout, D. E., & Cokins, G. (2010). *Cost management: A strategic emphasis*. New York, NY: McGraw-Hill.

Bratten, B., Choudhary, P., & Schipper, K. (2013). Evidence that market participants assess recognized and disclosed items similarly when reliability is not an issue. *The Accounting Review*, *88*(4), 1179-1210.

Brown, L. D., Call, A. C., Clement, M. B., & Sharp, N. Y. (2015). Inside the "black box" of sell-side financial analysts. *Journal of Accounting Research*, *53*(1), 1-47.

Bryzgalova, S., Lerner, S., Lettau, M., & Pelger, M. (2025). Missing financial data. *The Review of Financial Studies*, *38*(3), 803-882.

Chen, S., Miao, B., & Shevlin, T. (2015). A new measure of disclosure quality: The level of disaggregation of accounting data in annual reports. *Journal of Accounting Research*, *53*(5), 1017-1054.

Chen, Y., Jain, K., Li, N., & Rajgopal, S. (2024). Evaluating nature of expense classifications: Evidence from labor costs. Working Paper, Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5050805.

Cheng, C. A., Chu, K. K., & Ohlson, J. (2020). Analyst forecasts: sales and profit margins. *Review of Accounting Studies*, *25*, 54-83.

Chychyla, R., Falsetta, D., & Ramnath, S. (2022). Strategic choice of presentation format: The case of ETR reconciliations. *The Accounting Review*, *97*(1), 177-211.

Da, Z., & Huang, X. (2020). Harnessing the wisdom of crowds. *Management Science*, *66*(5), 1847-1867.

Da, Z., Huang, X., & Jin, L. J. (2021). Extrapolative beliefs in the cross-section: What can we learn from the crowds? *Journal of Financial Economics*, *140*(1), 175-196.

De Franco, G., Kothari, S. P., & Verdi, R. S. (2011). The benefits of financial statement comparability. *Journal of Accounting Research*, *49*(4), 895-931.

Deloitte (2006). China's new accounting standards: A comparison with current PRC GAAP and IFRS. Available at: http://www.aifa.org.cn/en/download/China%20Accounting%20Standards.pdf.

Deloitte (2011). Spanish national chart of accounts and consolidation rules in your pocket. Available at: https://iasplus.com/content/77927006-f94f-4634-b4c4-663f7f509491.

Ding, Y., Jeanjean, T., & Stolowy, H. (2008). The impact of firms' internationalization on financial statement presentation: Some French evidence. *Advances in Accounting*, *24*(1), 145-156.

Doupnik, T. S., Finn, M., & Gotti, G. (2020). *International Accounting*. McGraw-Hill Education.

Enache, L., & Srivastava, A. (2018). Should intangible investments be reported separately or commingled with operating expenses? New evidence. *Management Science*, *64*(7), 3446-3468.

FASB (2024). Accounting Standards Update 2024-03: Income Statement–Reporting Comprehensive Income–Expense Disaggregation Disclosures (Subtopic 220-40). Available at: https://www.fasb.org/page/ShowPdf?path=ASU%202024-03.pdf

Freyberger, J., Höppner, B., Neuhierl, A., & Weber, M. (2025). Missing data in asset pricing panels. *The Review of Financial Studies*, *38*(3), 760-802.

Gavana, G., Guggiola, G., & Marenzi, A. (2013). Evolving connections between tax and financial reporting in Italy. *Accounting in Europe*, *10*(1), 43-70.

Gopalakrishnan, V. (1994). The effect of recognition vs. disclosure on investor valuation: The case of pension accounting. *Review of Quantitative Finance and Accounting*, *4*, 383-396.

Hainmueller, J. (2012). Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political Analysis*, *20*(1), 25-46.

Hales, J., & Orpurt, S. F. (2013). A review of academic research on the reporting of cash flows from operations. *Accounting Horizons*, *27*(3), 539-578.

Hirshleifer, D., & Teoh, S. H. (2003). Limited attention, information disclosure, and financial reporting. *Journal of Accounting and Economics*, *36*(1-3), 337-386.

Hoitash, R., Hoitash, U., & Kurt, A. C. (2016). Do accountants make better chief financial officers? *Journal of Accounting and Economics*, *61*(2-3), 414-432.

Hoitash, R., Hoitash, U., Kurt, A. C., & Verdi, R. S. (2023). A measure of financial statement benchmarking. *The Accounting Review*, *98*(6), 253-281.

Hossfeld, C. (2011). Are IFRS income statements comparable? Working paper, Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1741191.

IASB (2017). Analysis of expenses by function and by nature. Available at: https://www.ifrs.org/content/dam/ifrs/meetings/2017/september/iasb/pfs/ap21b-primary-financial-statements.pdf.

IASB (2022). Analysis of operating expenses by nature in the notes. Available at: https://www.ifrs.org/content/dam/ifrs/meetings/2022/april/iasb/ap21a-analysis-of-operating-expenses-by-nature-in-the-notes.pdf

IASB (2024). IAS 1 Presentation of Financial Statements. Available at: https://www.ifrs.org/issued-standards/list-of-standards/ias-1-presentation-of-financial-statements/

Imbens, G. W., & Wooldridge, J. M. (2009). Recent developments in the econometrics of program evaluation. *Journal of Economic Literature*, *47*(1), 5-86.

Isidro, H., Nanda, D., & Wysocki, P. D. (2016). Financial reporting differences around the world: What matters? Working Paper, Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2788741.

Jensen, T. I., Kelly, B., & Pedersen, L. H. (2023). Is there a replication crisis in finance? *The Journal of Finance*, *78*(5), 2465-2518.

Kraft, P. (2015). Rating agency adjustments to GAAP financial statements and their effect on ratings and credit spreads. *The Accounting Review*, *90*(2), 641-674.

KPMG (2023). Income statement presentation: IFRS compared to US GAAP. Available at: https://kpmg.com/us/en/articles/2023/income-statement-presentation.html.

Lachmann, M., Stefani, U., & Wöhrmann, A. (2015). Fair value accounting for liabilities: Presentation format of credit risk changes and individual information processing. *Accounting, Organizations and Society*, *41*, 21-38.

Leuz, C., & Wysocki, P. D. (2016). The economics of disclosure and financial reporting regulation: Evidence and suggestions for future research. *Journal of Accounting Research*, *54*(2), 525-622.

Lourenço, I. C., Sarquis, R., Branco, M. C., & Magro, N. (2018). International differences in accounting practices under IFRS and the influence of the US. *Australian Accounting Review*, *28*(4), 468-481.

Luo, M., Zhang, F., & Zhang, X. (2025). Earnings management via not-wholly-owned subsidiaries. *Management Science*, *71*(1), 917-941.

Maines, L. A., & McDaniel, L. S. (2000). Effects of comprehensive-income characteristics on nonprofessional investors' judgments: The role of financial-statement presentation format. *The Accounting Review*, *75*(2), 179-207.

Mohanram, P., Sun, W., Xin, B., & Zhu, J. (2025). Does financial information presentation format matter? Evidence from Chinese firms' reporting of research and development expense. *Review of Accounting Studies*, forthcoming.

Nobes, C., & Parker, R. H. (2020). *Comparative International Accounting*. Pearson.

Peterson, K., Schmardebeck, R., & Wilks, T. J. (2015). The earnings quality and information processing effects of accounting consistency. *The Accounting Review*, *90*(6), 2483-2514.

PwC (2017). IFRS, US GAAP, Ind AS and Indian GAAP: Similarities and differences. Available at: https://www.pwc.in/assets/pdfs/publications/2017/ifrs-us-gaap-ind-as-and-indian-gaap-similarities-and-differences.pdf.

PwC (2023). Financial statement presentation. Available at: https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/assets/pwcfinlstmtpresentn0423.pdf.

PwC (2024). Format of the income statement. Available at: https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_3_income_sta_US/33_format_of_the_inc_US.html#pwc-topic.dita_1421043012145390.

Pope, P. F., & Wang, T. (2023). Analyst ability and research effort: non-EPS forecast provision as a research quality signal. *Review of Accounting Studies*, *28*(3), 1263-1315.

Ramnath, S., Rock, S., & Shane, P. (2008). The financial analyst forecasting literature: A taxonomy with suggestions for further research. *International Journal of Forecasting*, *24*(1), 34-75.

Riccardi, L. (2016). *China accounting standards: Introduction and effects of new Chinese accounting standards for business enterprises*. Singapore: Springer.

Riedl, E. J., & Srinivasan, S. (2010). Signaling firm performance through financial statement presentation: An analysis using special items. *Contemporary Accounting Research*, *27*(1), 289-332.

Riva, P. (2022). Structure and Contents of (Italian) Financial Statements. In *Lessons of Business Administration and Accounting*, 199-226.

Rocchi, F. (1996). Accounting and taxation in Italy. *European Accounting Review*, *5*, 981-989.

Schipper, K. (2007). Required disclosures in financial reports. *The Accounting Review*, *82*(2), 301-326.

SEC (2001). *Code of Federal Regulations: Chapter II – Securities and Exchange Commission*. Available at CFR-2001-title17-vol2.pdf.

SEC (2011). Staff paper: An analysis of IFRS in practice. Available at: https://www.sec.gov/spotlight/globalaccountingstandards/ifrs-work-plan-paper-111611-practice.pdf.

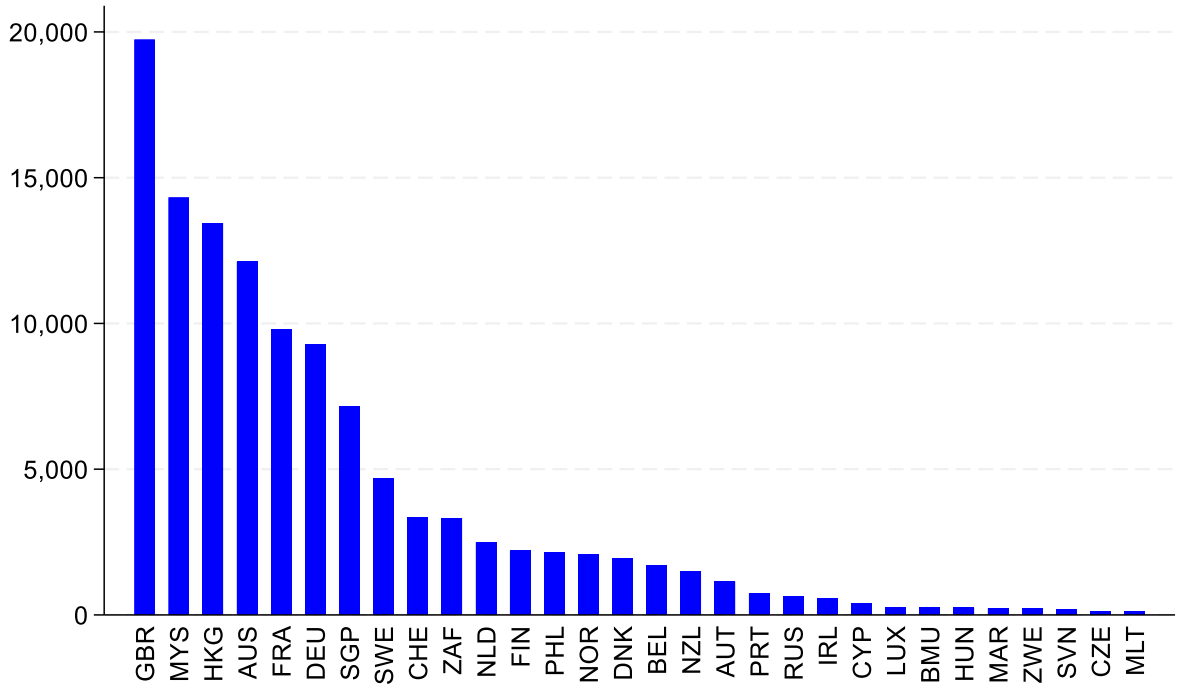
Shipman, J. E., Swanquist, Q. T., & Whited, R. L. (2017). Propensity score matching in accounting research. *The Accounting Review*, *92*(1), 213-244.

S&P Global (2021). Compustat Data Guide. Available at: https://wrds-www.wharton.upenn.edu/documents/1583/Compustat_Data_Guide.pdf.

Steffen, T. D. (2022). The information asymmetry effects of expanded disclosures about derivative and hedging activities. *Management Science*, *68*(8), 6298-6325.

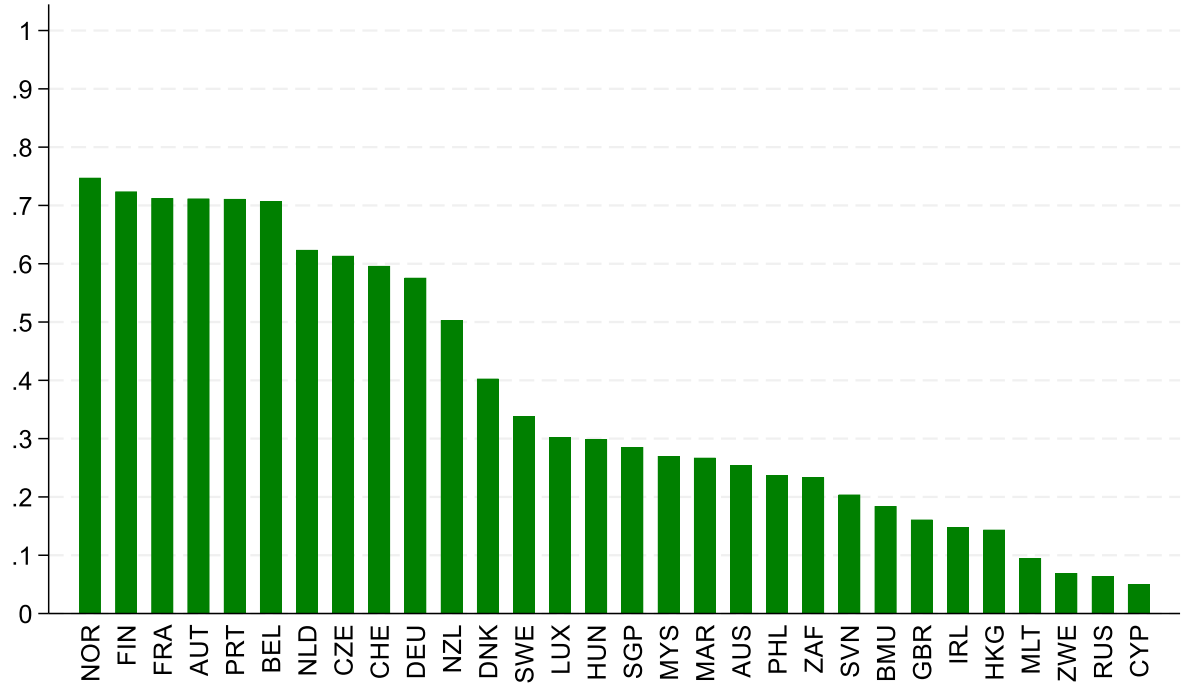
Verrecchia, R. E. (2001). Essays on disclosure. *Journal of Accounting and Economics*, *32*(1-3), 97-180.

Figure 1. Frequency of observations across countries



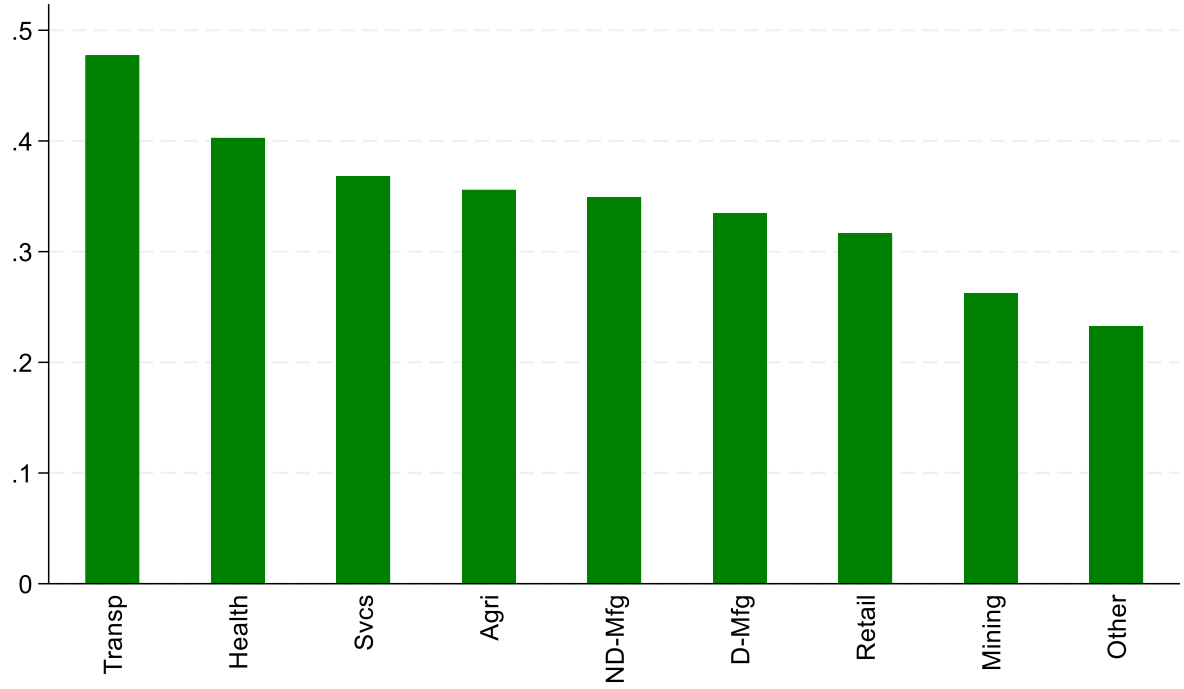
Notes: This figure presents the frequency of firm-year observations across countries in the sample. Country of location is determined based on the firm's corporate headquarters. The sample period covers fiscal years 1993-2023.

Figure 2. The proportion of firms using the nature-of-expenses method across countries



Notes: This figure presents the usage rate of the nature-of-expenses method by country in the sample. Country of location is determined based on the firm's corporate headquarters. The sample period covers fiscal years 1993-2023.

Figure 3. The proportion of firms using the nature-of-expenses method across industries



Notes: This figure presents the usage rate of the nature-of-expenses method by industry. Industries are defined based on one-digit SIC. The sample period covers fiscal years 1993-2023.

Table 1. Year Distribution

Year	Obs.	%
1993	1,192	1.02
1994	1,270	1.09
1995	1,395	1.20
1996	1,721	1.48
1997	1,963	1.69
1998	2,564	2.20
1999	2,952	2.54
2000	3,131	2.69
2001	3,288	2.83
2002	3,410	2.93
2003	3,763	3.23
2004	4,184	3.60
2005	4,583	3.94
2006	4,846	4.17
2007	5,018	4.31
2008	5,139	4.42
2009	5,273	4.53
2010	5,301	4.56
2011	5,173	4.45
2012	5,006	4.30
2013	4,904	4.22
2014	4,778	4.11
2015	4,609	3.96
2016	4,459	3.83
2017	4,301	3.70
2018	4,166	3.58
2019	3,983	3.42
2020	3,819	3.28
2021	3,722	3.20
2022	3,539	3.04
2023	2,870	2.47
Total	116,322	100%

Table 2. Summary Statistics

Panel A: Financial analyst sample					
	Mean	Std.	P25	P75	Obs.
ln(Coverage)	0.700	0.718	0.000	1.099	22,913
Accuracy	-0.203	0.421	-0.205	-0.014	22,913
Dispersion	0.145	0.236	0.013	0.167	13,265
Nature-of-expenses	0.319	0.466	0.000	1.000	22,913
ln(Market value)	7.068	1.891	5.720	8.385	22,913
Book-to-market	0.729	0.708	0.292	0.909	22,913
Sales-to-assets	0.955	0.630	0.524	1.223	22,913
Sales growth	0.050	0.221	-0.015	0.142	22,913
ROA volatility	0.044	0.055	0.014	0.051	22,913
Return volatility	0.025	0.011	0.018	0.030	22,913
R&D (industry adj.)	-0.000	0.067	-0.017	-0.000	22,913
Depreciation (industry adj.)	-0.015	0.052	-0.037	0.001	22,913
Issue	0.654	0.476	0.000	1.000	22,913
ln(Days)	2.619	0.843	1.946	3.258	22,913
Special items	0.012	0.030	0.000	0.010	22,913

Panel B: Stock characteristics sample					
	Mean	Std.	P25	P75	Obs.
ln(Bid-Ask spread)	-4.433	0.813	-5.022	-3.975	100,867
ln(Idiosyncratic risk)	-2.207	0.533	-2.599	-1.843	116,322
Short interest dummy	0.176	0.381	0.000	0.000	22,643
Short interest %	0.393	1.252	0.000	0.000	22,643
Nature-of-expenses	0.349	0.477	0.000	1.000	116,322
ln(Market value)	5.002	2.145	3.401	6.421	116,322
Book-to-market	1.122	1.267	0.379	1.373	116,322
Beta	1.015	0.548	0.656	1.309	116,322
Sales growth	-0.082	1.093	-0.066	0.151	116,322
ROA	-0.005	0.177	-0.013	0.069	116,322
ROA volatility	0.090	0.173	0.017	0.083	116,322
Asset tangibility	0.647	0.221	0.516	0.779	116,322
Leverage	0.199	0.167	0.049	0.309	116,322

Notes: The financial analyst sample covers fiscal years 2006-2023. The stock characteristics sample covers fiscal years 1993-2023. Short interest data are available beginning in 2012. All continuous variables are winsorized at the 1st and 99th percentiles.

Table 3. Analysts' gross profit margin forecasts

	Dependent variable =		
	ln(Coverage)	*Accuracy*	*Dispersion*
	(1)	(2)	(3)
Nature-of-expenses	-0.1286***	-0.0600***	0.0547***
	(0.0178)	(0.0126)	(0.0084)
ln(Market value)	0.4484***	-0.0157***	0.0281***
	(0.0100)	(0.0060)	(0.0044)
Book-to-market	0.0259***	-0.0299***	0.0341***
	(0.0066)	(0.0050)	(0.0042)
Sales-to-assets	0.0323***	0.0042	0.0028
	(0.0099)	(0.0055)	(0.0038)
Sales growth	-0.0051	0.0160***	-0.0136***
	(0.0037)	(0.0041)	(0.0027)
ROA volatility	-0.0100*	-0.0122***	0.0115***
	(0.0057)	(0.0041)	(0.0039)
Return volatility	0.0532***	-0.0238***	0.0133***
	(0.0070)	(0.0050)	(0.0041)
R&D	0.0423***		
	(0.0079)		
Depreciation	-0.0097		
	(0.0078)		
Issue	0.0514***		
	(0.0140)		
ln(Days)		-0.0028	-0.0037
		(0.0036)	(0.0028)
Special items		-0.0067	0.0052*
		(0.0042)	(0.0027)
Constant	0.7072***	-0.1842***	0.1246***
	(0.0134)	(0.0057)	(0.0039)
Country FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	22,913	22,913	13,265
R-squared	0.446	0.112	0.199

Notes: This table presents the results of regressions examining analyst coverage, forecast accuracy, and forecast dispersion for gross profit margin (GPM). The financial analyst sample covers fiscal years 2006-2023. Variable definitions are provided in Appendix D. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4. Placebo test: Analysts' revenue and book value forecasts

	Revenue Forecasts			**Book Value Forecasts**		
	Dependent variable =			Dependent variable =		
	ln(Coverage)	*Accuracy*	*Dispersion*	*ln(Coverage)*	*Accuracy*	*Dispersion*
	(1)	(2)	(3)	(4)	(5)	(6)
Nature-of-expenses	-0.0414**	0.0020	-0.0015	-0.0205	-0.0210	-0.0006
	(0.0184)	(0.0028)	(0.0014)	(0.0177)	(0.0196)	(0.0028)
ln(Market value)	0.8953***	0.0162***	-0.0049***	0.7913***	0.0060	0.0013
	(0.0102)	(0.0017)	(0.0008)	(0.0095)	(0.0121)	(0.0016)
Book-to-market	0.0975***	0.0079***	-0.0038***	0.1088***	0.0081	-0.0110***
	(0.0067)	(0.0025)	(0.0007)	(0.0066)	(0.0194)	(0.0015)
Sales-to-assets	0.0476***	0.0241***	-0.0105***	0.0530***	0.0083	-0.0047***
	(0.0091)	(0.0018)	(0.0010)	(0.0093)	(0.0091)	(0.0015)
Sales growth	-0.0199***	0.0322***	-0.0049***	-0.0295***	-0.0065	-0.0055***
	(0.0034)	(0.0025)	(0.0008)	(0.0036)	(0.0156)	(0.0013)
ROA volatility	-0.0159***	-0.0215***	0.0104***	-0.0135**	-0.0304*	0.0152***
	(0.0053)	(0.0024)	(0.0012)	(0.0053)	(0.0157)	(0.0017)
Return volatility	0.0457***	-0.0254***	0.0101***	0.0448***	-0.1325***	0.0224***
	(0.0067)	(0.0023)	(0.0010)	(0.0068)	(0.0253)	(0.0018)
R&D	0.0151**			0.0066		
	(0.0061)			(0.0054)		
Depreciation	0.0188***			0.0091		
	(0.0070)			(0.0071)		
Issue	0.0804***			0.0486***		
	(0.0134)			(0.0134)		
ln(Days)		-0.0100***	-0.0003		-0.0135	-0.0000
		(0.0013)	(0.0004)		(0.0134)	(0.0010)
Special items		0.0020	0.0005		-0.0804***	0.0093***
		(0.0017)	(0.0006)		(0.0193)	(0.0012)
Constant	1.3373***	-0.0674***	0.0446***	1.1573***	-0.2128***	0.0925***
	(0.0134)	(0.0015)	(0.0009)	(0.0134)	(0.0117)	(0.0017)
Country, Industry and Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	42,163	42,163	32,183	35,516	35,516	25,766
R-squared	0.649	0.136	0.219	0.616	0.032	0.102

Notes: This table presents the results of regressions examining analyst coverage, forecast accuracy, and forecast dispersion for revenue and book value per share. Variable definitions are provided in Appendix D. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 5. Stock characteristics: Bid-ask spread and idiosyncratic risk

	Dependent variable =	
	ln(Bid-ask spread)	*ln(Idiosyncratic risk)*
	(1)	(2)
Nature-of-expenses	-0.1063***	-0.0663***
	(0.0109)	(0.0065)
ln(Market value)	-0.4864***	-0.2543***
	(0.0061)	(0.0032)
Book-to-market	0.0270***	-0.0563***
	(0.0042)	(0.0027)
Beta	0.0165***	0.1442***
	(0.0037)	(0.0025)
Sales growth	-0.0120***	0.0016
	(0.0021)	(0.0010)
ROA	-0.0672***	-0.0409***
	(0.0034)	(0.0023)
ROA volatility	0.0758***	0.0890***
	(0.0036)	(0.0028)
Asset tangibility	-0.0042	-0.0225***
	(0.0043)	(0.0028)
Leverage	0.0173***	0.0066**
	(0.0039)	(0.0026)
Intercept	-4.3490***	-2.1840***
	(0.0059)	(0.0035)
Country FE	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	100,867	116,322
R-squared	0.589	0.577

Notes: This table presents the results of regressions examining bid-ask spread and idiosyncratic risk. The stock characteristics sample covers fiscal years 1993-2023. Variable definitions are provided in Appendix D. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6. Additional analysis: Short interest

	Dependent variable =	
	Short interest dummy	*Short interest %*
	(1)	(2)
Nature-of-expenses	-0.0285***	-0.1131***
	(0.0108)	(0.0394)
ln(Market value)	0.1743***	0.3905***
	(0.0064)	(0.0234)
Book-to-market	0.0263***	0.0959***
	(0.0038)	(0.0167)
Beta	0.0404***	0.1079***
	(0.0043)	(0.0167)
Sales growth	-0.0026	-0.0086
	(0.0019)	(0.0065)
ROA	-0.0170***	-0.0599***
	(0.0034)	(0.0116)
ROA volatility	0.0043	0.0046
	(0.0031)	(0.0109)
Asset tangibility	0.0073	0.0168
	(0.0046)	(0.0152)
Leverage	0.0223***	0.0628***
	(0.0046)	(0.0171)
Intercept	0.1880***	0.4391***
	(0.0066)	(0.0263)
Country FE	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	22,643	22,643
R-squared	0.279	0.166

Notes: This table presents the results of regressions examining short interest. The short interest sample covers fiscal years 2012-2023. Variable definitions are provided in Appendix D. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7. Additional analysis: Stock price target dispersion

	Dependent variable =
	Price target dispersion
Nature-of-expenses	-0.0069***
	(0.0020)
ln(Market value)	-0.0014
	(0.0011)
Book-to-market	0.0267***
	(0.0015)
Beta	0.0127***
	(0.0010)
Sales growth	-0.0031***
	(0.0009)
ROA	-0.0175***
	(0.0013)
ROA volatility	0.0139***
	(0.0012)
Asset tangibility	0.0031***
	(0.0010)
Leverage	0.0058***
	(0.0010)
Constant	0.1616***
	(0.0011)
Country FE	Yes
Industry FE	Yes
Year FE	Yes
Observations	29,283
R-squared	0.280

Notes: This table presents the results of regressions examining the dispersion of analysts' stock price estimates. Variable definitions are provided in Appendix D. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 8. Stock characteristics: Moderation analysis via expense salience

	Dependent variable =			
	ln(Bid-ask spread)		*ln(Idiosyncratic risk)*	
	(1)	(2)	(3)	(4)
Nature-of-expenses	-0.0791***	-0.0688***	-0.0545***	-0.0328***
	(0.0114)	(0.0130)	(0.0068)	(0.0071)
*Nature-of-expenses * Loss*	-0.1009***		-0.0400***	
	(0.0142)		(0.0087)	
*Nature-of-expenses * High expense risk*		-0.0755***		-0.0663***
		(0.0140)		(0.0087)
Loss	0.2195***		0.1591***	
	(0.0089)		(0.0059)	
High expense risk		0.1624***		0.2003***
		(0.0088)		(0.0060)
ln(Market value)	-0.4703***	-0.4713***	-0.2420***	-0.2354***
	(0.0061)	(0.0061)	(0.0032)	(0.0032)
Book-to-market	0.0221***	0.0291***	-0.0604***	-0.0538***
	(0.0041)	(0.0042)	(0.0026)	(0.0026)
Beta	0.0116***	0.0101***	0.1403***	0.1363***
	(0.0036)	(0.0036)	(0.0025)	(0.0025)
Sales growth	-0.0091***	-0.0112***	0.0037***	0.0026***
	(0.0020)	(0.0020)	(0.0010)	(0.0010)
ROA	-0.0207***	-0.0602***	-0.0055**	-0.0321***
	(0.0035)	(0.0033)	(0.0024)	(0.0021)
ROA volatility	0.0774***	0.0640***	0.0902***	0.0740***
	(0.0036)	(0.0036)	(0.0028)	(0.0026)
Asset tangibility	-0.0030	0.0003	-0.0216***	-0.0163***
	(0.0043)	(0.0043)	(0.0028)	(0.0027)
Leverage	0.0145***	0.0199***	0.0038	0.0094***
	(0.0038)	(0.0038)	(0.0025)	(0.0025)
Intercept	-4.4141***	-4.4336***	-2.2300***	-2.2867***
	(0.0064)	(0.0074)	(0.0039)	(0.0044)
Country FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	100,867	100,867	116,322	116,322
R-squared	0.596	0.595	0.586	0.597

Notes: This table presents the results of regressions examining bid-ask spread and idiosyncratic risk. Variable definitions are provided in Appendix D. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 9. Sensitivity tests: European Union member states

Panel A: Analysts' gross profit margin forecasts			
	Dependent variable =		
	ln(Coverage)	*Accuracy*	*Dispersion*
	(1)	(2)	(3)
Nature-of-expenses	-0.1419***	-0.0501***	0.0504***
	(0.0237)	(0.0179)	(0.0116)
Control variables	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	13,447	13,447	7,864
R-squared	0.496	0.105	0.201

Panel B: Stock characteristics		
	Dependent variable =	
	ln(Bid-ask spread)	*ln(Idiosyncratic risk)*
	(1)	(2)
Nature-of-expenses	-0.0731***	-0.0439***
	(0.0134)	(0.0081)
Control variables	Yes	Yes
Country FE	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	50,084	57,643
R-squared	0.564	0.575

Notes: This table presents robustness results based on the subsample of firms headquartered in European Union member states. Variable definitions are provided in Appendix D. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 10. Robustness test: Propensity score matching

Panel A: Analysts' gross profit margin forecasts			
	Dependent variable =		
	ln(Coverage)	*Accuracy*	*Dispersion*
	(1)	(2)	(3)
Nature-of-expenses	-0.1353***	-0.0503***	0.0454***
	(0.0204)	(0.0146)	(0.0115)
Control variables	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	7,706	7,706	2,842
R-squared	0.474	0.134	0.236

Panel B: Stock characteristics		
	Dependent variable =	
	ln(Bid-ask spread)	*ln(Idiosyncratic risk)*
	(1)	(2)
Nature-of-expenses	-0.0851***	-0.0632***
	(0.0120)	(0.0070)
Control variables	Yes	Yes
Country FE	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	34,952	43,028
R-squared	0.535	0.561

Notes: This table presents the propensity score matching results. Variable definitions are provided in Appendix D. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 11. Robustness test: Entropy balancing

Panel A: Analysts' gross profit margin forecasts			
	Dependent variable =		
	ln(Coverage)	*Accuracy*	*Dispersion*
	(1)	(2)	(3)
Nature-of-expenses	-0.1273***	-0.0658***	0.0551***
	(0.0179)	(0.0140)	(0.0084)
Control variables	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	22,913	22,913	13,265
R-squared	0.426	0.111	0.202

Panel B: Stock characteristics		
	Dependent variable =	
	ln(Bid-ask spread)	*ln(Idiosyncratic risk)*
	(1)	(2)
Nature-of-expenses	-0.1021***	-0.0641***
	(0.0107)	(0.0066)
Control variables	Yes	Yes
Country FE	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	100,867	116,322
R-squared	0.548	0.548

Notes: This table presents the entropy balancing results. Variable definitions are provided in Appendix D. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.