Do employees prefer conservative accounting?

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Abstract

We hypothesize that employees prefer conservative accounting. We test our hypothesis, using the setting of the German law on codetermination. The law mandates half of the board seats to be filled by employee representatives if the firm's number of domestic employees (DE) exceeds the threshold of 2,000. We exploit the discontinuity around the threshold and document a substantial increase in accounting conservatism, when employees gain meaningful influence on accounting policies through their representation on the board. Additionally, we show that the impact of employee board representation on accounting conservatism concentrates in firms with high risks and firms with high information asymmetry. Our findings have implications for academics, managers, and politicians.

Keywords: Employee representation, accounting conservatism.

JEL Classification: M41; J01

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1. Introduction

Prior studies have documented that accounting conservatism is demanded by various stakeholders of listed firms, such as debtholders and banks (Ahmed et al, 2002; Zhang 2008), shareholders (Lafond and Watts 2008; Francis and Martin, 2010), and major suppliers/customers (Hui et al., 2012). As pointed out by Zingales (2000), human capital is emerging as the most crucial asset for a firm. How employees perceive accounting conservatism therefore is an important and relevant question.

We hypothesize that employees prefer conservative accounting. This hypothesis is based on the asymmetric impact of firms' fortune on employees. The incomes of most employees are derived from their fixed employment salaries.[1] While a bounty year may benefit investors, the benefit does not spill over to rank-and-file employees. A substantial drop in the firm's fortune, however, may induce salary reduction, furloughs, and involuntary loss of jobs, increasing hardship for a typical employee. Employees' distaste for risks will lead to their preference for accounting conservatism, which is defined as the asymmetric verifiability required for the recognition of gains versus losses. As discussed in detail in Section 2, prior research (Kravet, 2004) has shown that accounting conservatism incentivizes managers to avoid risky investments because the timely recognition of large investment losses may trigger adverse events, such as debt covenant violations.

[1] Conceptually, if employees are compensated mainly through employee stock options, the payoff structure may better align the interest of employees with the interest of shareholders. In Germany, the use of employee stock options is uncommon. Furthermore, we only include firms with fewer than 2500 domestic employees in our sample. Given the limited size of our sample firms, we conjecture that the use of employee stock options is rare. We do not have access to employee stock option data to conduct related empirical analyses.

Our hypothesis is not without tension. Prior literature suggests that high earnings offer labor unions leverage in negotiating with the management to increase salaries and fringe benefits. Given that conservative accounting likely results in lower earnings numbers, employees may prefer non-conservative accounting to gain bargaining power in the compensation negotiations. The conceptual ambiguity necessitates an empirical test.

To the best of our knowledge, there has been no attempt to conduct the empirical test. The lack of research probably lies in the difficulty of identifying the preference of employees in the U.S., where employees have little influence on accounting policies. We overcome this hurdle by using the German setting. German law on codetermination grants employees a direct voice in the firm. This law mandates that, if the number of domestic employees (DE) exceeds 2,000, the supervisory board of a firm, which is similar to the board of directors in the U.S., has to comprise an equal number of owners' and employees' representatives. We refer to this as parity employee representation (PER).

This setting facilitates our research in twofold. First, the employees' influence granted by the law is substantial. As employees' representatives tend to vote together and they occupy 50% of board seats, they can outvote owners if owners have diverse opinions. What's more, their ability to appoint top managers offers them substantial leverage over the management. Overland and Samani (2021) conduct several interviews with employee representatives on the board and report that employee representatives not only actively participate in the preparation of financial reports but also engage in on-gong discussions about the financial reporting of the firm with the CFO both before and after board meetings. Therefore, this setting allows us to observe employees' preference through a meaningful elevation in employees' influence on

accounting policies. Second, this setting permits us to utilize a regression discontinuity design (RDD) as an identification strategy because the PER requirement only applies to firms with more than 2,000 DE. Since, in the narrow neighborhood of the threshold, only employee influence on accounting policies is altered once the threshold is exceeded, this research design helps to rule out other determinants of accounting conservatism as explanations for our results.

Our RDD research design centers on the threshold of 2,000 DE. We compare firms that are slightly above the threshold with those slightly below. Using Basu's (1997) model and a band of 500 DE around the 2,000 threshold, we find that, relative to non-PER firms (i.e., firms whose number of DE is lower than 2,000), the accounting conservatism of PER firms (i.e., firms whose number of DE exceeds 2,000) is higher by 144%. These results lend support to our hypothesis that employees' voice on the board results in higher accounting conservatism.

To challenge the validity of our RDD research design, following Angrist and Pischke (2008), we attempt to use a narrower window around the threshold. Using the band of 300 DE, we find more pronounced results: PER firms' conservatism is higher by 159%, compared to non-PER firms. These findings add to our confidence in our research design.

The maintained assumption of the RDD analysis is that firms around the threshold cannot precisely manipulate the number of employees in the bands near the cut-off. Although such manipulation is conceptually plausible, existing evidence suggests that such manipulation is absent in practice (Atanasov and Black, 2016) for the following reasons. First, owners and managers understand that keeping the number of employees low is not a sustainable strategy for the firms' long-run growth. Therefore, the real option value of delaying growth is limited. Second, the law has been in existence since 1976, with only minor changes implemented. If

the manipulation is large scale, the legislature would have revised the law to close the loophole. Third, McCrary (2008) empirically examined the distribution of the number of employees and found that the distribution is smooth around the threshold, evidence inconsistent with manipulations of the number. We conduct a similar examination and reach the same conclusion. Finally, we examine the covariates and find that their distribution is balanced around the threshold. While our tests cannot completely eliminate the possibility of employee number management around the threshold, they help to mitigate the concern that it drives our findings.

We conduct a battery of robustness checks on our main finding. First, we add firm-level control variables that may affect accounting conservatism, such as firm size, leverage, and market-to-book. We find that our results continue to hold. Second, we include firm-fixed effects, and our findings show that our conclusion remains the same. Third, we control for higher order polynomials of the assignment variable in our implementation of the RDD, and our results remain robust. Fourth, we use alternative measures of accounting conservatism: *C_Score* (Khan and Watts, 2009) and *Con-ACC* (Givoly and Hayn, 2000, and Ahmed et al., 2002). Our conclusion is unchanged.

We continue to conduct a placebo test to rule out alternative explanations. One such explanation is that since PER firms, by definition, have a higher number of DE, they are bigger than non-PER firms, and our results can be attributed to the effect of firm size. To alleviate such a concern, we randomly choose thresholds and examine whether our results hold around the pseudo cutoffs. If our results are driven by factors other than the law on codetermination, results from the placebo tests shall continue to be significant. Consistent with the notion that

our conclusion is driven by employee board representation, our results are never significant in the placebo test.[2]

Our hypothesis development postulates that the preference for accounting conservatism stems from employees' aversion to risks. If this is true, we predict that the impact of PER on accounting conservatism concentrates in firms with high risks, since their employees are likely concerned about risks and will push for accounting conservatism through their board representation. We test this prediction using three measures of risks: debt ratio, profit volatility, and stock return volatility. Results from all three measures show that the impact of employees' board representation on accounting conservatism is statistically significant only in riskier firms. This result supports the notion that employees in high-risk firms are worried about risk-taking and use their voice on the board to demand high accounting conservatism.

Finally, we predict that the impact of PER on accounting conservatism concentrates in firms with high information asymmetry. High information asymmetry prevents employees from effectively assessing and monitoring their firms' risk-taking. Since employees are incentivized to reduce risk-taking, they are likely to use their board representation to push for conservative accounting policies when their ability to detect risk-taking is hampered by information asymmetry. We use four measures of information asymmetry: analyst coverage, forecast dispersion, intangible assets' ratio, and market-to-book variation in the industry (Chen,

[2]Another identification approach would be to conduct a difference-in-differences test around the introduction of the law on codetermination in 1976. However, this approach is not suitable for our research question. Since our measurement of accounting conservatism requires the estimation of a triple interaction term, we would need a relatively long window around the introduction period to obtain reliable results (especially since the data availability is poor during the early period, which restricts the sample size). Furthermore, using a long window around the introduction period contradicts the idea of the difference-in-differences approach because such a long window does not allow us to identify the annual changes in accounting conservatism of PER firms and non-PER firms.

Harford, and Lin, 2015; Levin, Lin, and Wei, 2017). All four measures yield results that are consistent with our prediction.

Our study contributes to three lines of literature. First, our study extends prior literature on stakeholders' demand for accounting conservatism. Ahmed et al. (2002) and Zhang (2008) demonstrate the preference of debtholders and banks for accounting conservatism by showing an association between lower cost of debt and higher accounting conservatism. LaFond and Watts (2008) theorize that equity market participants demand conservative accounting to mitigate the effects of information asymmetry, and they show that high information asymmetry is associated with high conditional conservatism. Shareholders may also demand accounting conservatism because conservatism plays a corporate governance role (Ball, 2001; Watts 2003; Ball and Shivakumar, 2005). Supporting this idea, Francis and Martin (2010) find that more conservative firms make better investment decisions in the M&A setting. Hui et al. (2012) hypothesize and find that major suppliers/customers prefer conservative accounting. Specifically, they show that when a firm's suppliers or customers have bargaining advantages, the firm recognizes losses more quickly. Prior literature however has paid scant attention to the question: how employees perceive conservatism. Given the increasing importance of human capital in the modern innovation-driven economy, our findings help to address the noticeable gap in the literature. In addition, we conduct our tests in a setting that permits strong identification and causal inferences. Due to the limitations of their settings, prior studies typically base their inferences on association tests. For example, the conclusion of Ahmed et al. (2002) is based on the association between higher accounting conservatism and lower cost of debt, which invites alternative explanations based on endogeneity. We argue that our setting

offers a "cleaner" way to identify the preference of employees, because the threshold of 2000 DE gives rise to an exogenous increase in the power of employees to influence accounting policies. Our results are therefore less likely to be subject to the endogeneity concern.

Second, we extend prior studies on the consequences of employees' board representation. This line of literature dates back to Jensen and Meckling (1979), who discuss the impact of labor voice on valuation, productivity, and governance. Subsequent studies focus on the effect of employees' board representation on performance and valuation (Baums and Frick, 1998; Gorton and Schmid, 2004; Fauver and Fuerst 2006), productivity (Svejnar, 1981; 1982; FitzRoy and Kraft, 1993), financial leverage (Lin et al., 2018), earnings quality (Overland and Samani 2021)[3], and real earnings management and tax planning (Gleason et al., 2021). Our study is the first to investigate the impact of labor board representation on accounting conservatism and our setting allows strong identification of employees' preference through the use of the 2000 DE benchmark.

Lastly, our paper informs regulators and politicians. The majority of OECD countries have some form of regulations that guarantee the right of workers to be represented on the board[4]. Even in countries of Anglo-Saxon capitalism, there have been calls for greater board

[3] Using a sample of firms listed on the Stockholm Stock Exchange, Overland and Samani (2021) show that abnormal accruals are lower in firms with employee board representation than in firms without. While both Overland and Samani (2021) and our paper examine the impact of employees on accounting choices, two important differences stand out. First, accounting conservatism and earnings manipulations are two distinct concepts. Second, substantial differences exist between the settings. In their setting, employee board representation is a choice made by local trade unions, and factors influencing the local trade union's decision can potentially be responsible for their findings. We argue that our setting offers a much tighter identification of employees' preference.

representation by workers. In the U.K., when Theresa May was campaigning for prime minister, she vowed to give workers the right to sit on the board. In the U.S., in August 2018, Senator Elizabeth Warren proposed the Accountable Capitalism Act, which required companies with more than $1 billion in tax receipts to allow employees to elect 40% of board members. This backdrop motivates the question of how labor board representation influences firms' accounting conservatism. We find that after employees gain influence on accounting policies, they choose more conservative accounting. This finding is likely to be informative to regulators and politicians.

The remainder of the study is organized as follows. Section 2 develops the hypotheses. Section 3 covers the background of German codetermination, data, and methodology. Section 4 discusses our results, and Section 5 concludes.

2. Hypothesis development

Accounting conservatism is an important feature of financial reporting (Basu, 1997; Ball, 2001; and Watts, 2003). Also known as asymmetric timeliness in loss recognition, it implies that the hurdle for recognizing economic gains is substantially higher than that for recognizing economic losses. Watts (2003) argues that debt contracting is the primary explanation for conservative accounting. Empirical findings are consistent with this argument. For example, Ahmed et al., (2002) and Zhang (2008) document that firms with more conservative accounting enjoy a lower cost of debt, suggesting that creditors prefer conservative accounting.

Employees are similar to creditors. Both are risk-averse stakeholders and do not have claims on firms' residuals (Ratti, 1980; Gorton and Schmid, 2000; Berk et al., 2010). Compensations and benefits to rank-and-file employees are largely fixed according to employment contracts. In contrast to equity holders, employees do not profit directly when a risky project yields handsome rewards; however, they suffer from salary reduction and reduced job security as a result when a risky project results in big losses. Therefore, the asymmetric payoff to employees determines that employees prefer low risk-taking. Consistent with this notion, Faleye et al. (2006) document that employee-controlled firms take lower risks.

Kravet (2014) hypothesizes that accounting conservatism reduces managers' incentives to take on risky investments. Risky investments increase the likelihood of large economic losses.[5] Under conservative accounting, economic losses are recognized more quickly than economic gains. The recognition of large losses in the financial statements is especially costly to managers, because it may lead to adverse events, such as debt covenant violations and massive asset write-downs. Kravet (2014) tests his hypothesis in the setting of mergers and acquisitions. He finds that managers in firms with more conservative accounting make less risky acquisitions, which is consistent with the notion that accounting conservatism reduces managerial incentives to take on risky projects.

Given that employees prefer low risks and accounting conservatism curbs managerial risk-taking incentives, we hypothesize that when employees gain substantial influence on

[5] This can be easily seen by comparing two projects with the same expected value and different standard deviations in outcomes.

accounting policies through their board representation, they will choose conservative accounting policies.

Our discussion yields H1 (stated in the alternative form):

H1: *Accounting policies are more conservative for PER firms than for non-PER firms.*

Our hypothesis however is not without tension. Jensen and Meckling (1979) argue that employees are incentivized to maximize wages and job security. Since accounting earnings is a salient summary statistic of the firm's financial situation, high profitability is often cited by labor unions to justify their calls for higher pay and benefits (Liberty and Zimmerman, 1986; DeAngelo and DeAngelo, 1991; D'Souza et al., 2001; Comprix and Muller, 2011; Bova 2013). When employees gain influence on accounting policies through their board representation, they may be motivated to choose non-conservative accounting, which facilitates their potential demand for increases in salary and other benefits by yielding a higher earnings number. The conceptual ambiguity calls for empirical analyses.

Furthermore, we predict that the impact of employee board representation on accounting conservatism concentrates in firms with high risk. As we discussed earlier, accounting conservatism is an important channel through which employees curb managerial risk-taking. Employees of high-risk firms are likely to be especially concerned about risk-taking behaviors of the management. Consequently, when they gain substantial board representation, they have strong motivation to choose conservative accounting. This discussion yields H2.

H2: *The impact of PER on accounting conservatism concentrates in firms with high risks.*

Finally, we hypothesize that the impact of employee board representation on accounting conservatism concentrates in firms with high information asymmetry. High information asymmetry reduces employees' ability to assess and monitor their firm's risk-taking, which elevates employees' concerns over managerial risk-taking. Therefore, employees are likely to choose conservative accounting when they have a direct voice on the board. Our H3 is presented as follows.

H3: *The impact of PER on accounting conservatism concentrates in firms with high information asymmetry.*

3. Background, data, and methodology

3.1. Institutional background

German firms typically operate under a two-tier board system with a management board ("Vorstand"), which comprises the executives, and a supervisory board ("Aufsichtsrat"'), which is similar to the board of directors in U.S. firms. The supervisory board is responsible for appointing and monitoring members of the management board, and the management board is responsible for running the firm. The ability of the supervisory board members to appoint members of the management board offers them an effective way to influence firms' operations. For example, if they are not satisfied by the managers' decisions, they can deny the manager's re-election to the management board.

Employee representation on the boards of German firms is regulated by the law on codetermination ("Mitbestimmungsgesetz," MitBestG). Enacted in 1976, the law requires that companies with more than 2,000 DE fill half of their supervisory board seats with employee representatives elected by employees, while the other half of the board members are elected by shareholders.[6] For the determination of the number of DE, employees of both the parent company and all subsidiaries are considered. Our empirical evaluation suggests that virtually all firms in our sample follow the law: Once the 2,000 DE threshold is exceeded, we observe an equal number of shareholders' and employees' representatives on the supervisory board.[7]

Employee representatives have half of the voting rights in PER firms. Since they represent the interests of employees, they are likely to vote in tandem, and when they vote unanimously, they can outvote shareholder representatives who may have diverse views on corporate policies.[8] Consequently, employees in PER firms exert substantial influence on corporate policies.

3.2. Data

[6] For firms with fewer than 2,000 DEs but more than 500 DEs, another law ("Drittelbeteiligungsgesetz," DrittelbG) requires that one-third of the supervisory board members comprise employee representatives. The law is, however, much less effective than MitBestG in advocating the voice of labor for three reasons. First, employee representatives only have one-third claim to the board seats. Effectively, shareholders' representatives are the majority and they can easily overrule decisions made by employee representatives. Second, the law does not apply to businesses with certain legal forms. Third, employees of other firms in the group of companies are not necessarily considered. Overall, firms have ways to strategically avoid one-third codetermination. These strategic maneuvers are not available under parity codetermination (Rieble, 2006).

[7] It is possible for firms below the threshold to establish PER (parity employee representation). However, such voluntary PER is virtually non-existent in practice because it would require that owners' representatives give up control over the firm voluntarily.

[8] The dominance of employee representatives in voting is not guaranteed. In the case of a tie between employee and shareholder representatives, the head of the supervisory board—who usually is a representative of shareholders—has a double vote. Although large block holdings are common in Germany, shareholders typically have diverse interests relative to workers and are thus less likely to cast votes unanimously.

Our dataset comprises German firms that are listed on a public stock exchange. Our sample period starts in 1998 and ends in 2016. Accounting data comes from Hoppenstedt GmbH, a commercial provider of business information for German firms. Coverage before 1998 is generally poor in this database; hence, we do not include earlier firm-years in our sample. We exclude financial firms, not-for-profit firms, subsidiaries of a domestic or foreign business group, firms that are exempt from the codetermination law (e.g., publishers of newspapers), and firms with negative book equity at the beginning of the year.

For the regression discontinuity analysis, we need data on the number of DE because this is the variable that decides whether a firm has to establish PER. Although this data item is provided by the Hoppenstedt database, it is missing in many cases. Consequently, we hand-collect the number of DE from firms' annual reports for all firms with the total number of employees between 1000 and 6000 (the total number of employees is available for virtually all firms) because those are the firms that likely have around 2,000 DE. The annual reports are retrieved from various sources, including the firms' websites, the Hoppenstedt filings database, and the ThomsonReuters filings database. We also manually collect information as to whether a firm has parity employee representation since this information is not available in any database (to the best of our knowledge). For the RDD, we are interested in firms around the threshold of 2,000 DE. Thus, we exclude firms with less than 1,500, or more than 2,500 DE. The final sample includes 326 firm-year observations from 65 different firms with between 1,500 and 2,500 DE.

3.3. Methodology

Our main measure for accounting conservatism is based on Basu's (1997) model, which can be written as:

$$NI_{jt} = \beta_1 + \beta_2 D_{jt} + \beta_3 Ret_{jt} + \beta_4 D_{jt} * Ret_{jt} + \varepsilon_{jt} \quad (1)$$

where *NI* is the earnings divided by the market value, *Ret* is the stock return over the 12-month period, ending three months after the fiscal year end date, and *D* is a dummy equal to one if the return is negative and zero otherwise.

The coefficient, β_4, is the measure of accounting conservatism. The intuition is as follows. In this model, *Ret* represents economic news. When *Ret* is positive, it means good news and *D* is equal to 0; When *Ret* is negative, it means bad news and *D* is equal to 1. The responsiveness of accounting earnings to good news is therefore β_3, while the responsiveness of accounting earnings to bad news is β_3 plus β_4. If accounting earnings are conservative, we expect that accounting earnings are more responsive to negative news than to positive news; that is, $\beta_4 > 0$. The more conservative accounting earnings are, the higher β_4.

If H1 is true, we expect PER firms to practice more conservative accounting than non-PER firms. To test H1, we estimate the following model:

$$NI_{jt} = \beta_1 + \beta_2 D_{jt} + \beta_3 Ret_{jt} + \beta_4 D_{jt} * Ret_{jt} + \beta_5 PER_{jt} + \beta_6 D_{jt} * PER_{jt} + \beta_7 Ret_{jt} * PER_{jt} + \beta_8 PER_{jt} * D_{jt} * Ret_{jt} + \boldsymbol{r} * RDD\ Controls + Industry\ FE + Year\ FE + \varepsilon_{jt} \quad (2)$$

where PER is a dummy that equals one for PER firms and 0 otherwise. The first four terms are exactly the same as those in Equation (1). The next four terms are essentially the original four terms in Equation (1) interacted with PER. Accounting conservatism for non-PER firms is indicated by β_4, while accounting conservatism for PER firms is indicated by the sum of β_4

and β_8. Therefore, β_8 represents the difference in accounting conservatism between PER and non-PER firms. A positive and significant β_8 indicates that PER firms are more conservative than non-PER firms.

A standard implementation of the RDD approach requires us to control for the polynomial of the assignment variable (which is the difference between the actual number of DE and 2,000) and allow the functional form to be different for observations above and below the 2,000 cutoff, when the dependent variable is the outcome of interest (Lee and Lemieux, 2010). Because our conservatism measure is not directly measured but estimated from the coefficient on an interaction term, the implementation of this approach leads to many interaction terms to be added to the model. We label the variables added due to the implementation of RDD as RDD controls. These variables include the assignment variable, *DE_2000*, the number of DE minus 2,000; *DE_2000* interacted with *Ret*; and *DE_2000* interacted with *D*. To allow the functional form to differ across the cutoff of 2,000, we interact the three variables separately with *D_2000*, a dummy that takes the value of 1, if the number of DE exceeds 2,000, and 0 otherwise. We therefore add six variables as RDD controls. Essentially, we set the degree of polynomials to one in our main analysis. We test the robustness of our results when we use alternative polynomials in Section 4.3.3. Huber/White robust standard errors clustered by firms are reported in all tests.

4. Results

4.1 Descriptive statistics and main results

We present summary statistics in Table 1. The average firm in our sample has 1,954 DE (median: 1,905), and 36% of our sample firm are PER firms. The net income is on average about 2% of a firm's market value of equity. The stock return over the 12-month period ending three months after the fiscal year-end is on average 14%, and 41% of our sample firms have a negative return. These values are comparable to Ramalingegowda and Yu (2012), who use data on U.S. public firms. In their data, the average annual return is 17%, the mean net income to market value ratio is 3.4%, and about 37% of firms report negative earnings. The comparability between the two samples suggests that U.S. and German firms are similar in firm characteristics. The mean value of the natural logarithm of total assets is 13.18 (i.e., the total assets is about 530 million Euros). The mean values of leverage ratios and market-to-book ratios are 0.3 and 2.15, respectively. *CSCORE* averages 0.11 and *Con-ACC* −0.03. These two variables are defined in detail in Section 4.4.

The main results are presented in Panel A of Table 2. Columns 1 and 2 report results when we limit our firms to 500 DE below and above the cutoff of 2,000. In Column 1, we present the Basu (1997) model specification without additional terms for PER. The coefficient on *D*Ret* is 0.63, significant at the 1% level, suggesting that, on average, accounting of our sample firms is conservative. When we add the PER terms in Column 2, our focus is on the coefficient on the interaction term, *PER*D*Ret*. It is 0.56 and significant at the 5% level, indicating that accounting is more conservative in PER firms than in non-PER firms. The effect of PER on accounting conservatism is not only statistically significant but also economically significant. The coefficient on *D*Ret* is an indicator of accounting conservatism in non-PER firms; it is 0.39. The coefficient on *PER*D*Ret* is an indicator for additional accounting

conservatism in PER firms relative to non-PER firms; it is 0.56, suggesting that the increase in accounting conservatism as a result of PER is about 144% of the level of accounting conservatism in non-PER firms.

To test the robustness of our conclusion, we move to the shorter variation window of 300 DE and report our results in Columns (3) and (4). We continue to find that firms in this sample practice conservative accounting, as the coefficient on *D*Ret* remains positive and significant in Column 3. The coefficient on *PER*D*Ret* is 0.81 in Column 4 and significant at the 1% level. Compared to the coefficient on *D*Ret* (0.51), the increase in accounting conservatism due to PER is about 159% (0.81/0.51) of the accounting conservatism level of non-PER firms. The fact that our results are even more pronounced when we limit the extent of variation gives us more confidence that our results are due to PER.

In a typical RDD, it is crucial to ensure that important determinants of the dependent variable are smoothly distributed around the threshold. While the RDD does allow for differences in firm characteristics on both sides of the threshold, any discontinuity at the threshold could induce biased results. To make sure that our results are not affected by the bias, we use the independent variables in Panel A (specifically, *Ret*, *D*, and *Ret*D*) as dependent variables and regress them on PER, year fixed effects, and industry fixed effects. Our regression results are reported in Panel B. The coefficients on PER range between −0.015 to 0.011, and none of them are significant at the 10% level. This finding is consistent with the notion that our results are not driven by discontinuities of covariates around the threshold.

4.2 Manipulation of the threshold

The identification assumption for the RDD is that in the interval near the cut-off, firms cannot precisely manipulate the assignment variable. The assignment variable in our setting, i.e., the number of DE, is clearly not random and at least partly controlled by the firm's management. Thus, it is possible that managers manipulate the number of DE so that they stay below or above the threshold of 2,000.

While we acknowledge this possibility, good arguments exist that firms are unlikely to manipulate the number of employees. Artificially forcing the number of employees below the benchmark of 2,000 DE is costly to firms, as firms effectively forfeit growth opportunities. Since the law of codetermination has been in existence since 1976, it is unlikely that firms will forego growth opportunities for such a long period. Additionally, the fact that the law of codetermination has not experienced any major amendment suggests that manipulations of the numbers are uncommon; otherwise, the legislature would have taken actions to adjust the laws. A review of the law, which was conducted on behalf of the German Government, concluded that "only very few cases of companies avoiding board level representation are known."[9] Consistent with these arguments, prior empirical studies have offered evidence that there is no manipulation around the threshold (Kim et al., 2015; Lin et al., 2018).

We nonetheless examine whether there is evidence that managers manipulate the number of DE in our sample. If the number is manipulated, we would expect a kink in the distribution of the number of employees around the 2,000 DE threshold. For example, if managers manipulate the number of employees downward to avoid codetermination, we expect

[9] See "Results of the Biedenkopf Commission—the Government Commission on the modernization of employee board-level representation in Germany," Executive Summary by the Hans-Böckler-Foundation, p. 3.

to see an abnormally high proportion of firms immediately to the left of the 2,000 DE threshold and an abnormally low proportion of firms immediately to the right of the threshold. We use McCrary's (2008) density to investigate the distribution of DE around the threshold and report our results in Figure 1.

Figure 1 shows that the distribution of firms is smooth around the threshold, with no signs of kinks on either side, suggesting that there is no large-scale manipulation of the law. This result provides further justification for using the RDD.

4.3 Robustness checks

4.3.1. Additional control variables

After presenting the main results, we investigate their robustness. We start by adding the firm-level control variables: size (the natural logarithm of total assets), leverage ratio (total debt scaled by the sum of total debt and the market value of equity), and the market-to-book ratio (the market value of equity divided by the book value of equity). These control variables have been shown to be associated with accounting conservatism (Basu, 1997; LaFond and Roychowdhury, 2008; LaFond and Watts, 2008). Furthermore, we interact the control variables with *Ret*D.* We report the results in Panel A of Table 3.

Columns 1 and 2 report the results when we examine firms whose number of DE ranges within 500 of the threshold. In Column 1, we do not have the interaction terms between control variables and *Ret*D,* while these interaction terms are included in Column 2. Our focus is on the coefficient of the interaction term, *PER*Ret*D*. It is 0.51, significant at the 10% level in

Column 1, and 0.55, significant at the 5% level in Column 2. These results indicate that our conclusion is not affected by additional control variables.

Columns 3 and 4 report the results when we examine firms whose number of DE ranges within 300 of the threshold. The coefficient on *PER*Ret*D* is 0.74, significant at the 5% level in Column 3, and 0.84, significant at the 1% level in Column 4. These results confirm the findings in the previous two columns and provide strong evidence that PER firms have more conservative accounting.

4.3.2. Firm-fixed effects

In our main regression, we control for industry fixed effects. In this section, we test whether our results are robust toward controlling for firm fixed effects, which alleviates the concern that our results are driven by non-time-varying firm specific factors. Our results are reported in Panel B.

Columns 1 and 2, respectively, report for the sample allowing deviations of 500 and 300 DE from the cutoff. The coefficient on *PER*Ret*D* is 0.48, significant at the 5% level in Column 1. It is 0.71, significant at the 5% level in Column 2. These results suggest that after controlling for firm fixed effects, our conclusion remains the same: accounting conservatism is significantly higher in PER firms than in non-PER firms.

4.3.3. Alternative specifications of the RDD

We test whether our results are sensitive to alternative specifications of the model. Columns 1 and 3 in Panel C of Table 3 show the results when we include the assignment variable, DE_2000, without interacting it with a dummy for the threshold. Columns 2 and 4

report the results when we increase the order of polynomials of the assignment variable to 2.[10] Specifically, we add six variables to our model: *DE_2000_2* (the assignment variable *DE_2000* squared), *DE_2000_2* interacted with *Ret*, *DE_2000_2* interacted with *D*, and the three variables interacted with *D_2000*. Our focus is on the interaction term, *PER*Ret*D*. Its coefficient ranges from 0.57 to 0.80, and it is significant at the 1% level in all columns except Column 1, where it is significant at the 5% level. Our results suggest that our conclusion is robust to alternative specifications of the RDD.

4.4 Alternative measures for accounting conservatism

Basu's (1997) model has been a popular choice to measure accounting conservatism, because it intuitively captures the essence of accounting conservatism: more timely recognition of economic losses than economic gains. It however has two shortcomings. First, it does not allow a firm-year measure of accounting conservatism. Second, because the measure of accounting conservatism is the coefficient on an interaction term in Basu's (1997) model, our RDD becomes complicated.

To test the robustness of our results, we use two alternative measures for accounting conservatism. These two measures are *CSCORE* (Khan and Watts, 2009) and *Con-ACC* (Givoly and Hayn, 2000, and Ahmed et al., 2002).

Khan and Watts (2009) propose a firm-year measure of conditional conservatism, *CSCORE*. Their model is based Basu's (1997) model:

[10] Our model specification requires interacting the polynomials in the assignment variable with *Ret* and *D* and further interacting the terms with *D_2000*. We are unable to increase the degree of the polynomial further because the number of variables in the regression increases by 6 when the degree goes up by 1, and these variables are all correlated with the assignment variable, creating severe multicollinearity.

$$NI_{jt} = \beta_1 + \beta_2 D_{jt} + \beta_3 Ret_{jt} + \beta_4 D_{jt} * Ret_{jt} + \varepsilon_{jt} \quad (1)$$

Their innovation lies in assuming that all coefficients in Equation (1) are time-varying. In addition, β_3 and β_4 are linear combinations of the firm's size, market-to-book ratio, and leverage ratio. That is,

$$\beta_{3t} = \mu_{1t} + \mu_{2t} MKV_{jt} + \mu_{3t} MB_{jt} + \mu_{4t} LEV_{jt} \quad (3)$$

$$\beta_{4t} = \lambda_{1t} + \lambda_{2t} MKV_{jt} + \lambda_{3t} MB_{jt} + \lambda_{4t} LEV_{jt} \quad (4)$$

where *MKV* is the logarithm of market value of equity, *MB* is the market-to-book ratio, and *LEV* is the sum of long-term debt and debt in current liability deflated by market value of equity. Plugging Equations (3) and (4) in Equation (1) yields the following model:

$$\begin{aligned} NI_{jt} = {} & \beta_{1t} + \beta_{2t} D_{jt} + (\mu_{1t} + \mu_{2t} MKV_{jt} + \mu_{3t} MB_{jt} + \mu_{4t} LEV_{jt}) Ret_{jt} \\ & + (\lambda_{1t} + \lambda_{2t} MKV_{jt} + \lambda_{3t} MB_{jt} + \lambda_{4t} LEV_{jt}) D_{jt} * Ret_{jt} \\ & + \varepsilon_{jt} \end{aligned} \quad (5)$$

All variables have been previously defined. Equation (5) is estimated using annual cross-sectional regressions. *C_Score* is calculated as follows:

$$C\_Score_{i,t} = \hat{\lambda}_{1,t} + \hat{\lambda}_{2,t} MKV_{i,t} + \hat{\lambda}_{3,t} MB_{i,t} + \hat{\lambda}_{4,t} LEV_{i,t} \quad (6)$$

where $\hat{\lambda}_{1,t}$, $\hat{\lambda}_{2,t}, \hat{\lambda}_{3,t}$ and $\hat{\lambda}_{4,t}$ are estimated from Equation (5).

Khan and Watts (2009) show that the *C_Score* captures variation in conservatism and predicts asymmetric earnings' timeliness up to three years ahead. The higher the *C_Score*, the more conservative the firm's accounting.

Givoly and Hayn (2000) and Ahmed et al. (2002) propose *Con-ACC*, an alternative accounting conservatism measure based on a comparison between cash flows and accounting

income. They argue that, if accounting is conservative, that is, if the verification standard for economic gains is higher than that for economic losses, accounting income will be consistently lower than cash flows from operations. Specifically, they compute income before extraordinary items minus cash flows from operations plus depreciation expense deflated by average total assets and take the average of the value over the previous three years. *Con-ACC* is the average value multiplied by negative one. Larger values of *Con-ACC* indicate greater accounting conservatism. While *Con-ACC* offers another firm-year measure of accounting conservatism, it is subject to the concern that lower accounting income relative to cash flows may reflect earnings manipulations, such as "big baths", instead of accounting conservatism.

To test our prediction that accounting conservatism is higher for PER firms than for non-PER firms, we regress *CSCORE* and *Con-ACC*, two direct measures of accounting conservatism, on *PER* and industry fixed effects and year fixed effects. If the coefficient on PER is positive and significant, it is evidence in support of our prediction. Following the standard procedure for RDD regressions, we control for the assignment variable, *DE_2000*, and its interaction with *D_2000*. Results based on *CSCORE* are reported in Panel A of Table 4, while results based on *Con-ACC* are reported in Panel B.

Column 1 of Panel A reports regression results when we limit our sample firms to those whose number of DE is between 1500 and 2500. The coefficient on PER is 0.15 and significant at the 10% level. Considering that the mean value of *CSCORE* is 0.11, this finding indicates that the increase in accounting conservatism as a result of PER is about 136% of the sample mean. In Column 2, we report results when we limit our sample firms to those whose number

of DE is within 300 of the threshold of 2,000 DE. The coefficient on PER is 0.17 and significant at the 10% level.

Columns 1 and 2 of Panel B report the results when we limit our sample firms to those whose number of DE is between 1,500 and 2,500 DE. In Column 1, the coefficient on PER is 0.038 and significant at the 1% level. Considering that the mean value of the *Con-ACC* is −0.03, this finding indicates that the increase in accounting conservatism due to PER is about 127% of the magnitude of the sample mean. Column 2 reports the results when we additionally control for size, leverage ratio, and market-to-book ratio. The coefficient on PER is 0.023 and significant at the 5% level. Columns 3 and 4 report the results for the sample where we allow deviations of 300 DE around the cutoff. The coefficient on PER is 0.061 in Column 3, significant at the 1% level; while it is 0.060, significant at the 1% level, in Column 4. Overall, the results in Table 4 show that our conclusion is robust to alternative definitions of accounting conservatism.

4.5. Placebo tests

While our results are in support of the conclusion that employee board representation results in high accounting conservatism, we are concerned that our results could be attributed to explanations that establish the link between PER and accounting conservatism through other channels. For example, one plausible alternative explanation is that firms exceeding the benchmark of 2,000 DE are by definition larger than firms falling short of the benchmark. What we attribute to PER is in fact a manifestation of the size effect. To alleviate this concern, we conduct a placebo test.

Specifically, we replace the PER dummy with dummy variables that are based on either one of the alternative pseudo thresholds: 1,500 and 2,500 DE. Since there is no real regulatory change around the pseudo thresholds, we do not expect that firms' accounting conservatism is influenced by their exceeding/or failing to exceed the pseudo thresholds. Following our main analyses, we use windows of plus/minus 500 and 300 DE around the pseudo thresholds. We rerun our baseline regressions after replacing *PER* with either *DE_1500* or *DE_2500*. *DE_1500* and *DE_2500* are two binary variables, which take the value of 1 when the firm's number of DE exceeds 1500 and 2500, respectively, and 0 otherwise.

Panel A of Table 5 reports results based on the Basu (1997)'s model. Columns 1 and 2 report results for the pseudo threshold of 1500 and 2500, respectively, when we allow deviations of up to 500 DE. The coefficient on *DE_1500*Ret*D* is 0.57, not significant at the 10% level, while the coefficient on *DE_2500*Ret*D* is −0.21, not significant at the 10% level either. Columns 3 and 4 report the results when we allow deviations of up to 300 DE. Neither coefficient is significant at the 10% level.

Panel B and C examine the results when we use *C_Score* and *Con-ACC* to measure accounting conservatism. Our inferences are based on the coefficients on *DE_1500* and *DE_2500*. In all columns, the coefficients are never significant at the 10% level.

Overall, we find no evidence that pseudo benchmarks affect the conservatism of firms. This finding highlights the importance of the 2,000 DE threshold in driving our results and shows that our results are unlikely due to size effect or other factors that might be correlated with the number of DE.

4.6. The impact of firm risk

This section tests H2 that the impact of PER on accounting conservatism concentrates in firms with high risks. We use three measures of risk. The first is the debt ratio, calculated as total assets minus common equity divided by total assets. The second is the volatility of EBITA (earnings before interest, taxes, depreciation, and amortization) over the past five fiscal years. The third is the stock return volatility, the standard deviation of stock returns over the past five years, as reported by Datastream.

4.6.1. Debt ratio

The results based on the debt ratio are presented in Panel A of Table 6. We sort firms into two subsamples based on a median split of the debt ratio. Low (high) risk sample comprises firms whose debt ratio is below (above) the sample median. Similar to prior analyses, we run the regressions in two scenarios: one scenario with variations of up to 500 DE and the other 300 DE.

Column 1 shows that the coefficient on PER*Ret*D is 0.097, not significant at the 10% level, in firms with low risk. Column 2 shows that the coefficient is 0.69, significant at the 10% level, in firms with high risk. Columns 3 and 4 report the results for the scenario where we restrict the variation to 300 DE above/below our cutoff. Column 3 shows that the coefficient on PER*Ret*D is 0.024, not significant at the 10% level, in firms with low risk, while Column 4 reports that the coefficient is 0.97, significant at the 10% level, in firms with high risk.

4.6.2. Profit volatility

The results based on EBITDA volatility are presented in Panel B of Table 6. We sort firms into two subsamples based on a median split of EBITDA volatility. Low (high) risk sample comprises firms whose EBITDA volatility is below (above) the sample median. We run the regression specified in Equation (2) and include two scenarios: one scenario with variations of up to 500 DE and the other 300 DE.

Column 1 shows that the coefficient on *PER*Ret*D* is 0.11, not significant at the 10% level, in firms with low profit volatility. Column 2 shows that the coefficient is 0.69, significant at the 10% level, in firms with high profit volatility. Columns 3 and 4 report for the scenario where we restrict the variation to 300 DE above/below our cutoff. Column 3 shows that the coefficient on PER*Ret*D is 0.31, not significant at the 10% level, in firms with low profit volatility, while Column 4 reports that the coefficient is 0.81, significant at the 10% level, for firms with high profit volatility.

4.6.3. Stock return volatility

The results based on stock return volatility are presented in Panel C of Table 6. We sort firms into two subsamples based on a median split of stock return volatility. Low (high) risk sample comprises firms whose stock return volatility is below (above) the sample median.

Column 1 shows that the coefficient on PER*Ret*D is 0.26, not significant at the 10% level, in firms with stock return volatility. Column 2 shows that the coefficient is 0.74, not significant at the 10% level, in firms with high stock return volatility. Columns 3 and 4 report the results for the scenario where we restrict the variation to 300 DE above/below our cutoff. Column 3 shows that the coefficient on PER*Ret*D is 0.11, not significant at the 10% level,

in firms with low volatility, while Column 4 reports that the coefficient is 1.06, significant at the 10% level, for firms with high volatility. Overall, Table 6 shows that the impact of PER on accounting conservatism concentrates in firms with high risks, lending support to our hypothesis.

4.7. The impact of information asymmetry

In this section, we test H3, which hypothesizes that the impact of PER on accounting conservatism concentrates in firms with high information asymmetry. We use four measures of information asymmetry: analyst coverage, forecast dispersion, intangible assets' ratio, and market-to-book variation in the industry. Analyst coverage is the total number of estimates for the next year's EPS. Analyst forecast dispersion is the standard deviation of estimates for the next year's EPS, and we require the number of estimates to be at least five. The intangible assets' ratio is calculated as total intangible assets, scaled by total assets. The market-to-book variation is calculated as the standard deviation of market-to-book ratios within a Fama/French 12 industry and year.

4.7.1. Analyst coverage

The results based on analyst coverage are presented in Panel A of Table 7. We sort firms into two subsamples based on a median split of the analyst coverage. Low (high) information asymmetry sample comprises firms whose analyst coverage is above (below) the sample median. Similar to prior analyses, we run the regressions for the band of 500 DE and the band of 300 DE.

Column 1 shows that the coefficient on PER*Ret*D is 0.65, not significant at the 10% level, in firms with low information asymmetry. Column 2 shows that the coefficient is 1.26, significant at the 10% level, in firms with high information asymmetry. Columns 3 and 4 report the results for the scenario where we restrict the variation to 300 DE above/below our cutoff. Column 3 shows that the coefficient on PER*Ret*D is 0.90, not significant at the 10% level, in firms with low information asymmetry, while Column 4 reports that the coefficient is 1.57, significant at the 5% level, in firms with high information asymmetry.

4.7.2. Forecast dispersion

The results based on forecast dispersion are presented in Panel B of Table 7. We sort firms into two subsamples based on a median split of forecast dispersion. Low (high) information asymmetry sample comprises firms whose forecast dispersion is below (above) the sample median.

Column 1 shows that the coefficient on *PER*Ret*D* is 0.43, not significant at the 10% level, in firms with low information asymmetry. Column 2 shows that the coefficient is 0.79, significant at the 10% level, in firms with high information asymmetry. Columns 3 and 4 report the results for the scenario where we restrict the variation to 300 DE above/below our cutoff. Column 3 shows that the coefficient on *PER*Ret*D* is 0.27, not significant at the 10% level, in firms with low information asymmetry. Column 4 reports that the coefficient is 0.87, significant at the 10% level, in firms with high information asymmetry.

4.7.3. Intangible asset ratio

The results based on intangible asset ratio are presented in Panel C of Table 7. We sort firms into two subsamples based on a median split of the ratio. Low (high) information asymmetry sample comprises firms whose intangible asset ratio is below (above) the sample median.

Column 1 shows that the coefficient on PER*Ret*D is 0.47, not significant at the 10% level, in firms with low information asymmetry. Column 2 shows that the coefficient is 0.28, significant at the 10% level, in firms with high information asymmetry. Columns 3 and 4 report for the scenario where we restrict the variation to 300 DE above/below our cutoff. Column 3 shows that the coefficient on PER*Ret*D is 0.46, not significant at the 10% level, in firms with low information asymmetry, while Column 4 reports that the coefficient is 0.84, significant at the 10% level, in firms with high information asymmetry.

4.7.4. Market-to-book variation

The results based on the market-to-book variation of the industry are presented in Panel D of Table 7. We sort firms into two subsamples based on a median split of the variation. Low (high) information asymmetry sample comprises firms whose variation is below (above) the sample median.

Column 1 shows that the coefficient on PER*Ret*D is 0.20, not significant at the 10% level, in firms with low information asymmetry. Column 2 shows that the coefficient is 1.32, significant at the 1% level, in firms with high information asymmetry. Columns 3 and 4 report the scenario where we restrict the variation to 300 DE above/below our cutoff. Column 3 shows that the coefficient on PER*Ret*D is 0.19, not significant at the 10% level, in firms with low

information asymmetry, while Column 4 reports that the coefficient is 1.11, significant at the 10% level, in firms with high information asymmetry.

Overall, Table 7 shows that the impact of PER on accounting conservatism concentrates in firms with high information asymmetry, lending support to our hypothesis.

5. Conclusion

We hypothesize that workers prefer conservative accounting because it curbs managerial incentives to take on risky projects. Employees' risk aversions stem from the fact that they are not entitled to extra benefits when the firm "hits the jackpot," while they suffer from salary reduction and forced furloughs and turnovers when the firm experiences extreme adverse outcomes. Conservative accounting reduces managerial risk-taking by making it difficult to hide losses from stakeholders.

To test our hypothesis, we use the setting of German law on codetermination, which grants employees half of the board seats in firms with more than 2,000 DE. Using a regression discontinuity approach around the threshold of 2,000 DE, we find that accounting is more conservative in PER firms than non-PER firms. This result holds for different specifications of the regression model and alternative measures of accounting conservatism. Consistent with the risk channel, we continue to document that the effect of PER on accounting conservatism concentrates in firms with high risk and high information asymmetry. In sum, our findings show that employees prefer conservative accounting.

Our study contributes to the literature on accounting conservatism. While prior studies have investigated the demand for accounting conservatism from various stakeholders, there is

little attention on how employees perceive accounting conservatism. We contribute to the literature by using a unique setting that allows strong identification of employees' influence on the board. By demonstrating employees' preference for conservative accounting, our study offers implications for academics and managers. Given the recent political calls for greater employee representation on the board, our study also informs regulators and politicians.

References

Ahmed, A., Billings, B., Morton, R., Harris, M., 2002. The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs. The Accounting Review 77(4), 867–890.

Angrist, J.D., and Pischke, J.-S., 2008. Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press.

Atanasov, V., Black, B., 2016. Shock-based causal inference in corporate finance and accounting research. Critical Finance Review 5, 207–304.

Ball, R., 2001. Infrastructure Requirements for an Economically Efficient System of Public Financial Reporting and Disclosure. Brookings-Wharton Papers on Financial Services. Available at: https://muse.jhu.edu/article/26629/summary

Ball, R., and Shivakumar, L., 2005. Earnings quality in UK private firms: comparative loss recognition timeliness. Journal of Accounting and Economics 39 (1): 83–128.

Basu, S., 1997. The conservatism principle and the asymmetric timeliness of earnings. Journal of Accounting and Economics 24 (1): 3–37.

Baums, T., Frick, B., 1998. Co-determination in Germany: the impact of court decisions on the market value of firms. Economic Analysis 1, 143–161.

Berk, J.B., Stanton, R., Zechner, J., 2010. Human capital, bankruptcy, and capital structure. Journal of Finance 65, 891–926.

Bova, F., 2013. Labor unions and management's incentive to signal a negative outlook. Contemporary Accounting Research, 30(1), 14–41.

Chen, T., Harford, J., Lin, C., 2015. Do analysts matter for governance? Evidence from natural experiments. Journal of Financial Economics 115, 383–410.

Comprix, J., Muller, K. A., 51. Pension plan accounting estimates and the freezing of defined benefit pension plans. Journal of Accounting and Economics, 51: 115–133.

DeAngelo, H., DeAngelo, L., 1991. Union negotiations and corporate policy: A study of labor concessions in the domestic steel industry during the 1980s. Journal of Financial Economics, 30: 3–43.

D'Souza, J., Jacob, J., Ramesh, K., 2001. The use of accounting flexibility to reduce labor renegotiation costs and manage earnings. Journal of Accounting and Economics 30, 187–208.

Fauver, L., Fuerst, M.E., 2006. Does good corporate governance include employee representation? Evidence from German corporate boards. Journal of Financial Economics 82 (3): 673–710.

FitzRoy, F.R., Kraft, K., 1993. Economic effects of codetermination. Scandinavian Journal of Economics 95, 365–375.

Faleye, O., Mehrotra, V., Morck, R., 2006. When labor has a voice in corporate governance. Journal of Financial and Quantitative Analysis 41, 489–510.

Francis, J. R., Martin, X., 2010. Acquisition profitability and timely loss recognition. Journal of Accounting and Economics 49 (1): 161–178.

Givoly, D., Hayn, C., 2000. The changing time-series properties of earnings, cash flows and accruals: Has financial reporting become more conservative? Journal of Accounting and Economics 29 (3): 287–320.

Gleason, C., Kieback, S., Thomsen M., Watrin C., 2021. Monitoring or payroll maximization? What happens when workers enter the boardroom? Review of Accounting Studies, Forthcoming

Gorton, G., Schmid, F.A., 2000. Universal banking and the performance of German firms. Journal of Financial Economics 58, 29–80.

Gorton, G., Schmid, F.A., 2004. Capital, Labor, and the Firm: A Study of German Codetermination. Journal of the European Economic Association 2 (5): 863–905.

Hui, K.W., Klasa. S., Yeung, P.E., 2012. Corporate suppliers and customers and accounting conservatism. Journal of Accounting and Economics 53 (1): 115–135.

Jensen, M.C., Meckling, W.H., 1979. Rights and Production Functions: An Application to Labor-Managed Firms and Codetermination. The Journal of Business 52 (4): 469–506.

Khan, M., Watts, R.L., 2009. Estimation and empirical properties of a firm-year measure of accounting conservatism. Journal of Accounting and Economics 48, 132–150.

Kim, E. H., Maug, E., Schneider, C., 2015. Labor representation in governance as an insurance mechanism. Unpublished Working Paper, University of Michigan.

Kravet, T.D., 2014. Accounting conservatism and managerial risk-taking: Corporate acquisitions. Journal of Accounting and Economics 57(2/3), 218–240.

LaFond, R., Roychowdhury, S., 2008. Managerial ownership and accounting conservatism. Journal of Accounting Research 46,101–135.

LaFond, R., Watts, R., 2008. The information role of conservative financial statements. Accounting Review 83, 447–478.

Levin, R., Lin, C., Wei, L., 2017. Insider trading and innovation. Journal of Law and Economics 60, 749–800.

Lee, D.S., Lemieux, T., 2010. Regression discontinuity designs in eco- nomics. Journal of Economic Literature 48, 281–355.

Liberty, S., Zimmerman, J., 1986. Labor union contract negotiations and accounting choices. The Accounting Review 61, 692–713.

Lin, C., Schmid, T., Xuan, Y., 2018. Employee representation and financial leverage. Journal of Financial Economics 127 (2): 303–324.

McCrary, J., 2008. Manipulation of the running variable in the regression discontinuity design: A density test. Journal of Econometrics 142 (2): 698–714.

Overland C., Samani, N., 2021. The sheep watching the shepherd: Employee representation on the board and earnings quality. European Accounting Review

Ratti, R.A., 1980. Bank attitude toward risk, implicit rates of interest, and the behavior of an index of risk aversion for commercial banks. Quarterly Journal of Economics 95, 309–331.

Ramalingegowda, S., Yu, Y., 2012. Institutional ownership and conservatism. Journal of Accounting and Economics 53 (1): 98–114.

Rieble, V., 2006. Schutz vor parittischer Unternehmensmitbestimmung. Betriebs-Berater 37, 2018–2023.

Svejnar, J., 1981. Relative wage effects of unions, dictatorship and codetermination: econometric evidence from Germany. Review of Economics and Statistics 63, 188–197.

Svejnar, J., 1982. Codetermination and productivity: Empirical evidence from the Federal Republic of Germany. In: Jones, D.C., Svejnar, J. (Eds.), Participatory and Self-managed Firms: Evaluating Economic Performance. Lexington Books, Lanham, MD, pp. 199–202.

Watts, R. L., 2003. Conservatism in accounting, part I: Explanations and implications. Accounting Horizons 17 (3), 207–221. doi:10.2308/acch.2003.17.3.207

Zhang, J., 2008.The contracting benefits of accounting conservatism to lenders and borrowers. Journal of Accounting and Economics 45(1), 27–54.

Zingales, Luigi., 2000. In search of new foundations, Journal of Finance 55, 1623-1653.

Figure 1

This figure shows a McCrary (2008) density plot for the distribution of domestic employees around the threshold of 2,000 domestic employees. The x axis represents the number of domestic employees. The y axis represents the density of firm years. The graph is based on the DC density function in Stata, and default values are used for the bandwidth and bin size.

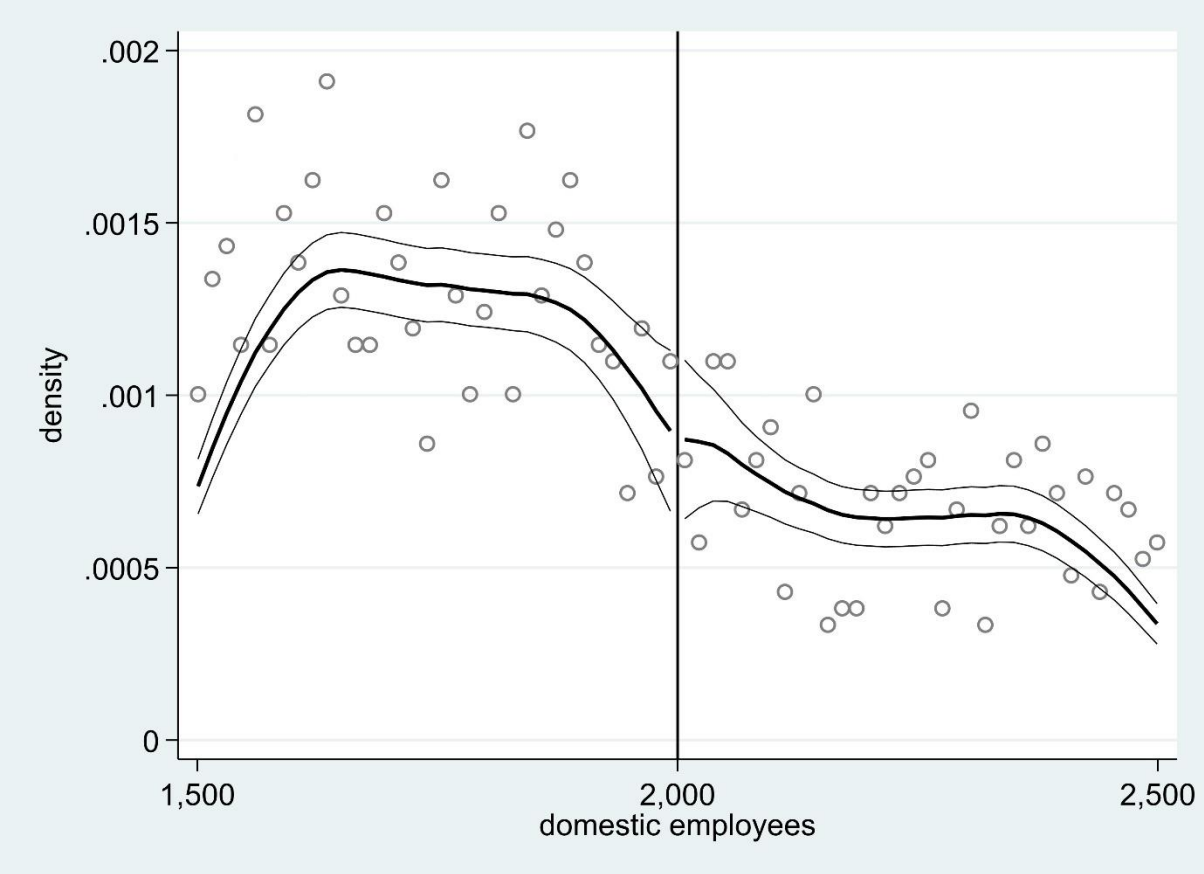

Table 1. Descriptive Statistics

This table shows the mean, standard deviation, p25 (25th percentile), p50 (median), and p75 (75th percentile) for the main variables that are used in the empirical analyses. The sample is restricted to firms with more than 1,500 DE and less than 2,500 DE. All variables are defined in Appendix A.

	Mean	SD	P25	P50	P75
DE	1954	301	1681	1905	2230
PER	0.36	0.48	0.00	0.00	1.00
NI	0.02	0.20	0.02	0.06	0.09
Ret	0.14	0.53	−0.21	0.08	0.46
D	0.41	0.49	0.00	0.00	1.00
Log(assets)	13.18	0.89	12.51	13.08	13.94
Leverage	0.30	0.22	0.12	0.26	0.45
Market-to-book	2.15	1.61	1.08	1.70	2.64
CSCORE	0.11	0.53	−0.07	0.14	0.38
Con-ACC	−0.03	0.08	−0.06	−0.03	0.01

Table 2. Employee representation and accounting conservation

In Panel A, the dependent variable is *NI*. Panel B shows the balancing of Ret, D, and Ret x D between firms with and without PER. T-statistics based on Huber/White robust standard errors clustered by firms are presented in parentheses. ***, **, and * indicate significance on the 1%-, 5%- and 10%-levels, respectively. A detailed description of all variables can be found in Appendix A.

Panel A: Main results

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
D	0.16***	0.12***	0.16**	
		0.12**	(3.61)	
		(2.67)	(2.59)	(2.04)
Ret	0.059**	0.077*	0.076*	−0.016
	(2.10)	(1.91)	(1.82)	(-0.20)
D x Ret	0.63***	0.39***	0.59***	0.51**
	(3.90)	(3.15)	(3.13)	(2.61)
PER		−0.041		−0.056
		(−1.07)		(−1.40)
PER x D		0.14		0.23*
		(1.20)		(1.86)
PER x Ret		0.026		0.022
		(0.34)		(0.23)
PER x Ret x D		0.56**		0.81***
		(2.35)		(3.19)
Industry FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Polynomial	no	one	no	one
Both sides	no	yes	no	yes
Observations	326	326	181	181
Firms	65	65	44	44
Adj. R^2	0.36	0.42	0.46	0.56

Panel B: Balancing of Ret, D, and Ret x D

Column	1	2	3
Dependent variable	ret	D	ret x D
PER	−0.011	0.011	−0.015
	(−0.14)	(0.15)	(−0.46)
Year/industry FE	yes	yes	yes
Polynomial	one	one	one
Both sides	yes	yes	yes
Observations	319	319	319

Table 3. Robustness tests for the Basu (1997) measure

Panel A includes the firm-level control variables log(total assets), leverage, and market-to-book ratio. The control variables are interacted with the return and the dummy variable in Columns (2) and (4). Panel B presents models that include firm fixed effects. Panel C shows the results for alternative ways to control for the number of domestic employees. In the main specification, we use a linear control function on both sides of the threshold. ***, **, and * indicate significance on the 1%-, 5%-and 10%-levels, respectively. A detailed description of all variables can be found in Appendix A.

Panel A: firm-level control variables

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
Control variables	log(total assets), leverage, market-to-book			
PER x Ret x D	0.51*	0.55**	0.74**	0.84***
	(1.98)	(2.32)	(2.69)	(3.09)
Controls x Ret x D	no	yes	no	yes
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	326	326	181	181

Panel B: firm-fixed effects

Column	1	2
Bandwidth	± 500 DE	± 300 DE
PER x Ret x D	0.48**	0.71**
	(2.10)	(2.66)
Year/firm FE	yes	yes
Polynomial	one	one
Both sides	Yes	yes
Observations	306	170

Panel C: Alternative polynomials

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
PER x Ret x D	0.57**	0.57***	0.80***	0.72***
	(2.27)	(2.77)	(2.83)	(3.52)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	two	one	two
Both sides	no	yes	no	yes
Observations	326	326	181	181

Table 4. Alternative measures for accounting conservatism

The dependent variables are *CSCORE* (Khan and Watts, 2009) in Panel A and *Con-ACC* (Givoly and Hayn, 2000, and Ahmed et al., 2002) in Panel B. T-statistics based on Huber/White robust standard errors clustered by firms are presented in parentheses. ***, **, and * indicate significance on the 1%-, 5%- and 10%-levels, respectively. A detailed description of all variables can be found in Appendix A.

Panel A: *CSCORE*

Column	1	2
Bandwidth	± 500 DE	± 300 DE
PER	0.15*	0.17*
	(1.74)	(1.76)
Year FE	yes	yes
Industry FE	yes	yes
Polynomial	one	one
Both sides	yes	yes
Observations	312	174
Firms	64	42
Adj. R^2	0.30	0.25

Panel B: *Con-ACC*

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
PER	0.038***	0.023**	0.061***	0.060***
	(4.29)	(2.52)	(4.94)	(4.24)
Log(Total Assets)		−0.010		−0.029**
		(−1.34)		(−2.39)
Leverage		0.043		(−0.75)
		(1.57)		(−0.75)
Market-to-book		−0.0023		−0.0037
		(−0.84)		(−0.86)
Year FE	Yes	yes	yes	yes
Industry FE	Yes	yes	yes	yes
Polynomial	One	one	one	one
Both sides	Yes	yes	yes	yes
Observations	299	294	168	167
Firms	64	63	43	42
Adj. R^2	0.17	0.19	0.19	0.23

Table 5. Placebo tests

This table shows placebo tests for the randomly chosen thresholds of 1,500 and 2,500 domestic employees. Similar to our main models, we use a window of 500 or 300 domestic employees around the thresholds. ***, **, and * indicate significance on the 1%-, 5%-and 10%-levels, respectively. A detailed description of all variables can be found in Appendix A.

Panel A: Basu (1997) measure

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
DE_1500 x Ret x D	0.57		0.041	
	(1.60)		(0.13)	
DE_2500 x Ret x D		−0.21		−0.090
		(−0.51)		(−0.16)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	580	317	368	186

Panel B: *CSCORE*

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
DE_1500	−0.13	−0.031		
	(−0.75)	(−0.12)		
DE_2500			0.13	−0.15
			(0.43)	(−0.32)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	504	313	256	150

Panel C: *Con-ACC*

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
DE_1500	0.033	−0.024		
	(1.19)	(−0.33)		
DE_2500			0.13	−0.15
			(0.43)	(−0.32)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	468	288	246	144

Table 6. The role of firm risk

We estimate the following model. For brevity, we only report the coefficient on the variable of interest.

$$NI_{jt} = \beta_1 + \beta_2 D_{jt} + \beta_3 Ret_{jt} + \beta_4 D_{jt} * Ret_{jt} + \beta_5 PER_{jt} + \beta_6 D_{jt} * PER_{jt} + \beta_7 Ret_{jt} * PER_{jt} +$$

$$\beta_8 PER_{jt} * D_{jt} * Ret_{jt} + \boldsymbol{r} * RDD\ Controls + Industry\ FE + Year\ FE + \varepsilon_{jt} \quad (2)$$

Firms are classified as high or low risk based on risk measure that is indicated in each panel. Debt ratio is calculated as total assets (WC02999) minus total equity (WC03501), scaled by total assets. EBIT volatility is the standard deviation of EBIT (WC18191) over the past five fiscal years. EBITDA volatility is the standard deviation of EBITDA (WC18198) over the past five fiscal years. Stock return volatility is the standard deviation of stock returns over the past five years, as reported by Datastream (400E). ***, **, and * indicate significance on the 1%-, 5%-and 10%-levels, respectively. A detailed description of other variables can be found in Appendix A.

Panel A: Debt ratio

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
Risk	Low	high	low	high
PER x Ret x D	0.097	0.69*	0.024	0.97*
	(0.74)	(1.85)	(0.14)	(1.88)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	163	163	87	89

Panel B: EBITDA volatility

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
Risk	Low	high	low	high
PER x Ret x D	0.11	0.69*	0.31	0.81*
	(0.29)	(1.89)	(0.92)	(1.73)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	152	148	84	79

Panel C: Stock return volatility

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
PER x Ret x D	0.26	0.74	0.11	1.06*
	(1.35)	(1.33)	(0.29)	(1.91)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	159	156	85	82

Table 7. The role of information asymmetry

We estimate the following model. For brevity, we only report the coefficient on the variable of interest.

$$NI_{jt} = \beta_1 + \beta_2 D_{jt} + \beta_3 Ret_{jt} + \beta_4 D_{jt} * Ret_{jt} + \beta_5 PER_{jt} + \beta_6 D_{jt} * PER_{jt} + \beta_7 Ret_{jt} * PER_{jt} +$$

$$\beta_8 PER_{jt} * D_{jt} * Ret_{jt} + \boldsymbol{r} * RDD\ Controls + Industry\ FE + Year\ FE + \varepsilon_{jt} \quad (2)$$

Firms are classified as having high or low information asymmetry based on risk measure that is indicated in each panel. Analyst coverage is the total number of estimates for the next year's EPS (EPS1NE). Analyst forecast dispersion is the standard deviation of estimates for the next year's EPS (EPS1SD), which we only calculate of the number of estimates is at least five. The intangible assets ratio is calculated as total intangible assets (WC02649), scaled by total assets (WC02999). Market- to-book variation is calculated as the standard deviation of market-to-book ratios within a Fama/French 12 industry and year. For brevity, we only report the coefficient on the variable of interest. ***, **, and * indicate significance on the 1%-, 5%-and 10%-levels, respectively. A detailed description of other variables can be found in Appendix A.

Panel A: Analyst coverage

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
Information asymmetry	low	high	low	high
PER x Ret x D	0.65	1.26*	0.90	1.57**
	(1.61)	(1.80)	(1.26)	(2.59)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	132	123	73	71

Panel B: Analyst forecast dispersion

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
Asymmetry	low	high	low	high
PER x Ret x D	0.43	0.79*	0.27	0.87*
	(1.45)	(1.97)	(0.53)	(1.92)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	79	81	53	42

Panel C: Intangible assets ratio

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
Asymmetry	low	high	low	high
PER x Ret x D	0.47	0.28*	0.46	0.84*
	(1.21)	(1.77)	(0.81)	(1.99)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	162	163	90	86

Panel D: Market-to-book variation in an industry

Column	1	2	3	4
Bandwidth	± 500 DE		± 300 DE	
Asymmetry	low	high	low	high
PER x Ret x D	0.20	1.32***	0.19	1.11*
	(0.82)	(3.00)	(0.43)	(2.01)
Year/industry FE	yes	yes	yes	yes
Polynomial	one	one	one	one
Both sides	yes	yes	yes	yes
Observations	161	161	86	86

Appendix A. Variable definitions

Variable	Description
PER	Dummy which equals one if the firm has parity employee representation, and zero otherwise. Source: Hand-collected
DE	Number of domestic employees. Source: Hoppenstedt and hand-collected
NI	Net income before extraordinary items and preferred dividends (wc01551) in year t scaled by the market value of equity (wc08001) at the end of year t-1. Source: Worldscope
Ret	Stock return over the 12-month period ending three months after the fiscal year-end. Source: Datastream
D	Dummy equal to one if the return is negative and zero otherwise. Source: Datastream
Log(assets)	Natural logarithm of total assets (wc02999). Source: Worldscope
Leverage	Total debt (wc03255) scaled by the sum of total debt and the market value of equity (wc08001). Source: Worldscope
Market-to-book	Market value of equity (wc08001) scaled by the book value of equity (wc03501). Source: Worldscope
CSCORE	A measure of accounting conservatism, computed according to Khan and Watts (2009)
Con-ACC	A measure of accounting conservatism, computed according to Givoly and Hayn (2000) and Ahmed et al. (2002).
DE_1500	Dummy which equals one if the firm has more than 1,500 domestic employees, and zero otherwise. Source: Hoppenstedt and hand-collected
DE_2500	Dummy which equals one if the firm has more than 2,500 domestic employees, and zero otherwise. Source: Hoppenstedt and hand-collected