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DOES INFLATION AFFECT EARNINGS RELEVANCE? A CENTURY-LONG ANALYSIS

Oliver Binz
John Graham
Matthew Kubic

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ABSTRACT

Financial reports present assets, liabilities, and earnings on a nominal basis (unadjusted for inflation). Using a novel dataset of nearly a century of financial reports, this paper examines whether and how inflation affects the relation between accounting earnings and stock market value, i.e., earnings relevance. On the one hand, inflation may decrease earnings relevance as historical cost accounting relies on historical transaction prices that become less relevant when inflation changes the price level. On the other hand, inflation may increase earnings relevance by increasing firms' discount rates and thereby shifting agents' focus towards nearer-term payoffs. Consistent with the latter hypothesis, we document a strong positive relation between earnings relevance and inflation. Cross-sectional tests indicate that this relation is stronger for firms that are more sensitive to discount rate changes. We find that inflation is of first-order importance relative to determinants of earnings relevance explored in prior literature.

Oliver Binz
oliver.binz@esmt.org

Matthew Kubic
matt.kubic@mccombs.utexas.edu

John Graham
Duke University
Fuqua School of Business
100 Fuqua Drive
Durham, NC 27708-0120
and NBER
john.graham@duke.edu

1. Introduction

In June 2022, US inflation reached a 40-year high of 9.1% and became the most pressing concern on the minds of Americans (Gallup Polls 2022) and CFOs (The CFO Survey, Q3 2022). The recent increase in inflation has heightened the debate on the effects of inflation on the relevance of accounting numbers (Ball 2024). At least since the 1920s, observers have argued that inflation decreases the relevance of accounting numbers as nominal amounts on firms' balance sheets and income statements understate current values (Paton 1922; Burton 1974; FASB 1984a). The FASB's conceptual framework, which provides the goals and limitations of financial reporting and is the foundation for accounting standard setting (FASB 2023), formalizes this concern, asserting that "as rates of change in general purchasing power increase, financial statements expressed in nominal units of money become progressively less useful" (FASB 1984a, para 71).

Our paper has two objectives that we explore in the context of earnings relevance, which we measure as the relation between accounting earnings and stock returns. The first objective is to test the widely held belief that financial statements become less useful as inflation degrades the quality of earnings presented on a nominal basis (the "historical cost accounting channel"). While this effect must exist to some degree, we explore an overlooked influence on earnings relevance that may offset this first channel via the "discount rate channel". Recall that asset prices and returns reflect the discounted value of an infinite stream of future cash flows; higher discount rates make far-in-the-future cash flows less relevant to returns, and near-term cash flows more relevant. Since financial statements are more useful in understanding near-term rather than distant future cash flows, and inflation increases discount rates, the discount rate channel posits that higher inflation *increases* earnings relevance. While we find some empirical support for both channels, we show that on net the discount rate channel dominates, and hence inflation increases earnings relevance.

The second objective of our paper is to explore the notion that earnings relevance has decreased over time (Francis and Schipper 1999; Ely and Waymire 1999; Collins et al. 1999; Lev and Zarowin 1999; Barth et al. 2001; Barth et al. 2023). Studies documenting a decline in earnings relevance have had a significant influence on research and practice, but they do not consider inflation as a determinant of earnings relevance.[1] If inflation negatively affects earnings relevance (i.e., the historical cost accounting channel dominates), then omitting inflation from an earnings relevance test will understate the decline in earnings relevance during periods of falling inflation. In contrast, if the discount rate channel dominates, then omitting inflation from earnings relevance tests will overstate the decline in earnings relevance during periods of falling inflation. We address this issue and show that the negative time trend in earnings relevance disappears when inflation is included in the specification, due to the positive association of inflation on earnings relevance. Our two objectives are thus intertwined and have important implications given that apparent declines in earnings relevance led academics to question whether the FASB is achieving its goals.

As discussed above, we posit that historical cost accounting and discount rate effects are two non-mutually exclusive and offsetting channels through which inflation affects earnings relevance. With respect to the former, assets like property, plant, and equipment (PPE) are measured at historical cost and depreciated over their useful life. If inflation erodes the real value of dollar amounts stated on the balance sheet, this will lead to a divergence between historical cost book values and current market values, making depreciation less useful in understanding future capital expenditures and profitability. Similarly, inventory sales measured at historical cost will

[1] Our primary focus is on the relevance of earnings because it features prominently in prior research and is a metric of importance to investors that has been disclosed by firms for over a century. Francis and Schipper (1999) summarize the historical concerns about a decrease in value relevance and initiatives to address these concerns. Lev and Zarowin (1999) illustrate how influential research (over 3,000 citations on Google Scholar) uses the time-series decline in earnings relevance as motivation to call for changes to financial reporting.

provide a potentially misleading picture of performance, as part of gross profit (revenue less inventory cost) represents real profit, while another part represents the effects of inflation.[2] Under the historical cost channel, the inflation-induced divergence between economic reality and the historical cost measurement makes it more difficult for investors to assess the prospects of the firm. As a result, investors rely less on accounting numbers, which should lead to a negative association between inflation and earnings relevance (Lipe 1990).

The idea that earnings decline in relevance as inflation increases due to historical cost accounting is the traditional view held by the FASB and academic researchers (Paton 1922; Burton 1974; FASB 1984a). In contrast to the traditional view, we propose an alternative hypothesis that due to inflation's positive impact on discount rates, a rise in inflation increases earnings relevance by increasing the importance of near-term cash flows. A similar view is often expressed by practitioners and market commentators who assert that investors place more weight on current earnings than future growth prospects when inflation increases, as the future payoffs of growth firms are less certain and discounted at a higher rate (JPMorgan 2022; BlackRock 2023; Goldman 2023).[3] This reasoning, which we refer to as the discount rate channel, predicts a positive association between earnings relevance and inflation. To demonstrate, suppose all firms have one near-term and one long-term cash flow. As shown in prior research, accounting explains more variation in near-term cash flows than long-term cash flows (Finger 1994; Dechow et al. 1998; Ball and Nikolaev 2022). For illustrative purposes, assume accounting explains 40% (10%) of

[2] The FASB (1979) provides the following inventory example to illustrate this concern: "[A]n enterprise may buy an item of inventory for $100 and sell it for $140. The transactions would contribute $40 to income determined on a historical cost/nominal dollar basis (i.e., under generally accepted accounting principles). However, the enterprise may need to replace the inventory at a cost of $115. The sale produces only $25 ($140 less $115), available for distribution without impairment of operating capability."

[3] For example, JP Morgan (2022) states that "value investing tends to outperform" growth investing during periods of rising inflation. While this assertion is focused on investment strategies, not on earnings relevance, the concepts are linked. When inflation is low (high), growth stocks can have higher (lower) returns than value stocks because more distant cash flows are discounted less (more), and the correlation between current earnings and returns is low (high).

variation in near-term (long-term) cash flows, firms cannot pass along all price increases, firm value equals discounted cash flows, and the discount rate consists of the real discount rate and inflation (Fisher 1930). If the discount rate is zero, near-term and long-term cash flows receive equal weight, and accounting will explain 25% of variation in firm value (40% × ½ + 10% × ½). If the discount rate becomes extremely high, then accounting will explain closer to 40% of the variation as the present value of long-term cash flow becomes small. Hence, accounting will explain more variation in firm value as inflation increases.

Our main tests examine whether earnings relevance varies systematically with inflation. One challenge of studying the effect of inflation on the relevance of earnings is that the time series for which firm fundamental data are available to compute annual cross-sectional earnings relevance measures is rather short. This data limitation restricts the amount of inflation variation that studies based on traditional datasets, such as Compustat, can examine. We address this issue by analyzing a novel dataset of firm fundamentals from 1926 to 2021.[4] During our sample period, the primary periods of inflation are in the 1930s during the New Deal, the 1940s following World War II, the 1970s during the Great Inflation, and, most recently, the early 2020s following the COVID-19 pandemic. Inflation differs greatly between the pre-Compustat-initiation period, for which we use hand-collected data, and the post-Compustat-initiation period. The pre-Compustat period features more variation in inflation (i.e., a greater standard deviation and range), the period with the highest inflation (following WWII), and the only deflationary period (during the Great Depression). In contrast, the post-Compustat-initiation period features more stable and generally declining inflation. Our long time series mitigates the risk that the relations we document result

[4] An alternative to examining a long time series of data within a single country would be to examine a panel of data from multiple countries. However, as Ali and Hwang (2000) point out, value relevance varies with features of countries' institutional environments. Our focus on a single country allows us to hold the country-level dimension of firms' institutional environment constant.

from small sample bias, and it allows us to separately conduct confirmatory analysis of both the pre- and post-Compustat-initiation periods.

Following Francis and Schipper (1999), we compute earnings relevance as the adjusted R-squared obtained from annual cross-sectional regressions of returns on earnings and changes in earnings. We document a strong, positive association between earnings relevance and inflation. We show that this association is robust to using PPI, CPI, and GDP deflator inflation as the inflation measure; and the relation is significantly positive in both the pre- and post-Compustat-initiation periods. This suggests that our findings are not driven by a specific period but rather persist across different inflation regimes and business environments. Our results are also robust to using alternative measures of value relevance (such as using prices, earnings or book value of equity) and to excluding new economy and technology firms from the analysis. Addressing concerns that correlated observable or unobservable macroeconomic factors could drive our findings, we find that our results are robust to controlling for observable macroeconomic factors and to using deviations from economists' and consumers' real-time inflation expectations (which should account for unobservable factors) as alternative inflation measures. This suggests that it is inflation, and not inflation's correlation with other macroeconomic conditions, that drives our key results. In sum, our results imply that inflation increases earnings relevance by making current earnings more relevant to investors (the discount rate channel).

To provide context on the relative importance of inflation, we compare the association between earnings relevance and inflation to that of four other explored factors in the earnings relevance literature: a general time trend, the percentage of loss-making firms, the percentage of technology firms, and different standard-setter eras (Francis and Schipper 1999; Ely and Waymire 1999; Collins et al. 1999; Lev and Zarowin 1999; Barth et al. 2023). To evaluate the relative

importance of each factor, we use the Shapley value variance decomposition approach (Shapley 1953) and find that inflation explains significantly more variation in earnings relevance than any of these previously examined factors. This suggests that inflation is of first-order importance in explaining variation in earnings relevance over time. This finding is important as prior earnings relevance research has not accounted for the effects of inflation, leading to potential bias.

Our main tests show a positive association between earnings relevance and inflation, consistent with the discount rate channel having a greater effect than the historical cost accounting channel. Nonetheless, it is possible that both channels are at play, with the discount rate outweighing the historical cost accounting channel. To investigate this possibility, we conduct two sets of additional analyses. First, consistent with the historical cost accounting channel's predictions, we find some evidence that inflation reduces the ability of earnings to forecast cash flows. Second, we conduct a series of cross-sectional tests to determine whether the results vary as the discount rate and historical cost accounting channels predict. We begin by examining firms with a relatively large portion of assets measured at historical cost. Under the historical cost accounting channel, we would expect investors in such firms to struggle more to forecast the true economic cash flows during inflationary times, resulting in lower earnings relevance. Consistent with FASB-mandated inflation-related disclosures that require the presentation of income statement items adjusting for the effects of inflation on these accounts (FASB 1979), we focus on inventory and PPE, two assets that are expensed as COGS and depreciation. We find little evidence that our main findings vary for firms with large amounts of PPE. Consistent with the historical cost accounting channel, we find some evidence of a weaker association between earnings relevance and inflation for firms with high inventory. This finding suggests that inflation renders

earnings less useful for firms with more inventory measured at historical cost, a set of firms about which standard setters have expressed inflation-related accounting concerns (FASB 1979).

Next, we test whether the results vary heterogeneously in ways that bolster the interpretation that the discount rate channel is important. First, the discount rate channel assumes that frictions prevent at least some firms from fully passing along cost increases to consumers. If this were not the case, and firms could pass along all cost increases to consumers, then the increase in discount rates and cash flows would offset, resulting in no change in earnings relevance (see Section 3 for additional discussion). We predict and find that our results are stronger for firms that have more frictions in passing along prices increases. Second, we study firms whose stock market valuation is more sensitive to changes in discount rates. Following Dechow et al. (2004), we use implied equity duration to measure discount rate sensitivity. Consistent with the discount rate channel, we find that the positive association between earnings relevance and inflation is pronounced for firms that are more sensitive to discount rate changes.

Our study is subject to several limitations. First, our results should not be interpreted as evidence that inflation improves or deteriorates the quality of accounting standards. Similarly, our results do not provide evidence on whether alternative approaches to inflation accounting would make accounting information more useful to investors. To examine this, we would need counterfactual data reflecting alternative accounting approaches, which are unavailable for our full sample.[5] Instead, our results should be interpreted as evidence that inflation is an important determinant of earnings relevance as increases in inflation make near-term cash flows more

[5] Beaver and Ryan (1985) collect a sample of 1,137 non-financial firms that disclosed inflation-adjusted earnings computed in accordance with FASB Statement 33 over the 1979 to 1982 period. They find that historical-cost earnings are more relevant than inflation-adjusted earnings. In a sample of Zimbabwean firms, Chamisa et al. (2018) find that historical cost earnings are just as relevant as inflation-adjusted earnings when inflation is high (361%), and more relevant when inflation is low (91%). The years of low inflation in Chamisa et al. (2018) have a rate of inflation (91%) that is substantially higher than any inflationary period in our setting.

relevant to investors. Second, our main tests rely on a time series of nearly a century of data, which is longer than that of any previous value-relevance study. Although we show that our results are robust across different inflation regimes and business environments and to controlling for aggregate real growth, unemployment, interest rates, and uncertainty, we cannot fully rule out the possibility that an unspecified correlated omitted factor drives our results.

With these limitations in mind, we contribute to three literatures. First, the value relevance literature has sought to operationalize the FASB's conceptual framework to understand whether the relevance of accounting information has changed over time, and if so, whether the decline in value relevance necessitates changes in financial reporting.[6] For example, in a highly influential paper, Lev and Zarowin (1999) use the time-series decline in earnings relevance as their motivation to call for changes in financial reporting. We contribute to the value relevance literature by collecting accounting data for the full set of NYSE firms for the 1926 to 2021 period to examine the effect of inflation on earnings relevance. Our results suggest that inflation is of first-order importance in explaining earnings relevance, an important finding as inflation is an omitted variable in prior earnings relevance studies that is likely correlated with the variables of interest. Specifically, there is a time trend in inflation since Compustat initiation. After controlling for inflation, we find no evidence of a time-series decline in earnings relevance. One implication of our results is that researchers should be cautious in attributing changes in earnings relevance to changes in standard setters or standards when the change coincides with a change in inflation, a factor that is outside the control of any accounting standard setter.

[6] See Collins et al. (1997), Francis and Schipper (1999), Lev and Zarowin (1999), Ely and Waymire (1999), Brown et al. (1999), Core et al. (2003), Balachandran and Mohanram (2011), Srivastava (2014), and Barth et al. (2023). These studies typically focus on the post-Compustat initiation period, which limits the time series of data to around 50 years. One exception is Ely and Waymire (1999), who collected data for 100 randomly selected NYSE firms for the 1927 to 1993 period. They find mixed evidence that earnings relevance varies with different standard-setting bodies.

Second, we contribute to research on the effects of inflation on various stakeholders' assessments of accounting figures. Prior academic research shows that investors, analysts, and managers do not always appropriately correct for inflation when using accounting figures (Chordia and Shivakumar 2005; Basu et al. 2010; Konchitchki 2011; Binz et al. 2023a). Given the recent surge in inflation, one might expect heightened interest in inflation accounting in a recent FASB agenda consultation project (FASB 2022). To the contrary, few stakeholders cite inflation as a current limitation of accounting, and the FASB has not added an inflation-related project to its agenda, a perspective which differs from the concerns in academic research. This lack of concern about inflation is less surprising in light of our findings that on net financial statements become more relevant as inflation increases due to the discount rate channel.[7] Our findings align with the FASB's decision not to revisit inflation accounting. Nonetheless, our tests do not imply that a historical cost measurement basis is superior to other methods that may account for changes in price levels.

Third, we contribute to the macro-to-micro literature.[8] This literature seeks to understand how aggregate-level variables affect firm-level outcomes. We show that inflation, a key macroeconomic variable, is associated with earnings relevance through its effect on firms' historical cost accounting figures and discount rates. Perhaps surprisingly given prior commentators' focus on inflation's detrimental effect on the usefulness of historical cost figures, we find that while both effects are present, the discount rate effect outweighs the historical cost accounting channel, leading to a net positive association between inflation and earnings relevance.

[7] We appreciate helpful feedback from FASB staff and Board members regarding the implications of our research, especially feedback on how to make our research more applicable to standard setters.
[8] See, Ball et al. (2009), Rogers et al. (2009), Bonsall et al. (2013), Kim et al. (2016), Carabias (2018), Jackson et al. (2018), Bonsall et al. (2020), Binz (2022), Binz et al. (2023b), Binz et al. (2022), and Holstead et al. (2022).

2. Background

2.1 Earnings Relevance Literature

The FASB's conceptual framework is the foundation for accounting standard setting and provides the goals, purpose, and limitations of financial reporting (FASB 2023). It states that the objective of financial reporting is to provide decision-useful information to investors, lenders, and creditors (FASB 2010). Using the conceptual framework as its motivation, an influential stream of accounting research (the value relevance literature) seeks to answer the following question: Does accounting provide decision-useful information to investors, and if so, has the nature of the information provided to investors changed over time?

To answer this question, the value relevance literature attempts to operationalize the FASB's stated objective by examining the association between accounting information and equity market value (Barth et al. 2001).[9] Most value relevance studies focus on earnings as a key performance measure, and generally document a decrease in earnings relevance over time, leading to concerns that accounting is not serving the needs of investors (Collins et al. 1997; Francis and Schipper 1999; Lev and Zarowin 1999). These studies posit that the usefulness of accounting may decrease or increase over time for several reasons. First, technological innovation and changes in the business environment may change the relevance of earnings (Lev and Zarowin 1999). A common example is that technological change has led to more investment in intangible assets, yet internally generated intangible assets and their associated amortization charges are not recognized in financial statements, which leads to a decrease in earnings relevance (Srivastava 2014).

[9] As discussed above, we focus on value relevance as it attempts to operationalize the FASB's conceptual framework. A different line of research focuses on the stock market response to firms' earnings announcements (Kothari 2001; Landsman and Maydew 2002). This literature documents an increase in the market response to earnings over time (Francis et al. 2002; Beaver et al. 2020). The earnings response coefficient (ERC) literature, which captures the stock market's response to an unexpected earnings surprise, documents a negative (positive) association between ERCs and discount rates (earnings persistence) (Collins and Kothari 1989; Kothari 2001).

Second, the incidence of firms experiencing losses has increased over time, and prior research shows that earnings are less relevant for loss firms. If shareholders expect losses to persist, they will consider liquidating the firm. Thus, only firms with losses that shareholders expect to reverse will survive, rendering the losses of such firms less indicative of future performance and therefore less relevant (Hayn 1995; Collins et al. 1999). Consistent with this reasoning, Joos and Plesko (2005) and Barth et al. (2023) document lower earnings relevance for loss firms and attribute the decrease in earnings relevance over time, in part, to an increase in loss firms.

Third, the usefulness of the accounting system might vary with the competence of the standard setter designing it. Ely and Waymire (1999) test this conjecture by examining how earnings relevance varies with the tenures of the four standard-setting bodies that have existed in the United States since the Securities Exchange Act of 1934. Ely and Waymire (1999) find some evidence that earnings relevance was low during the 1960 to 1973 tenure of the Accounting Principles Board but find no evidence that earnings relevance varies across the tenures of the other standard-setting bodies.

Finally, other research suggests that any potential decrease in earnings relevance may be offset by an increase in the relevance of other financial statement attributes. For example, Francis and Schipper (1999) find a decrease in the relevance of earnings and an increase in the relevance of the balance sheet. Barth et al. (2023) expand the set of accounting variables, examining not only earnings and the book value of equity, but fourteen other financial statement variables, and argue that there has been no decline in combined value relevance from 1962 to 2014.

The concern regarding a potential decline in earnings relevance permeates academia and practice. Francis and Schipper (1999) summarize the historical concerns about a decrease in earnings relevance and initiatives to address these concerns, such as the AICPA Special Committee

on Financial Reporting and the FASB business reporting project.[10] In an influential paper, Lev and Zarowin (1999) use the time-series decline in earnings relevance as their motivation to call for changes in financial reporting:

> Our evidence indicates that the usefulness of reported earnings […] has been deteriorating over the past 20 years […] Having linked the increasing importance of intangible investments […] to the documented decline in the usefulness of financial information, we address the normative question of what can be done to arrest this decline. We advance two proposals: a comprehensive capitalization of intangible investments and a systematic restatement of financial reports. (Lev and Zarowin 1999, 353-354)

Despite the longstanding interest in the relevance of accounting numbers, to the best of our knowledge, the value relevance literature has not focused on how macroeconomic conditions such as inflation affect earnings relevance. Motivated by the FASB's claim that inflation renders corporate financial statements less useful (FASB 1984a, para 71), we seek to fill this void.

2.2. A History of Inflation Accounting

For as long as there have been standardized accounting principles in the United States, the scale of measurement in financial statements has been nominal units of money, unadjusted for changes in purchasing power over time (FASB 1984a, para 71). For at least a century, accountants have recognized that inflation affects the relevance of financial statements by measuring assets, liabilities, and earnings at amounts that do not reflect current-period economic reality. In the early 1920s, William Paton, founder of the American Accounting Association and coauthor of the influential *An Introduction to Corporate Accounting Standards*, argued that inflation should be considered when preparing financial statements (Paton 1922; Narvaez 1991). Various regulatory

[10] Former SEC Chief Accountant Lynn Turner (2021) has recently raised concerns that accounting standards have become increasingly irrelevant. Similar concerns have been voiced for decades, with several former SEC chairs criticizing the financial reporting environment (Ball 2024). In congressional testimony after the accounting scandals of the early 2000s, Former SEC Chair Arthur Levitt raised concerns about FASB oversight and the ability of accounting practices to keep up with a changing business environment (Levitt 2002). Nearly a decade before Levitt's testimony, former SEC Chair Richard Breeden raised similar concerns. For more discussion on concerns about the relevance of accounting, see Collins et al. (1997) and Ely and Waymire (1999).

bodies expressed similar sentiments over time. For example, in an influential 1977 speech, former SEC Chairman Harold Williams stated:

> I do believe, however, that a review of the interplays between financial reporting, inflation, and capital formation strongly suggests that the conventions and assumptions underlying accounting must leave room for and, indeed, must demand disclosure of the impact of inflation. […] The 'Alice in Wonderland' accounting of cost and profits that now passes for orthodoxy, is a problem not only for business management but for the accounting profession. (pp. 14, 18)

Williams went on to identify clear policy implications:

> I do urge, however, that within the conceptual framework, there be mandatory disclosure of the impact of inflation on financial statements. […] In my judgment the issue of the need for disclosure of the impact of inflation on corporate performance is simply no longer open to serious debate; the question is not whether it should be disclosed, but how. (pp. 23, 29)

As noted by former SEC Chief Accountant John C. Burton, concerns about standard-setting projects to address inflation tended to arise when inflation was high. He stated:

> Historically, it can be noted that the level of discussion and action about the accounting problems caused by inflation has not surprisingly been closely correlated to the rate of inflation currently existing. At low levels—perhaps under 3% per annum—financial statements based on an historical monetary unit of account have been felt to provide adequate information for most users […]. At the other extreme, when the rate of inflation reached dramatic levels—say over 25% per annum—financial statements based on historical monetary units could be generally agreed to have little value. (Burton 1974)

The FASB expressed similar views, noting in Concept Statement 5 that:

> [t]he Board expects that nominal units of money will continue to be used to measure items recognized in financial statements. However, a change from present circumstances (for example, an increase in inflation to a level at which distortions became intolerable) might lead the Board to select another, more stable measurement scale. (FASB 1984a)

Despite recurring concerns regarding inflation, accounting standard setters in the United States have never mandated a change to the primary financial statements to adjust for inflation.[11]

[11] Prior to the Great Depression, there was no single standard-setting body in the United States. Following the stock market crash of 1929, Congress passed the Securities Acts and created the Securities and Exchange Commission (SEC). In 1939, the Committee on Accounting Procedure (CAP) became the first accounting standard-setting body in the United States. Criticism of the CAP led to its dissolution and the creation of the Accounting Principles Board (APB) in 1960 (Zeff 1972; Ely and Waymire 1999). The Wheat Study Group, appointed in 1971, recommended the

As discussed in FASB Concept Statement 5, standard setters acknowledge that an ideal measurement scale would be stable over time, but standard setters have always perceived that the simplicity benefit of a nominal measurement scale outweighs its costs (FASB 1984a, para 71). Thus, instead of adjusting the primary financial statements, standard setters have opted for additional disclosures to help investors understand the effects of inflation while minimizing complexity. In 1947, 1948, and 1953, the CAP considered inflation-related accounting issues and recommended that firms provide disclosures explaining the need for earnings retention because of inflation (FASB 1979). In 1969, the APB issued APB Statement No. 3, *Financial Statements Restated for General Price-Level Changes*, which recommended that historical cost financial statements be complemented by price-level information. Yet few companies followed the APB recommendation (FASB 1979, para. 71).

After the FASB was established in July 1973, one of the first projects added to its agenda was the accounting for changes in price levels (FASB 1979). In the course of its due process, the FASB issued a discussion memorandum, released multiple exposure drafts, held public hearings, conducted field tests with over 100 companies, and received over 700 comment letters. While the FASB conducted its due diligence, the SEC issued Accounting Standards Release (ASR) 190, which required large public entities to disclose replacement cost information about inventories, fixed assets, and the corresponding income statement effects (Flynn 1977).[12] The FASB process concluded in 1979 with the issuance of SFAS No. 33, *Financial Reporting and Changing Prices*. For firms with over $125 million in inventory and property plant and equipment, or total assets

creation of a full-time standard-setting body. This led to the dissolution of the APB and the creation of the FASB, which has been the standard setter in the United States since July 1, 1973 (Zeff 2005).

[12] Beaver et al. (1980), Gheyara and Boatsman (1980), Ro (1980), and Watts and Zimmerman (1980) examine the stock market reaction to ASR 190 disclosures. The studies fail to document a significant market reaction to the new disclosures and interpret this as lack of evidence that ASR 190 disclosures provide useful information to investors.

over $1 billion, the standard required enhanced disclosures on the measurement of inventory, PPE, income adjusted for the effects of general inflation, and income on a current cost basis. However, the standard made clear that it did not require any changes to the primary financial statements and its requirements were rescinded in SFAS 82 and 89 (FASB 1984b, 1986).[13] Appendix A provides additional discussion on historical proposals to adjust financial statements for inflation.

3. Hypotheses Development

As the previous section illustrates, the debate around inflation's effects on the usefulness of accounting numbers has revolved around historical cost accounting. Although much of the debate focuses on the failure of accounting to adjust for inflation, there are reasons to believe that inflation may either increase or decrease earnings relevance. We outline these competing predictions next.[14]

Conceptually, inflation can affect earnings relevance through a historical cost accounting channel and/or a discount rate channel. With respect to the former, the primary reason that inflation may lead to a decrease in earnings relevance is the prevalence of measuring assets, liabilities, and income in nominal terms. If inflation erodes the real value of dollar amounts stated on the balance sheet, this leads to a divergence between balance sheet values and economic values over time.[15] This divergence has at least three income statement effects. First, it makes financial statement

[13] The IASC (the IASB's predecessor) published a similar standard in 1983, IAS 15, *Information Reflecting the Effects of Changing Prices*. Like FAS 33, IAS 15 did not require any changes to the primary financial statements. The IASC made IAS 15 optional in 1989 and withdrew it in 2003.

[14] Our paper seeks to understand whether the relevance of earnings in explaining firm value changes with the level of inflation. A separate literature in finance explores the relation between stock returns and inflation. This other literature documents a surprising, negative association between common stock returns and inflation (Fama 1981; Fama and Schwert 1977). The explanations for this negative association include: 1) a negative relation between inflation and real economic activity which leads to lower returns (Fama 1981; Geske and Roll 1983), 2) investor irrationality (Modigliani and Cohn 1979), and 3) the effects of nominal contracts (Feldstein and Summers 1979; Zarowin 1988).

[15] Hodder et al. (2014, p. 228-229) discuss DuPont's accounting for the land its headquarters are built on as an extreme example of how inflation can cause accounting and economic values to diverge. According to Note 10 of DuPont's 2013 10-K, the land is still carried at its pre-1905 purchase price, which is likely much less than what DuPont could sell the land for at current market prices.

depreciation less useful in understanding profitability and capital outlays (Feltham and Ohlson 1996; Chambers et al. 1999). Second, it affects the likelihood and measurement of asset impairments. Third, firms report their inventory at historical cost; hence inflation will directly affect the gross profit recognized from the sale of inventory. In sum, inflation leads balance sheet and income statement numbers to become increasingly distorted reflections of economic reality and changes in economic reality, and therefore less useful for investors' decision making. As a result, earnings relevance decreases.[16] This leads to our first hypothesis:

> **Hypothesis 1.** Inflation reduces earnings relevance by distorting the relation between accounting and economic value.

The historical cost accounting channel articulated in Hypothesis 1 is the traditional view in academic research and the FASB's conceptual framework (Paton 1922; FASB 1984a; Konchitchki 2011; Ball 2024). Despite its wide acceptance, there is little academic evidence that inflation-adjusted earnings figures are more useful than historical-cost-based earnings figures (Beaver et al. 1980; Gheyara and Boatsman 1980; Watts and Zimmerman 1980).

We propose a contrasting hypothesis, which we refer to as the discount rate channel. When valuing a firm, the relative importance of near-term and distant future cash flows depends on the discount rate. When inflation rises and discount rates increase, the importance of near-term cash flows increases. Given that accounting is more useful in understanding near-term performance (Dechow et al. 1998; Ball and Nikolaev 2022), an increase in the importance of near-term cash flows should increase earnings relevance. Moreover, the effect of inflation on real profitability, and thus firm value, depends on whether the firm can pass cost increases on to consumers. We posit that the income statement provides information that is useful in determining which firms can,

[16] The concern that inflation may decrease value relevance aligns closely with the FASB's stated rationale for requiring new inflation-related disclosures in FASB Statement 33, *Financial Reporting and Changes in Prices*. In Appendix C, we provide additional details on the disclosures required by this standard.

and cannot, pass along price increases in the short run, leading to an increase in earnings relevance.[17] This reasoning leads to our second hypothesis:

Hypothesis 2. Inflation increases earnings relevance by increasing firms' discount rates.

This perspective aligns with a view among investment advisers that under rising inflation, value stocks will outperform growth as investors place more weight on near-term earnings and less weight on growth prospects (BlackRock 2023; JPMorgan 2022; Goldman 2023). Although their reasoning focuses on investment strategies, we believe it aligns with Hypothesis 2 because expected cash flows for value stocks skew toward the near term, while cash flows for growth stocks skew toward the longer term.

The discussion above offers competing directional predictions on the association between inflation and earnings relevance that we test below. Conceptually, we may find no evidence of an overall association, if both channels are exist but offset each other. Similarly, documenting a positive or negative association does not indicate that only one channel exists. Both channels may exist but with different magnitudes.

4. Data

We collect firm-level stock return data from CRSP and fundamental data from Compustat and Moody's Industrial Manuals. Our sample begins in 1926 (the first year CRSP covers) and ends in 2021. Compustat's coverage starts in 1950 but suffers from survivorship bias until 1962. Hence, we use the Moody's Industrial Manuals data collected by Graham et al. (2015, 2018) to cover the

[17] In the absence of frictions, inflation would cause discount rates and future cash flows to increase in an offsetting way, leading to no inflation-related changes in firm value or earnings relevance (Kydland and Prescott 1982). The discount rate channel assumes that frictions prevent at least some firms from fully passing along cost increases to consumers (an assumption with extensive empirical support, see Taylor (1999) for a review), and financial statements are useful in understanding changes in input costs and sale prices. Following this reasoning, we expect our results to be stronger (weaker) for firms that have more (less) difficultly in passing along price increases. In Section 6.2 we test this prediction.

1926 to 1950 period and to supplement Compustat for the 1950 to 1962 period. We restrict our sample to NYSE firms because CRSP did not cover other exchanges until 1962, when it started to cover AMEX firms, and 1973, when NASDAQ was added.[18] We exclude firms in the financial services (SIC 6000-6999) and utilities (SIC 4900-4999) industries because they are not covered by the Moody's Industrial Manuals. We winsorize all continuous firm-level variables at the 1st and 99th percentiles and require non-missing data for all our variables of interest.[19]

Figure 1 presents the number of observations by year. Recessions as classified by the National Bureau of Economic Research are shaded in grey. The sample size steadily increases with time, reaching a high of 1,185 observations in 1998, the peak of the dot-com bubble. Thereafter, the number of observations steadily declines to 812 observations in 2021, the last sample year. Table 1 presents the Fama and French (1997) 48 industry composition of our sample. Retail (8.13%), Petroleum and Natural Gas (6.71%), and Machinery (6.10%) are the industries with the largest numbers of observations, though the distribution of industries is broad.

Table 2 Panel A presents descriptive statistics for our firm-level variables. All variables are defined in Appendix B. The annual stock returns (*Return*), computed from April of the current fiscal year to March of the subsequent fiscal year (Fama and French 1992),[20] are skewed to the right, with a mean of 14.9% and a median of 8.9%. We require non-missing values for all 12 months of the fiscal year to compute *Return*. Earnings yield (*Earnings*), computed as earnings scaled by beginning-of-year market value of equity, varies widely but is 6.5% on average, with a

[18] In untabulated analysis, we extend our analysis to the whole CRSP universe. Our inferences remain unchanged.
[19] We use the same sample of observations in the main analysis and cross-sectional tests. Thus, we require observations to have non-missing data on sales, earnings, assets, liabilities, PP&E, and inventory. Our results are robust to varying the set of variables for which we require non-missing data.
[20] Our results are robust to using market-adjusted instead of raw returns and to computing returns from January to December of the current fiscal year, from January of the current to March of the subsequent fiscal year, and from January of the current to April of the subsequent fiscal year (Lev and Zarowin 1999; Francis and Schipper 1999; Ely and Waymire 1999).

standard deviation of 12.8%. As evidenced by the 12.6% standard deviation of the change in earnings yield (Δ*Earnings*), computed as the change in earnings scaled by beginning-of-year market value of equity, this variation arises because of both across-firm and within-firm developments.

4.1. Aggregate-Level Data

We collect data on PPI inflation (*PPI*) and CPI inflation (*CPI*) from the Bureau of Labor Statistics; real GDP growth (*GDP*) and GDP deflator growth (*GDP Deflator*) from www.MeasuringWorth.com for 1926 to 1930, and from the Bureau of Economic Analysis for 1930 to 2021; unemployment (*Unemployment*) from the National Bureau of Economic Research for 1926 to 1947, and from the Bureau of Labor Statistics for 1948 to 2021; and Baker et al. (2015) economic policy uncertainty (*Macroeconomic Uncertainty*) from www.PolicyUncertainty.com. Figure 2 plots PPI, CPI, and GDP deflator inflation over time. The three inflation measures are highly correlated but exhibit different levels of volatility. The GDP deflator is the least volatile, and PPI inflation is the most volatile. Inflation spikes during the aftermath of the Great Depression, World War II, the Great Inflation of the 1970s, and, more recently, after the COVID-19 pandemic.

Table 2 Panel B presents the descriptive statistics for our aggregate-level variables other than inflation. Real GDP growth averages 3.3% annually, with a minimum of -12.9% in 1932, the nadir of the Great Depression, and a maximum of 18.9% in 1942, the year after the United States entered World War II on December 7th, 1941. Unemployment averages 6.9% but exhibits substantial volatility with a standard deviation of 4.6%.

Table 3 provides more detailed descriptive statistics for PPI, CPI, and GDP deflator inflation for the full sample and shows how these descriptive statistics change from the pre- to the post-Compustat-initiation period. Consistent with Figure 1, we find more variation in our three

inflation measures before Compustat initiation. During this early period, all three inflation measures have a greater standard deviation and reach their lows (during the Great Depression) and highs (following World War II). Further, CPI and GDP deflator inflation experience their only deflationary episodes in the pre-Compustat period, while PPI has a deflationary period in both the pre and post-Compustat periods. We find a similar percentage of years with high inflation (over 5%) before and after Compustat initiation, and a larger percentage of years with stable inflation (0 to 5%) after the initiation of Compustat.

Together, the information in Figure 2 and Table 3 highlights the importance of using the longer time series of our hand-collected data. Since Compustat was initiated, inflation has become more stable and generally experienced a downward trend. An unobservable omitted factor with a similar time trend as inflation would lead to biased inferences. Before Compustat initiation and over the full sample, there is no such trend, which reduces the possibility that an unobserved factor correlated with inflation would confound the results.[21] Below, to ensure the robustness of our analysis, we estimate our main tests for the full sample as well as separately for the pre- and post-Compustat initiation periods.

Table 4 presents the correlation matrix. Returns correlate positively with earnings levels and changes (Ball and Brown 1968) but negatively with GDP growth and various inflation measures. In contrast, earnings levels and changes correlate positively with GDP growth and various inflation measures. However, these univariate correlations between firm-level and aggregate-level variables are difficult to interpret since the aggregate-level variables tend to be

[21] To illustrate this concern, it is possible that firms during the high-inflation periods of the 1970s and early 1980s are fundamentally different in some unobservable way from firms during the low-inflation period from the 1990s to 2020. Under this scenario, this unobserved factor, not inflation, would drive any changes in value relevance. In the pre-Compustat-initiation period, there is no clear time trend, and it is difficult to posit an unobservable factor or firm characteristic that would systematically covary with the numerous inflation spikes during this period.

highly correlated with each other. This highlights the importance of controlling for macroeconomic variables in multivariate analysis.

5. Aggregate-Level Results

5.1. Main Results

Following Francis and Schipper (1999), we compute *Earnings Relevance* as the adjusted R-squared obtained from annual cross-sectional regressions of *Return* on *Earnings* and Δ*Earnings*:

$$Return_{it} = \beta_0 + \beta_{1t} Earnings_{it} + \beta_{2t} \Delta Earnings_{it} + \varepsilon_{it}. \quad (1)$$

Table 2 Panel B shows that variation in earnings explains on average 12.3% of the variation in returns, with a minimum of 2.1% in 1937 and a maximum of 27.0% in 1950.

Figure 3 Panel A plots earnings relevance and PPI inflation over time. We choose PPI instead of CPI or GDP deflator inflation as our primary inflation measure because Shivakumar and Urcan (2017) document that the relation between aggregate earnings and inflation is most pronounced when researchers use PPI to measure inflation. To facilitate interpretation and reduce noise, we standardize and, in Figure 3 Panel B, smooth both measures (by taking a moving average over the preceding, current, and subsequent year). As documented by Francis and Schipper (1999) and Lev and Zarowin (1999), earnings relevance appears to decline from the 1970s until 2020. This decline coincides with a decline in inflation levels over the same period. However, the trend in earnings relevance is much more nuanced once one extends the sample period back to 1926 (see also Ely and Waymire (1999)). Most recently, there is an uptick in earnings relevance to 22.2% in 2021, the highest level since 1984. Figure 4 shows a binned scatter plot of standardized earnings relevance against PPI inflation using 10 bins, to address concerns that the positive correlation between inflation and earnings relevance might be driven by outlier years. Inconsistent with such concerns, the plot displays a positive relation at different earnings relevance and inflation levels.

Consistent with the discount rate channel, Figures 3 and 4 present a strong and significant positive correlation between earnings relevance and inflation. Table 5 Panel A tests whether this correlation persists after we include real GDP growth (*GDP Growth*), the unemployment level (*Unemployment*), the T-bill return (*Risk-Free Rate*), economic policy uncertainty (*Macro Uncertainty*), and stock market volatility (*Stock Volatility*) as controls. To facilitate interpretation, we standardize all variables. We estimate standard errors following Newey and West (1987) using a lag order of five.[22]

Earnings Relevance is significantly positively related to all three inflation measures, consistent with the discount rate channel (Table 5). A one-standard-deviation change in *PPI* (*CPI*, *GDP Deflator*) relates to a 0.390 (0.519, 0.500) change in *Earnings Relevance*. These associations are economically large relative to those of all control variables. *GDP Growth*, *Unemployment*, *Risk-Free Rate,* and *Stock Volatility* do not consistently relate significantly to *Earnings Relevance*. *Macroeconomic Uncertainty* consistently relates negatively to *Earnings Relevance* in all models, though the economic magnitude of its effect is smaller than that of inflation.

Table 5 Panel A shows a reliably positive association between inflation and earnings relevance. This finding suggests that as inflation falls, as it did for many years after the great inflation of the 1970s, earnings relevance is likely to decline. One might wonder whether the reduction in earnings relevance and inflation since the 1970s is due to a correlated omitted variable or unrelated time trends, and whether this portion of the sample is driving our results. To address these concerns, in Table 5 Panels B and C, we repeat the analysis for the pre- and post-Compustat-

[22] We use only the current value of variables in our aggregate-level analyses. To determine whether another lag order fits the data better, in untabulated analyses, we re-estimate the model after varying the lag order from 0 to 10 and compute the Bayesian Information Criteria (BIC) and the Akaike Information Criterion (AIC). For all three of our inflation measures, a lag order of 0 yields the lowest BIC as well as AIC, which is evidence that the models presented here describe the data best. Further, when we re-estimate our models in changes instead of levels, our inferences remain unchanged.

initiation periods, where inflation characteristics and the composition of firms differ. We find a reliably positive association between inflation and earnings relevance in both periods, which suggests that our main result is not driven by a trending correlated omitted variable.

5.2. Additional Tests

5.2.1. Importance of Inflation Relative to Extant Determinants of Earnings Relevance

To explore more deeply inflation's importance in explaining changes in earnings relevance (i.e., our second objective), we extend the models estimated in Table 5 to include other determinants highlighted in prior literature: a time trend (*Year*), the percentage of loss firms (*Loss*), the percentage of technology firms (*Technology*), and indicators for the tenures of different standard-setting bodies (*SEC*, *CAP*, *APB*, *FASB*). We use the Shapley value variance decomposition to compute how much of the variance in earnings relevance each determinant explains relative to all other determinants (Shapley 1953; Winter 2002; Sharapov et al. 2021). As discussed in recent accounting research (McInnis et al. 2018), the Shapley value shows the contribution of a specific variable to the total explanatory power of a regression. Shapley values are computed by comparing the adjusted R-squared from the regression including the variable with a regression excluding the variable (Israeli 2007). The greater a variable's Shapley value, the more variation that variable explains.

Table 6 Columns (1), (3), and (5) present the estimation results, and Columns (2), (4), and (6) present the percentages of the explained variance attributable to the corresponding grouped set of determinants. Consistent with Ely and Waymire (1999), earnings relevance does not appear to systematically vary with variables proposed in prior literature after one extends the sample period back to 1926. Notably, in contrast to studies that focus on the post-Compustat-initiation period, the time trend in earnings relevance is not significant after including the pre-Compustat-initiation

period in the sample.[23] Across all three measures of inflation, we document that inflation is the most influential variable in explaining earnings relevance. *PPI* (*CPI, GDP Deflator*) accounts for 34.02% (39.69%, 33.74%) in the grouped model. The inflation effect magnitudes are large relative to groups of other determinants. For example, standard-setting body tenures (i.e., *SEC, CAP*, *APB*, and *FASB*), the next most important group of variables, jointly explain only 27.33% (23.61%, 26.14%). Figure 5 depicts these results graphically and illustrates that inflation is an important determinant of earnings relevance relative to other factors examined in prior literature.

5.2.2. An Alternative Measure of Earnings Relevance

Following Francis and Schipper (1999), as an alternative measure of earnings relevance, we use the relevance of book value of equity (which approximates cumulative earnings less dividends) and earnings (*Book Value & Earnings Relevance*). Specifically, we use the adjusted R-squared obtained from annual cross-sectional regressions of market value of equity on book value of equity and earnings.[24] Table 7 Panels A presents the results. Inflation relates significantly positively to *Book Value & Earnings Relevance* across all specifications. For example, a one-standard-deviation increase in *GDP Deflator* is associated with a 0.288-standard-deviation increase in *Book Value & Earnings Relevance*.

5.2.3. Excluding New Economy and Technology Firms

Lev and Zarowin (1999) argue that the application of US GAAP produces accounting numbers that do not represent the economic reality of firms whose business models are heavily dependent on investment in intangibles, such as human capital or software technology. In a similar

[23] In untabulated analyses, we replicate prior findings of a significantly negative time trend in earnings relevance in the post-Compustat-initiation part of our sample. However, after controlling for inflation, the time trend variable turns insignificant while the inflation variables remain significantly positive.

[24] Ohlson (1995) connects assets, liabilities, and book value of equity (= assets – liabilities) to value, justifying their appearance in value relevance models (Barth et al. 2001). Barth et al. (2001) discuss when it is appropriate to use firm value or returns in value relevance research. We document similar results using both prices and returns, suggesting that our findings are not sensitive to this research design choice.

spirit, Barth et al. (2023) show that over time changes in value relevance are driven, in part, by a transition from industrial firms to "new economy" firms. To mitigate concerns that the rise of new economy (technology) firms drives our results, in Table 7 Panel B (Panel C), we re-estimate Table 5 Panel A after excluding new economy (technology) firms.[25] The results remain qualitatively similar, suggesting that the rise of these new types of firms does not explain our results.

5.2.4. Subjective Expectations of Inflation

While Table 5 controls for various macroeconomic factors other than inflation, one concern is that our results might be driven by other correlated but unobservable macroeconomic factors. To address this concern, Table 8 tests whether our results are robust to using deviations from peoples' real-time inflation expectations as alternative inflation measures. Since investors likely incorporate observable as well as unobservable macroeconomic factors in their inflation expectations, deviations from these expectations should help us isolate the effects of inflation rather than those of other macroeconomic factors. The two oldest continuous surveys of inflation expectations are the Livingston Survey (which queries professional economists from industry, government, banking, and academia about their CPI inflation expectations since 1946) and the University of Michigan Survey (which queries consumers about their CPI inflation expectations since 1978). Table 8 presents the results of replacing the inflation measures in Table 5 with *Livingston* and *Michigan*, which we compute as realized CPI inflation minus the expectations obtained from the Livingston and Michigan surveys, respectively. While lack of data availability shortens the sample period considerably, our inferences remain unchanged.

5.2.5. Frictions to Price Increases

[25] Following Barth et al. (2023), we define technology firms as members of the 283, 357, 360, 361, 362, 363, 364, 365, 366, 367, 368, 481, 737, and 873 3-digit SIC industries and new economy firms as technology firms founded after 1970 which made a loss during their IPO year.

In the absence of frictions, inflation would cause discount rates and future cash flows to increase in an offsetting way (Kydland and Prescott 1982). Thus, we expect our results to concentrate in firms that face frictions in passing along prices increases. Following prior research (Baqaee and Farhi 2020; Barry et al. 2023), we use firm level markup to measure pricing power. In an untabulated analysis, we restrict our sample to firms with low pricing power and find that our main results are concentrated in this subsample, consistent with our expectations.

5.2.6. Cash Flow Predictability

So far, we have documented that inflation is positively related to earnings relevance, which is consistent with the discount rate channel but inconsistent with the historical cost accounting channel. This finding is perhaps surprising, as it is inconsistent with the FASB assertion that earnings become less relevant as inflation increases. The FASB Conceptual Framework states that one component of relevance is predictive value (FASB 1984a), and many concerns regarding historical cost accounting focus on the assumption that predictive value will decrease as inflation increases because earnings are measured on a nominal basis (Konchitchki 2011; Curtis et al. 2015). Motivated by this reasoning, we examine whether accounting numbers are less useful in forecasting future cash flows when inflation increases.

Table 9 tests this prediction by re-estimating our Table 5 Panel A analysis after replacing *Earnings Relevance* as the dependent variable with standardized *Cash Flow Predictability*, the slope coefficient obtained from annual cross-sectional regressions of current cash flow (scaled by beginning-of-the-year market value of equity) on lagged *Earnings*. We compute cash flow as earnings minus accruals, where accruals are defined as: changes in receivables, plus changes in inventory, minus changes in accounts payable, minus depreciation expense. Consistent with the historical cost accounting channel, we document a significant negative relation between *Cash Flow*

Predictability and inflation for *PPI* but not for *CPI* and *GDP Deflator*. Hence, we find some evidence (for the *PPI* measure) that inflation renders accounting numbers less useful for cash flow prediction. The overall implication is that, to the extent that the historical cost channel does play a role, it is more than offset by the discount rate channel in our main tests.

6. Firm-Level Analysis

The aggregate-level results show that inflation is positively related to earnings relevance, which is consistent with the discount rate channel. There are two possible reasons for this finding. First, it is possible that only the discount rate channel exists, which leads to a positive association between inflation and earnings relevance. Second, the cash flow predictability analysis in Table 9 suggests the possibility that both the historical cost (H1) and the discount rate (H2) channels play a role, but the discount rate channel is stronger. To distinguish between these explanations, we complement the aggregate-level results in the previous section with a firm-level analysis that provides evidence on the mechanisms underlying Hypotheses 1 and 2. The firm-level analysis compliments our previous analysis in two important ways. First, it follows the design in Lev and Zarowin (1999), an influential value relevance study.[26] Finding a consistent association between inflation and earnings relevance using different research designs would bolster our inferences. Second, the firm-level analysis allows us to split the sample based on an accounting variable of interest and test whether earnings relevance varies with that accounting variable.

6.1. Historical Cost Accounting Effect

We examine Hypothesis 1's prediction that inflation distorts the relation between historical cost accounting numbers and economic values, rendering accounting numbers less useful for

[26] As discussed in Barth et al. (2001), many value-relevance papers focus on whether the coefficient on an accounting amounts differs from zero with the predicted sign. We focus on Lev and Zarowin (1999) because our research question and design is closest to their analysis. Following Lev and Zarowin (1999), we examine how the earnings slope coefficient varies with inflation and interpret a higher slope coefficient as higher earnings relevance.

investment decision-making. If so, we would expect that inflation should decrease earnings relevance more for firms with a larger share of assets that are subject to historical cost accounting treatment. To test this prediction, we estimate the following firm-level panel data regression model separately for firms with above- and below-median PPE (or inventory) scaled by total assets:

$$Return_{it} = \beta_0 + \beta_1 Earnings_{it} + \beta_2 Earnings_{it} \times PPI_t + \Gamma_i + \Phi_t + \varepsilon_{it}. \quad (2)$$

The focus on inventory and PPE is consistent with the FASB's FAS 33 disclosure requirements, which require firms to provide supplemental information about inventory, PPE, depreciation expense, and cost of goods sold (see Appendix C). *Controls* denotes a vector of firm-level control variables including *Beta*, *Size*, *Dividend Yield*, *Dividend Payer*, *Loss*, *Market-to-Book*, and *Leverage*. Table 1 Panel A presents descriptive statistics for these firm-level control variables. Γ denotes a firm fixed effect, and Φ denotes a year fixed effect. All other variables are as defined before. We cluster standard errors by firm and year. We standardize all continuous variables to facilitate interpretation. In contrast to the aggregate-level analysis in which we directly measure earnings relevance as the R-squared obtained from annual cross-sectional regressions of returns on earnings, for the firm-level analysis we now focus on the β_1 slope coefficient, another commonly used earnings relevance measure (Lev and Zarowin 1999).

Table 10 Panel A Columns (1) and (2) present the results of using PPE to identify firms for which historical cost accounting is more important. The last row (*High – Low*) presents the p-value of a 1,000-repetition bootstrap analysis testing whether the *PPI* × *Earnings* coefficient in Column (1) is different from the one in Column (2). Inconsistent with Hypothesis 1, we do not find that inflation's effect on the returns-earnings relation is mitigated for firms with high PPE. The *PPI* × *Earnings* coefficients in Columns (1) and (2) are similar in economic magnitude (0.050 vs. 0.047)

and not significantly different at conventional levels (p = 0.207). This suggests that the association between inflation and earnings relevance does not differ based on the level of a firm's PPE.

Columns (3) and (4) present the results using inventory to identify firms for which historical cost accounting is more important. [27] When inflation increases the nominal price of inventory, the inventory amount stated on a firm's balance sheet becomes a worse reflection of what the inventory could be sold for at current market prices. In contrast to the PPE analysis, we find that *PPI* × *Earnings*' slope coefficient is economically (0.067 vs. 0.021) and statistically (p < 0.01) smaller for firms with large inventory balances. Therefore, consistent with Hypothesis 1, we find that inflation's effect on earnings relevance is weaker for firms that hold large inventory balances, consistent with the historical cost accounting channel.

6.2. Discount Rate Effect

We explore in two different cross-sectional settings whether Hypothesis 2's prediction that inflation increases earnings relevance by increasing discount rates and thereby the share of firm value comprised by current earnings. First, if the discount rate channel is important, we would expect that inflation would increase earnings relevance more for firms that are more sensitive to changes in a firm's discount rate. To test this prediction, we re-estimate Equation (2) separately for firms with above- and below-median Dechow et al. (2004) equity duration. Similar to bond duration, equity duration measures the sensitivity of a firm's equity value to discount rate changes by taking a value-weighted average of the time until forecasted future cash flows are expected to be realized.[28] Table 10 Panel B Columns (1) and (2) show how the results vary with equity

[27] Prior research notes that LIFO inventory accounting results in a cost of sales number that is closer to current replacement cost (Biddle and Martin 1985; Lev and Thiagarajan 1993). The use of LIFO accounting is driven by tax concerns and is not intended to mitigate distortions during periods of high inflation (Biddle 1980; Dopuch and Pincus 1988; Kang 1993; Hand 1993; Guenther and Trombley 1994). We are unable to conduct a cross-sectional test based on inventory accounting methods (e.g., LIFO or FIFO) as this information is not available for our full sample period.
[28] To illustrate the intuition, we use the example from the introduction where accounting explains 40% (10%) of variation in near-term (long-term) cash flows. Assume there are two firms, one with both a near-term and long-term

duration, a measure of how sensitive a firm's equity value is to changes in the discount rate. Consistent with Hypothesis 2, *PPI* × *Earnings*' slope coefficient is economically (0.027 vs. 0.094) and statistically ($p < 0.01$) larger for firms with high equity duration.

Second, as discussed above, the discount rate channel is predicated on the idea that frictions prevent at least some firms from passing along all price increases. In the absence of frictions, inflation would cause discount rates and expected future cash flows to increase in an offsetting way, leading to no change in firm value or earnings relevance. Following this reasoning, we expect the increase in earnings relevance to be more pronounced for firms that face difficulty in passing along price increases. To test this explanation, we re-estimate Equation (2) separately for firms with above- and below-median pricing power.[29] Table 10 Panel B Columns (3) and (4) show that the results concentrate in firms with low pricing power, the subsample of firms most likely to face frictions. For firms with high pricing power, where it is more likely that the change in discount rates is offset by changes in future cash flows, we find no evidence that earnings relevance varies with inflation. In sum, we find consistent evidence for Hypothesis 2's prediction that inflation's effect on earnings relevance is more positive for firms that are more sensitive to discount rate changes, which further supports the discount rate channel. As expected, the results are concentrated in firms that are more likely to face difficultly in passing along price increases.

cash flow (a high equity duration firm), and another firm with only near-term cash flow (a low equity duration firm). As discount rates increase, accounting will explain more variation in the high duration firm as more weight is shifted to the near-term cash flows. There will be little change in earnings relevance for the low-duration firm as there are no distant cash flows, only near-term cash flows. Thus, duration is positively related to inflation's impact on earnings relevance. Of course, all firms have more than two future cash flows, thus any firm with cash flows in more than just one future period should have at least some increase in earnings relevance.

[29] Following prior research, we use firm level markup to measure pricing power (Baqaee and Farhi 2020; Barry et al. 2023). Markup is defined as 1/(1 – income before extraordinary items/sales). To mitigate the effects of any one-time shocks, we take a four-year average which results in some sample attrition. In robustness tests, we find qualitatively similar results using the most recent year's margin and alternative measures of income.

7. Conclusion

The FASB's conceptual framework posits that financial statements will become less useful as inflation increases (FASB 1984a, para 71). Motivated by the recent rise in inflation, we test the FASB's conjecture. Using a novel dataset that spans nearly a century, we document a positive relation between inflation and earnings relevance, which is consistent with the hypothesis that inflation increases the importance of current relative to future payoffs. The magnitude and explanatory power of inflation's effect are large relative to drivers of earnings relevance examined in prior literature. Cross-sectional analysis suggests that while the discount rate effect dominates on average, both the discount rate and the historical cost accounting channels exist. The historical cost accounting channel appears for firms with large inventory balances, while inflation's effect on earnings relevance is pronounced for firms that are more sensitive to discount rate changes and firms that face more frictions in passing along price increases. On net, our evidence suggests that the discount rate channel more than offsets any effects of the historical cost accounting channel.

Collectively, the evidence shows that accounting explains more, not less, variation in equity values as inflation increases, which is opposite to the FASB's conjecture. Our finding that inflation is an important determinant of earnings relevance has implications for policy evaluation and the interpretation of prior research. Prior research uses the time-series decline in earnings relevance as motivation to call for changes in financial reporting, but does not control for the effects of inflation. When controlling for inflation, we find no evidence of a time-series decline in value-relevance. Since inflation is outside the control of accounting standard setters, researchers seeking to understand changes in earnings relevance should control for inflation.

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Appendix A. Historical Proposals on Inflation Accounting

Historically, the proposed approaches to account for inflation fall into one of two buckets (Flynn 1977). The first approach is general purchasing power accounting (GPPA), which is based on the approach presented by the FASB in the 1970 exposure drafts. Under GPPA, balance sheet items are split into monetary (cash, receivables, payables, etc.) and nonmonetary items, with nonmonetary items adjusted for the changes in purchasing power. For example, if purchasing power ten years ago was 75% higher, then a fixed asset with a historical cost of $1,000 would be presented in the current financial statements at $1,750 (Flynn 1977). Under GPPA, monetary assets would not be adjusted in the current period, but monetary items in prior-period balance sheets would be adjusted to express them in terms of current purchasing power. The second approach is referred to as replacement cost or current-cost accounting (hereafter, the CCA approach). Under this approach, PPE and inventory would be adjusted to the asset-specific replacement cost for an asset with equivalent capacity. As any change in asset values would affect depreciation and cost of goods sold, the firm would be required to disclose the corresponding effect on depreciation and cost of goods sold.

The approaches differ in two important ways. First, they differ in whether a general adjustment is made for all nonmonetary items (GPPA) or whether the adjustments are asset-specific (CCA). Second, the CCA approach applies only to PPE and inventory and thus creates potential mismatches. Flynn (1977) illustrates this point with an example. Consider a fixed asset purchase financed with long-term debt. Adjusting the asset balances to the replacement cost with a corresponding increase in depreciation expense would decrease net income for the increase in depreciation. However, the long-term debt would also be repaid with cheaper future dollars, generating an offsetting gain that is ignored under the CCA approach. Under the GPPA approach, the historical value of the debt would be restated, and changes in the historical value of the debt would (approximately) offset any increase in depreciation.

In 1981, the FASB issued SFAS 52 on foreign currency. This standard includes accounting guidance for hyperinflationary economies, defined as economies with cumulative inflation of 100% or more over 3 years. Under SFAS 52, the financial statements of the foreign subsidiary must be remeasured using the parent company's reporting currency (typically, the US dollar) as the foreign subsidiary's functional currency. Nonmonetary assets and liabilities and the related expenses (e.g., depreciation) must be remeasured at the exchange rate at the time when the asset or liability was created. All gains and losses resulting from this remeasurement process must be reported in net income. In contrast, monetary assets and liabilities must be remeasured using current exchange rates. See the PwC Foreign Currency Guide, Section 6.3 for detailed examples. SFAS 52 applies only to foreign subsidiaries and does not apply to subsidiaries in the United States where the functional currency and reporting currency are both the US dollar.

In contrast to US GAAP, IAS 29 requires firms to adjust their financial statements for inflation not only for foreign subsidiaries but also for the parent firm if the parent firm operates in a hyperinflationary environment.

Appendix B. Variable Definitions

Panel A. Firm-Level Variables

Variable	Source	Definition
Return	CRSP	Stock return computed from the beginning of April of the current to the end of March of the subsequent fiscal year.
Earnings	Compustat & Moody's	Earnings scaled by lagged market value of equity.
Δ*Earnings*	Compustat & Moody's	Change in earnings scaled by lagged market value of equity.
Cash Flow	Compustat & Moody's	Earnings minus accruals scaled by lagged market value of equity, where accruals are changes in receivables, plus changes in inventory, minus changes in accounts payable, minus depreciation expense.
Beta	Compustat & Moody's	Slope coefficient estimated from regressing the firm's daily excess stock returns on the excess market return for the fiscal year.
Size	Compustat & Moody's	Natural logarithm of one plus total assets.
Dividend Yield	Compustat & Moody's	Dividends scaled by lagged market value of equity.
Dividend Payer	Compustat & Moody's	Indicator that the firm is paying a dividend.
Loss	Compustat & Moody's	Indicator that the firm is making a loss.
Market-to-Book	Compustat, Moody's & CRSP	Market value of equity scaled by book value of equity.
Leverage	Compustat & Moody's	Total debt scaled by total assets.

Panel B. Aggregate-Level Variables

Variable		Definition
Earnings Relevance	Compustat, Moody's & CRSP	R-squared obtained by estimating annual cross-sectional regressions of *Return* on *Earnings* and Δ*Earnings*.
Assets & Liabilities Relevance	Compustat, Moody's & CRSP	R-squared obtained by estimating annual cross-sectional regressions of market value of equity on total assets and total liabilities.
Book Value & Earnings Relevance	Compustat, Moody's & CRSP	R-squared obtained by estimating annual cross-sectional regressions of market value of equity on earnings and book value of equity.
Cash Flow Predictability	Compustat & Moody's	Slope coefficient obtained by estimating annual cross-sectional regressions of *Cash Flow* on Earnings.
PPI	BLS	PPI inflation.
CPI	BLS	CPI inflation.
GDP Deflator	www.MeasuringWorth.com & BEA	GDP deflator inflation.
Livingston	Philadelphia Fed	Actual minus expected CPI inflation.
Michigan	St. Louis Fed	Actual minus expected CPI inflation.
GDP Growth	www.MeasuringWorth.com & BEA	Real GDP growth.
Unemployment	NBER & BLS	Unemployment rate.
Risk-Free Rate	CRSP	Treasury bill rate return over the year.
Macro Uncertainty	www.PolicyUncertainty.com	Economic Policy Uncertainty index.
Stock Volatility	CRSP	Annualized CRSP daily market return volatility over the year.

Appendix C. Disclosure Requirements in FASB Statement 33, Financial Reporting and Changes in Prices

In September 1979, the FASB issued FASB Statement 33, *Financial Reporting and Changes in Prices.* That Standard requires firms to report the following information (FASB 1979, Summary):

For fiscal years ended on or after December 25, 1979, enterprises are required to report:

1. Income from continuing operations adjusted for the effects of general inflation
2. The purchasing power gain or loss on net monetary items.

For fiscal years ended on or after December 25, 1979, enterprises are also required to report:

1. Income from continuing operations on a current cost basis
2. The current cost amounts of inventory and property, plant, and equipment at the end of the fiscal year
3. Increases or decreases in current cost amounts of inventory and property, plant, and equipment, net of inflation.

As FAS 33 notes, "this Statement calls for two supplementary income computations, one dealing with the effects of general inflation, the other dealing with the effects of changes in the prices of resources used by the enterprise. The Board believes that both types of information are likely to be useful" (FASB 1979). FAS 33 provides the following illustrative example:

STATEMENT OF INCOME FROM CONTINUING OPERATIONS ADJUSTED FOR CHANGING PRICES

For the Year Ended December 31, 1980
(In (000s) of Dollars)

	As Reported in the Primary Statements	Adjusted for General Inflation	Adjusted for Changes in Specific Prices (Current Costs)
Net sales and other operating revenues	$253,000	$253,000	$253,000
Cost of goods sold	197,000	204,384	205,408
Depreciation and amortization expense	10,000	14,130	19,500
Other operating expense	20,835	20,835	20,835
Interest expense	7,165	7,165	7,165
Provision for income taxes	9,000	9,000	9,000
	244,000	255,514	261,908
Income (loss) from continuing operations	$ 9,000	$(2,514)	$(8,908)
Gain from decline in purchasing power of net amounts owed		$ 7,729	$ 7,729
Increase in specific prices (current cost) of inventories and property, plant, and equipment held during the year *			$ 24,608
Effect of increase in general price level			18,959
Excess of increase in specific prices over increase in the general price level			$ 5,649

Figure 1. Number of Observations by Year

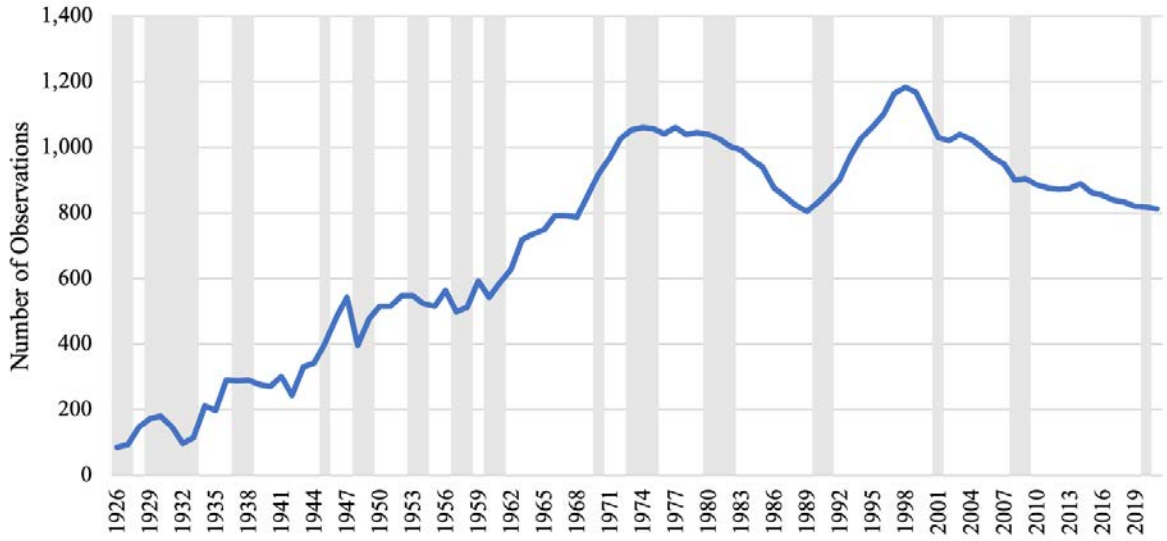


Figure 1 presents the number of our sample observations by year. Recessions as classified by the National Bureau of Economic Research are shaded in grey. The sample period spans from 1926 to 2021.

Figure 2. Different Inflation Measures over Time

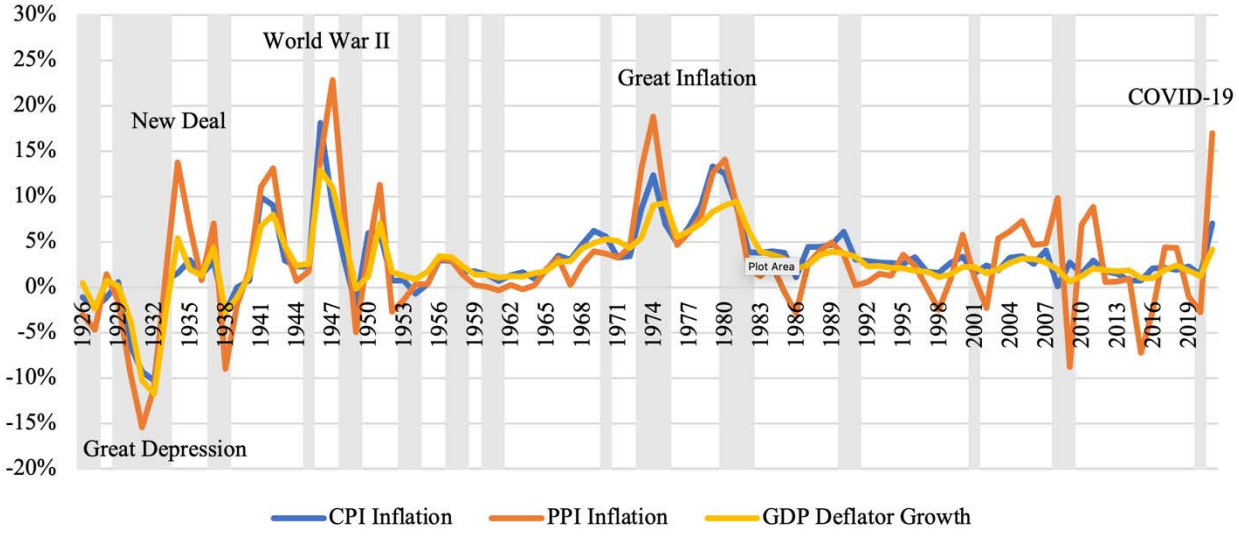
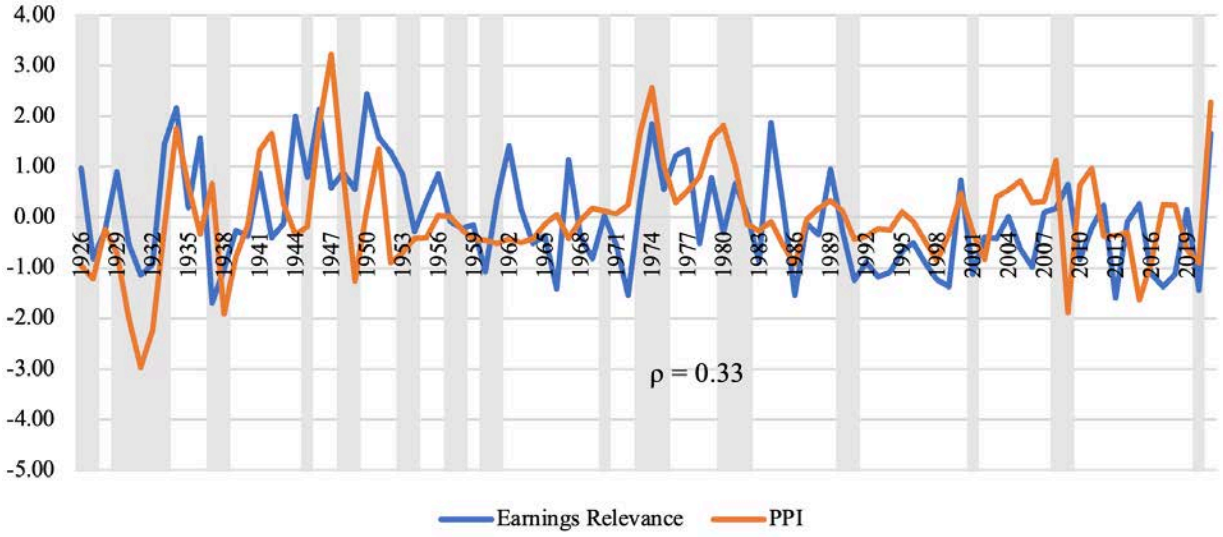


Figure 2 presents different inflation measures over our sample period. Recessions as classified by the National Bureau of Economic Research are shaded in grey. The sample period spans from 1926 to 2021.

Figure 3. Earnings Relevance and Inflation over Time

Panel A. Unsmoothed



Panel B. Smoothed

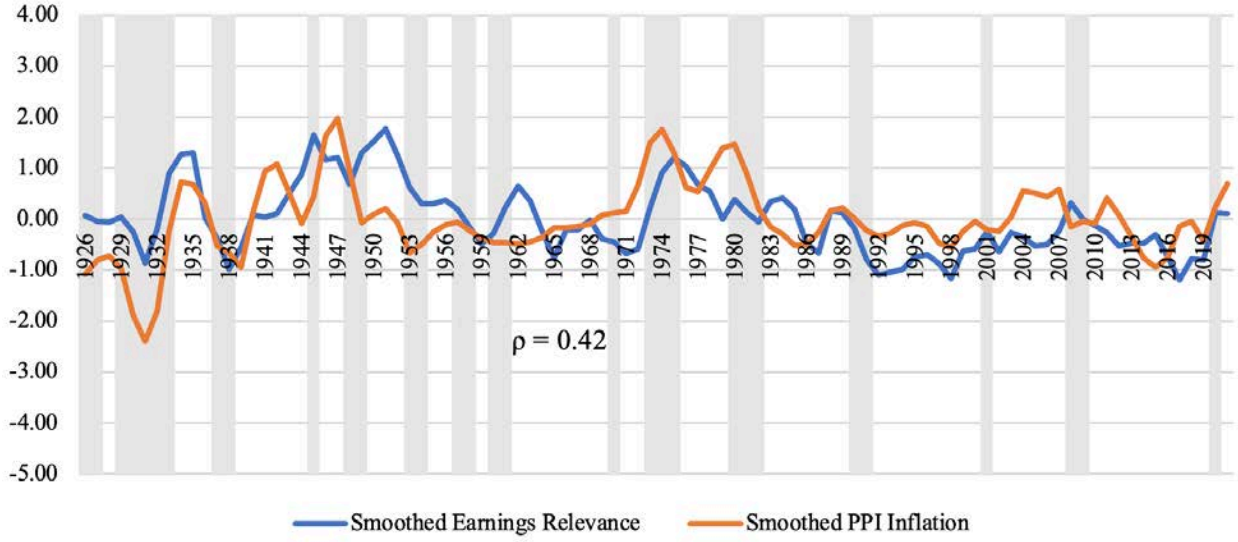


Figure 3 plots earnings relevance and PPI inflation over time. To facilitate interpretation and reduce noise, we standardize both measures and, in Panel B, smooth them (by taking a moving average over the preceding, current, and subsequent year). Recessions as classified by the National Bureau of Economic Research are shaded in grey. The sample period spans from 1926 to 2021.

Figure 4. Earnings Relevance and Inflation Scatter Plot

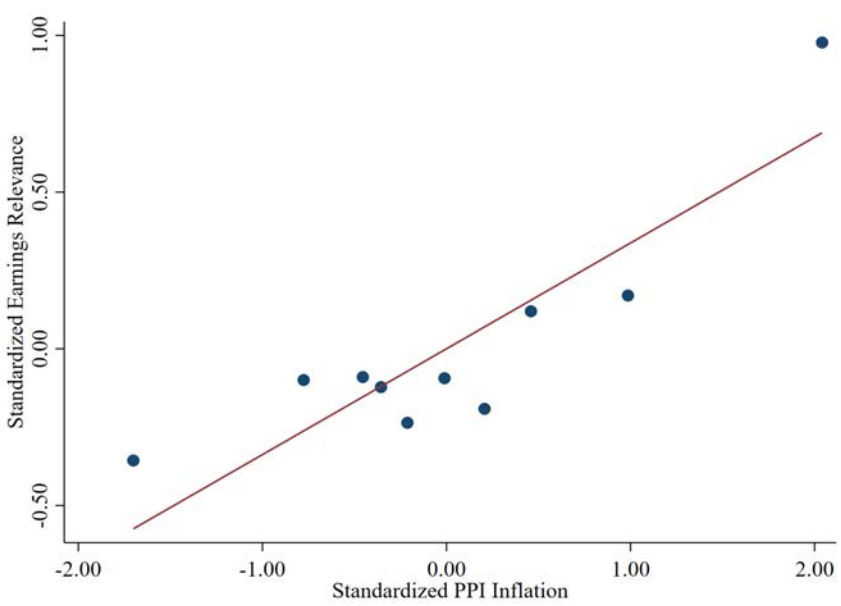


Figure 4 displays a binned scatter plot (10 bins) of earnings relevance against PPI inflation. To facilitate interpretation, we standardize both measures. The sample period spans from 1926 to 2021.

Figure 5. Inflation's Contribution to Explaining Variation in Earnings Relevance

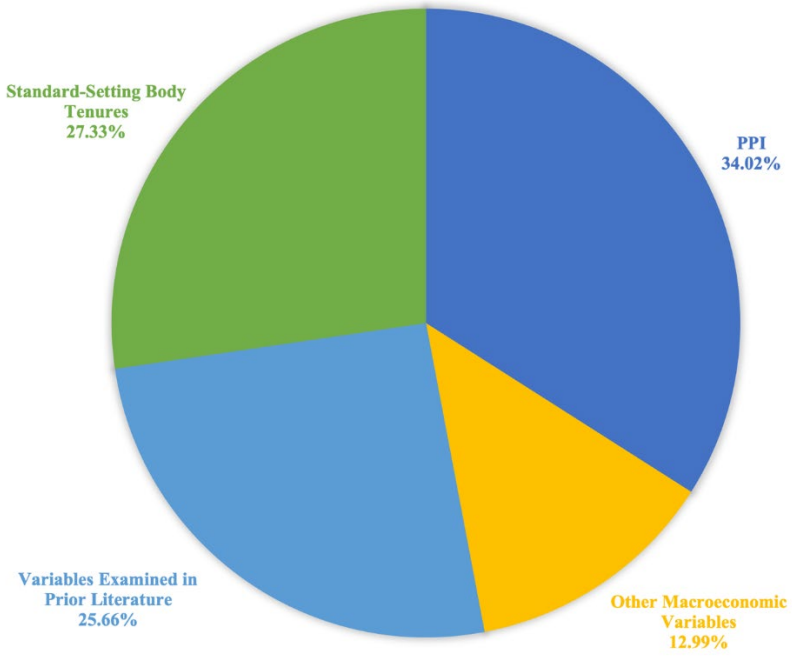


Figure 5 illustrates the grouped Shapley decomposition analysis, which implies that the PPI inflation measure explains more of the variation in earnings relevance than do other determinants examined in prior literature.

Table 1. Descriptive Statistics

Industry	Observations	Percent of Total (%)
Agriculture	155	0.22
Food Products	2,960	4.29
Candy and Soda	313	0.45
Beer and Liquor	524	0.76
Tobacco Products	419	0.61
Recreation	582	0.84
Entertainment	1,000	1.45
Printing and Publishing	807	1.17
Consumer Goods	2,184	3.17
Apparel	1,579	2.29
Healthcare	824	1.19
Medical Equipment	1,018	1.48
Pharmaceutical Products	1,465	2.12
Chemicals	3,220	4.67
Rubber and Plastic Products	738	1.07
Textiles	1,096	1.59
Construction Materials	3,484	5.05
Construction	1,128	1.64
Steel Works	3,225	4.68
Fabricated Products	248	0.36
Machinery	4,207	6.10
Electrical Equipment	1,486	2.15
Automobiles and Trucks	2,743	3.98
Aircraft	1,334	1.93
Shipbuilding, Railroad Equipment	564	0.82
Defense	292	0.42
Precious Metals	388	0.56
Non-Metallic & Industrial Metal Mining	692	1.00
Coal	408	0.59
Petroleum and Natural Gas	4,627	6.71
Communication	1,757	2.55
Personal Services	749	1.09
Business Services	3,713	5.38
Computers	1,397	2.03
Electronic Equipment	2,363	3.43
Measuring and Control Equipment	984	1.43
Business Supplies	1,767	2.56
Shipping Containers	831	1.20
Transportation	2,101	3.05
Wholesale	2,126	3.08
Retail	5,608	8.13
Restaurants, Hotels, Motels	1,070	1.55
Other	788	1.14
Sum	68,964	100

Table 1 presents the industry composition of our sample. The sample period spans from 1926 to 2021.

Table 2. Descriptive Statistics

Panel A. Firm-Level Variables

Variable	N	Mean	Std	P1	P25	Median	P75	P99
Return	68,964	0.149	0.451	-0.721	-0.125	0.089	0.343	2.006
Earnings	68,964	0.065	0.128	-0.609	0.039	0.071	0.112	0.406
Δ*Earnings*	68,964	0.008	0.126	-0.506	-0.015	0.007	0.029	0.649
Beta	68,964	0.187	0.840	-1.889	-0.340	0.124	0.640	2.863
Size	68,964	6.210	1.958	2.111	4.771	6.140	7.580	10.973
Dividend Yield	68,964	0.030	0.029	0.000	0.004	0.024	0.046	0.134
Dividend Payer	68,964	0.779	0.415	0.000	1.000	1.000	1.000	1.000
Loss	68,964	0.123	0.328	0.000	0.000	0.000	0.000	1.000
Market-to-Book	68,964	2.132	2.327	0.195	0.863	1.445	2.469	15.776
Leverage	68,964	0.232	0.163	0.000	0.106	0.222	0.334	0.676

Panel B. Aggregate-Level Variables

Variable	N	Mean	Std	P1	P25	Median	P75	P99
Earnings Relevance	96	0.123	0.060	0.021	0.073	0.115	0.169	0.270
GDP Growth	96	0.033	0.048	-0.129	0.016	0.032	0.053	0.189
Unemployment	96	0.069	0.046	0.012	0.044	0.056	0.074	0.249
Risk-Free Rate	96	0.033	0.031	0.000	0.004	0.027	0.051	0.147
Macro Uncertainty	96	0.969	0.437	0.318	0.637	0.946	1.203	3.263
Stock Volatility	96	0.149	0.078	0.050	0.097	0.126	0.170	0.437

Table 2 presents descriptive statistics. All variables are defined in Appendix B. The sample period spans from 1926 to 2021.

Table 3. Inflation over the Past Century

Panel A. PPI Inflation

	Years	Mean	Std	Low	High	Range	% High Inflation (over 5%)	% Deflation	% Stable (0 to 5%)
Full Sample	96	2.87%	6.19%	-15.47%	22.86%	38.33%	26.04%	23.96%	50.00%
Pre: 1926 to 1961	36	1.88%	7.64%	-15.47%	22.86%	38.33%	25.00%	33.33%	41.67%
Post: 1962 to 2021	60	3.47%	5.11%	-8.80%	18.79%	27.59%	26.67%	18.33%	55.00%
Difference (Post − Pre)	24	1.60%	-2.50%	6.70%	-4.10%	-10.70%	1.70%	-15.00%	13.30%

Panel B. CPI Inflation

	Years	Mean	Std	Low	High	Range	% High Inflation (over 5%)	% Deflation	% Stable (0 to 5%)
Full Sample	96	2.98%	3.98%	-10.27%	18.13%	28.41%	18.75%	9.38%	71.88%
Pre: 1926 to 1961	36	1.57%	5.07%	-10.27%	18.13%	28.41%	16.67%	25.00%	58.33%
Post: 1962 to 2021	60	3.82%	2.88%	0.09%	13.29%	13.20%	20.00%	0.00%	80.00%
Difference (Post − Pre)	24	2.30%	-2.20%	10.40%	-4.80%	-15.20%	3.30%	-25.00%	21.70%

Panel C. GDP Deflator Inflation

	Years	Mean	Std	Low	High	Range	% High Inflation (over 5%)	% Deflation	% Stable (0 to 5%)
Full Sample	96	2.72%	3.47%	-11.75%	12.88%	24.63%	19.79%	8.33%	71.88%
Pre: 1926 to 1961	36	1.70%	4.74%	-11.75%	12.88%	24.63%	19.44%	22.22%	58.33%
Post: 1962 to 2021	60	3.33%	2.26%	0.64%	9.46%	8.82%	20.00%	0.00%	80.00%
Difference (Post − Pre)	24	1.60%	-2.50%	12.40%	-3.40%	-15.80%	0.60%	-22.20%	21.70%

Table 3 Panel A (Panel B, Panel C) summarizes PPI (CPI, GDP Deflator) inflation during our sample period. We summarize inflation for the full sample, the pre-Compustat-initiation period, and the post-Compustat-initiation period. The column % High Inflation (% Deflation, % Stable) shows the number of years with inflation above 5% (below 0%, between 0 and 5%).

Table 4. Correlation Matrix

Variable		1	2	3	4	5	6	7	8	9	10	11
Return	1	1.00	0.18*	0.22*	-0.09*	-0.02*	-0.02*	-0.08*	0.13*	-0.03*	0.12*	-0.01*
Earnings	2	0.28*	1.00	0.46*	0.18*	0.19*	0.21*	0.12*	-0.05*	0.08*	-0.16*	-0.15*
Δ*Earnings*	3	0.24*	0.46*	1.00	0.07*	0.06*	0.04*	0.08*	0.02*	-0.02*	-0.01*	-0.04*
PPI	4	-0.08*	0.20*	0.13*	1.00	0.76*	0.77*	0.08*	-0.10*	0.26*	0.00	-0.02*
CPI	5	-0.04*	0.23*	0.11*	0.69*	1.00	0.90*	-0.02*	-0.14*	0.52*	-0.03*	-0.10*
GDP Deflator	6	-0.05*	0.24*	0.07*	0.75*	0.86*	1.00	-0.02*	-0.14*	0.52*	-0.08*	-0.18*
GDP Growth	7	-0.08*	0.12*	0.16*	0.06*	0.09*	0.04*	1.00	-0.08*	-0.01	-0.21*	-0.37*
Unemployment	8	0.14*	0.01*	0.02*	-0.01*	0.02*	0.04*	-0.20*	1.00	-0.05*	0.30*	0.31*
Risk-Free Rate	9	-0.03*	0.13*	0.02*	0.24*	0.58*	0.55*	0.11*	0.03*	1.00	-0.23*	-0.13*
Macro Uncertainty	10	0.00	-0.17*	-0.02*	0.03*	-0.05*	-0.06*	-0.29*	0.37*	-0.24*	1.00	0.53*
Stock Volatility	11	-0.08*	-0.13*	-0.04*	0.08*	-0.01*	-0.10*	-0.31*	0.19*	-0.04*	0.55*	1.00

Table 4 presents our correlation matrix. * indicates significance at the 1% level. Pearson (Spearman) correlations are above (below) the diagonal. All variables are defined in Appendix B. The sample period spans from 1926 to 2021.

Table 5. Inflation and Earnings Relevance

Panel A. Full Sample

Variable	(1)	(2)	(3)
		Earnings Relevance	
PPI	**0.390*** **		
	(3.96)		
CPI		**0.519*** **	
		(5.95)	
GDP Deflator			**0.500*** **
			(5.70)
GDP Growth	0.107	0.127	0.130
	(0.83)	(1.16)	(1.19)
Unemployment	0.067	0.129	0.132
	(0.58)	(1.02)	(1.07)
Risk-Free Rate	-0.124	-0.250*	-0.219*
	(-0.96)	(-1.85)	(-1.85)
Macro Uncertainty	-0.297***	-0.360***	-0.353***
	(-3.19)	(-3.47)	(-3.40)
Stock Volatility	0.137	0.196*	0.250**
	(1.23)	(1.70)	(2.11)
Observations	96	96	96
Adjusted R-squared	0.136	0.196	0.169

Panel B. Pre-Compustat-Initiation Sample

Variable	(1)	(2)	(3)
		Earnings Relevance	
PPI	**0.329** **		
	(2.14)		
CPI		**0.402*** **	
		(3.48)	
GDP Deflator			**0.349** **
			(2.36)
GDP Growth	0.118	0.121	0.133
	(0.72)	(0.85)	(0.85)
Unemployment	-0.103	0.001	-0.024
	(-0.37)	(0.00)	(-0.08)
Risk-Free Rate	-0.822	-0.630	-0.764
	(-1.54)	(-1.15)	(-1.41)
Macro Uncertainty	-0.434	-0.430	-0.457
	(-1.58)	(-1.55)	(-1.60)
Stock Volatility	0.194	0.164	0.243
	(0.78)	(0.71)	(0.99)
Observations	36	36	36
Adjusted R-squared	0.079	0.136	0.084

Panel C. Post-Compustat-Initiation Sample

Variable	(1)	(2)	(3)
		Earnings Relevance	
PPI	**0.357***		
	(1.76)		
CPI		**0.671*****	
		(2.87)	
GDP Deflator			**0.772*****
			(3.28)
GDP Growth	0.251	0.436	0.567
	(0.68)	(1.30)	(1.49)
Unemployment	0.466*	0.502**	0.319
	(1.72)	(2.08)	(1.44)
Risk-Free Rate	0.066	-0.149	-0.163
	(0.74)	(-1.00)	(-1.17)
Macro Uncertainty	-0.173	-0.201	-0.150
	(-1.16)	(-1.36)	(-1.02)
Stock Volatility	0.213*	0.294**	0.343***
	(1.69)	(2.35)	(3.13)
Observations	60	60	60
Adjusted R-squared	0.116	0.188	0.162

Table 5 Panel A (Panel B, Panel C) regresses *Earnings Relevance* on *PPI*, *CPI*, and *GDP Deflator* inflation and controls for the full (pre-Compustat-initiation, post-Compustat-initiation) sample. Continuous variables are standardized to facilitate interpretation. Standard errors are computed following Newey and West (1987) using a lag order of 5. All variables are defined in Appendix B. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6. How Much of the Variance in Earnings Relevance Does Inflation Explain Relative to Variables Proposed in Prior Literature?

Variable	(1)	(2)	(3)	(4)	(5)	(6)
	Earnings Relevance					
PPI	0.335**	34.02%				
	(2.37)					
CPI			0.531***	39.69%		
			(3.18)			
GDP Deflator					0.487**	33.74%
					(2.58)	
Other Macroeconomic Variables						
GDP Growth	0.049		0.122		0.118	
	(0.26)		(0.62)		(0.59)	
Unemployment	-0.035		0.015		0.085	
	(-0.26)		(0.12)		(0.51)	
Risk-Free Rate	-0.068	12.99%	-0.160	14.79%	-0.136	16.67%
	(-0.39)		(-0.83)		(-0.82)	
Macro Uncertainty	-0.157		-0.261**		-0.243**	
	(-1.34)		(-2.16)		(-2.02)	
Stock Volatility	0.138		0.128		0.194	
	(0.80)		(0.78)		(1.23)	
Variables Examined in Prior Literature						
Year	-0.017		-0.010		-0.009	
	(-0.95)		(-0.57)		(-0.52)	
Loss	-0.029	25.66%	0.104	21.91%	0.008	23.45%
	(-0.11)		(0.35)		(0.03)	
Technology	0.076		0.055		0.128	
	(0.14)		(0.10)		(0.25)	
Standard Setting Body Tenures						
SEC	0.095		-0.163		-0.469	
	(0.15)		(-0.26)		(-0.61)	
CAP	0.481		0.072		-0.026	
	(0.92)		(0.13)		(-0.04)	
APB	-0.050	27.33%	-0.541	23.61%	-0.688	26.14%
	(-0.06)		(-0.57)		(-0.70)	
FASB	0.544		-0.140		-0.323	
	(0.41)		(-0.10)		(-0.22)	
Observations	96		96		96	
Adjusted R-squared	0.162		0.214		0.175	

Table 6 Columns (1), (3), and (5) regress *Earnings Relevance* on *PPI*, *CPI*, and *GDP Deflator* inflation, controls, and earnings relevance determinants proposed in prior literature. Columns (2), (4), and (6) present the percentages of the explained variance attributable to the corresponding grouped set of determinants (Shapley 1953). Continuous variables are standardized to facilitate interpretation. Standard errors are computed following Newey and West (1987) using a lag order of 5. All variables are defined in Appendix B. The sample period spans from 1926 to 2021. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7. Alternative Value Relevance Measures

Panel A. Book Value & Earnings Relevance

Variable	(1)	(2)	(3)
	Book Value & Earnings Relevance		
PPI	**0.163***		
	(1.77)		
CPI		**0.227****	
		(2.09)	
GDP Deflator			**0.288****
			(2.33)
GDP Growth	-0.078	-0.072	-0.082
	(-0.98)	(-0.92)	(-1.01)
Unemployment	0.075	0.103	0.121
	(0.58)	(0.78)	(0.90)
Risk-Free Rate	0.173	0.117	0.105
	(1.41)	(0.92)	(0.88)
Macro Uncertainty	-0.457***	-0.486***	-0.503***
	(-4.32)	(-4.68)	(-4.90)
Stock Volatility	-0.221	-0.195	-0.154
	(-1.31)	(-1.14)	(-0.93)
Observations	96	96	96
Adjusted R-squared	0.364	0.378	0.396

Panel B. Exclude New Economy Firms

Variable	(1)	(2)	(3)
	Earnings Relevance		
PPI	**0.390*****		
	(3.93)		
CPI		**0.515*****	
		(5.93)	
GDP Deflator			**0.494*****
			(5.63)
GDP Growth	0.102	0.122	0.126
	(0.78)	(1.10)	(1.13)
Unemployment	0.058	0.119	0.121
	(0.50)	(0.93)	(0.98)
Risk-Free Rate	-0.129	-0.254*	-0.222*
	(-1.02)	(-1.89)	(-1.89)
Macro Uncertainty	-0.277***	-0.340***	-0.332***
	(-3.03)	(-3.33)	(-3.25)
Stock Volatility	0.125	0.183	0.237*
	(1.11)	(1.59)	(1.97)
Observations	96	96	96
Adjusted R-squared	0.130	0.187	0.159

Panel C. Exclude Technology Firms

Variable	(1)	(2)	(3)
	Earnings Relevance		
PPI	**0.397*** **		
	(3.94)		
CPI		**0.534*** **	
		(5.92)	
GDP Deflator			**0.497*** **
			(5.81)
GDP Growth	0.102	0.122	0.128
	(0.77)	(1.04)	(1.07)
Unemployment	0.048	0.112	0.111
	(0.44)	(0.95)	(0.95)
Risk-Free Rate	-0.116	-0.247*	-0.208*
	(-0.99)	(-1.92)	(-1.89)
Macro Uncertainty	-0.290***	-0.357***	-0.344***
	(-3.30)	(-3.56)	(-3.49)
Stock Volatility	0.119	0.180*	0.231**
	(1.16)	(1.68)	(2.05)
Observations	96	96	96
Adjusted R-squared	0.141	0.207	0.166

Table 7 Panel A (Panel B) [Panel C] regresses *Book Value & Earnings Relevance* (*Earnings Relevance* computed after excluding new economy firms as defined in Barth et al. (2023)) [*Earnings Relevance* after excluding technology firms] on *PPI*, *CPI*, and *GDP Deflator* inflation and controls. Continuous variables are standardized to facilitate interpretation. In all specifications, we include the control variables *GDP Growth*, *Unemployment*, *Risk-Free Rate*, *Macro Uncertainty*, and *Stock Volatility*. Standard errors are computed following Newey and West (1987) using a lag order of 5. All variables are defined in Appendix B. The sample period spans from 1926 to 2021. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 8. Alternative Inflation Measures

Variable	(1) *Earnings Relevance*	(2) *Earnings Relevance*
Livingston	**0.419*** (4.39)**	
Michigan		**0.320** (2.20)**
GDP Growth	0.363* (1.85)	0.469 (1.23)
Unemployment	0.526 (1.50)	0.485** (2.14)
Risk-Free Rate	0.064 (0.66)	0.076 (0.57)
Macro Uncertainty	-0.214* (-1.97)	-0.057 (-0.40)
Stock Volatility	0.197 (1.44)	0.264* (1.93)
Observations	75	43
Adjusted R-squared	0.183	0.146

Table 8 regresses *Earnings Relevance* on *Livingston*, *Michigan*, and controls. Continuous variables are standardized to facilitate interpretation. In all specifications, we include the control variables GDP Growth, Unemployment, Risk-Free Rate, Macro Uncertainty, and Stock Volatility. Standard errors are computed following Newey and West (1987) using a lag order of 5. All variables are defined in Appendix B. The sample period spans from 1926 to 2021. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 9. Inflation and Cash Flow Predictability

Variable	(1)	(2)	(3)
	Cash Flow Predictability		
PPI	**-0.139****		
	(-2.05)		
CPI		**-0.086**	
		(-1.20)	
GDP Deflator			**-0.045**
			(-0.58)
GDP Growth	-0.073	-0.098	-0.105
	(-0.81)	(-1.17)	(-1.34)
Unemployment	-0.319***	-0.318***	-0.308**
	(-2.76)	(-2.78)	(-2.61)
Risk-Free Rate	-0.247*	-0.242*	-0.260**
	(-1.98)	(-1.85)	(-2.19)
Macro Uncertainty	0.262***	0.257***	0.245***
	(2.93)	(2.94)	(2.70)
Stock Volatility	0.005	-0.001	-0.000
	(0.05)	(-0.01)	(-0.00)
Observations	95	95	95
Adjusted R-squared	0.132	0.121	0.117

Table 9 regresses *Cash Flow Predictability* on *PPI*, *CPI*, and *GDP Deflator* inflation and controls. Continuous variables are standardized to facilitate interpretation. Standard errors are computed following Newey and West (1987) using a lag order of 5. All variables are defined in Appendix B. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 10. Cross-Sectional Analysis

Panel A. Historical Cost Accounting Channel

Variables	(1)	(2)	(3)	(4)
	Return			
	PPE/Assets		*Inventory/Assets*	
	Low	High	Low	High
PPI* × *Earnings	**0.050****	**0.047*****	**0.067*****	**0.021**
	(2.30)	**(4.11)**	**(4.08)**	**(1.31)**
Earnings	0.183***	0.221***	0.172***	0.253***
	(9.00)	(12.97)	(9.51)	(12.21)
Observations	34,482	34,482	34,482	34,482
Adjusted R-squared	0.421	0.468	0.430	0.461
Firm Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
High − Low p-value	0.207		0.000	

Panel B. Discount Date Channel

Variables	(1)	(2)	(3)	(4)
	Return			
	Equity Duration		*Pricing Power*	
	Low	High	Low	High
PPI* × *Earnings	**0.027*****	**0.094*****	**0.045*****	**0.010**
	(2.71)	**(3.52)**	**(2.92)**	**(0.48)**
Earnings	0.220***	0.218***	0.161***	0.538***
	(12.97)	(10.40)	(10.52)	(11.66)
Observations	34,482	34,482	26,019	26,018
Adjusted R-squared	0.513	0.403	0.459	0.461
Firm Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
High − Low p-value	0.000		0.000	

Table 10 Panel A (Panel B) estimates firm-level cross-sectional regressions of *Return* on *Earnings* interacted with *PPI*, controls, and fixed effects separately for firms with above- and below-median PPE scaled by total assets or inventory scaled by total assets (equity duration or pricing power). To compute equity duration, we follow the methodology described in Section 2 of Dechow et al. (2021). We measure pricing power as the four-year rolling average of 1/(1 – income/sales) (Baqaee and Farhi 2020; Barry et al. 2023). The last row (*High – Low* p-value) presents the p-value of a 1,000-repetition bootstrap analysis testing whether the *PPI* × *Earnings* coefficients in Columns (1) and (3) are different from those in Columns (2) and (4). Continuous variables are standardized to facilitate interpretation. Standard errors are clustered by firm and year. All variables are defined in Appendix B. The sample period spans from 1926 to 2021. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.