Earnings Myopia and Private Equity Takeovers

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Abstract: We examine whether earnings myopia among publicly traded companies motivates takeover by private equity (PE) firms. We first construct a measure of earnings myopia using factor analysis. Then, using a sample of PE takeovers, we show earnings myopia increases the likelihood of takeover by PE buyers. In contrast, private takeovers motivated for strategic reasons do not have a similar association with earnings myopia, nor do takeovers by public firms. We further show that post-takeover, acquired firms exhibit significantly less earnings myopia, including increased investments in R&D and higher productivity. Our results suggest that the cost of earnings myopia can be sufficiently large to outweigh the benefits of capital markets and this cost contributes to the shrinking number of publicly traded firms.

Keywords: myopia; real earnings management; private equity takeover; going private.

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"*The pressure to meet short-term earnings estimates has contributed to the decline in the number of public companies in America over the past two decades.* ***Short-term-oriented capital markets*** *have discouraged companies with a longer-term view from going public at all, depriving the economy of innovation and opportunity."*

"Short-Termism Is Harming the Economy," Jamie Dimon and Warren E. Buffett, Wall Street Journal, June 6, 2018 (emphasis added)

1. Introduction

The capital market pressures facing managers of publicly traded companies have long been argued as a cause of myopic behavior, or short-termism, contributing to declines in long-run investments and value creation (e.g., Narayanan 1985; Stein 1989; Barton and Wiseman 2013; Asker, Farre-Mensa, and Ljungqvist 2015). Myopic decision-making to report favorable earnings, or 'earnings myopia', is the focus of numerous academic studies, media articles, and regulatory scrutiny. Prior research finds that earnings myopia negatively affects long-term firm value (e.g., Bushee 1998; Bhojraj et al. 2009; Cohen and Zarowin 2010). In addition, Asker et al. (2015) show that private firms invest relatively more than public firms, their decisions are more responsive to changes in investment opportunities, and that these effects are strongest when the public firm faces earnings pressure. Corporate executives agree. A 2013 McKinsey quarterly survey of 1000 C-suite executives revealed that 86% of executives believed that using a longer time horizon to make business decisions would positively affect corporate performance, increase stock returns, and foster innovation (Barton and Wiseman 2013). Finally, the SEC recently invited comments about switching from quarterly to semi-annual financial reporting to determine if the existing reporting system "fosters an overly short-term focus by managers and other market participants (SEC 2018)." Overall, there is widespread speculation that pressure on public companies from financial markets to deliver short-term earnings can induce myopic behavior detrimental to long-run firm value.

If the above arguments hold, it suggests that although transient or short-term investors might demand and benefit from companies focusing on short-term results, long-term investors suffer. Long-term focused investors can respond in several ways. For one, current shareholders can exercise their exit option, sell their investment in the firm, and reallocate their capital elsewhere.[1] Alternatively, investors can attempt to influence managers' decisions through shareholder activism. Prior research suggests that activist investors and institutional shareholders constrain agency costs due to myopic managerial behavior (Bushee 1998; Brav, Jiang, Partnoy, and Thomas 2008; Klein and Zur 2009; Khurana, Li, and Wang 2018). These first two options reflect the typical 'voice' and 'exit' responses that are available when investors are dissatisfied with an organization (e.g., Hirschman 1970; Edmans 2009). Another option available to a more limited set of investors, however, is to acquire the company and take it private, thereby alleviating the pressure associated with public capital markets and freeing the company to make value-maximizing long-run decisions. This paper examines whether the cost of earnings myopia and the potential gains from going private are substantial enough to induce takeovers by private equity (PE) firms.

The role of PE in shaping the public capital markets is increasingly important. There has been a sizeable decrease in the number of US publicly listed companies, falling 45% from over 8,000 two decades ago. This decline is partly due to increased consolidation and the delisting of companies that are acquired and taken private (Weild and Kim 2009; Gao et al. 2013; Doidge et al. 2017). Importantly, this reduction in public companies limits retail investors' access to potentially attractive investment opportunities and has drawn the attention of executives and regulators (e.g. Sorkin 2016, Smith 2019). For example, Paul Smith, president of the CFA

[1] Investors could also take short positions to capitalize on the value destructive behavior, although this behavior would be atypical for a long-term dedicated investor.

Institute, acknowledged:

"*Public markets remain the sole channel for most retail investors. And those markets continue to shrink. Due to this trend, existing listed markets have become more exposed to older industries, slower-growing companies and short-termism driven by the steady beat of quarterly earnings expectations. Private markets have become the bastion of more long-term thinking*."

Therefore, it is essential to understand the cost of earnings myopia to public firms and the extent to which it contributes to going-private transactions.

Our goal in this paper is to examine the extent to which the costs of earnings myopia are large enough to generate returns for PE takeovers. There are several reasons why we believe that earnings myopia induces PE takeovers. First, to the extent that the incentives and capital market pressures associated with being publicly traded induce earnings myopia, the primary way to fully eliminate those incentives is by going private. PE acquirers earn high returns from takeovers of public firms (Guo et al. 2011) and prior studies find that capital market incentives are associated with lower accounting quality for public firms compared to private firms (e.g., Ke et al. 1999; Beatty et al. 2002; Katz 2009; Givoly et al. 2010).

Second, if the net benefits to activist investors are not substantial enough given the cost of activism and free-riding (Jensen and Meckling 1976; Grossman and Hart 1980), then hedge funds and institutional investors will not have sufficient incentive to reduce managerial myopia. In addition, changes to firms' myopic behavior in response to shareholder activism are not guaranteed and might ultimately fail whereas control ensures the ability to change behavior. By examining the association between the likelihood of takeover by PE and earnings myopia, we provide evidence on whether removing earnings myopia incentives increases firm value.

Third, the market for corporate control is an important external governance mechanism for inefficient firms to improve performance by being acquired by more efficient firms (e.g., Marris 1963; Manne 1965; Jensen 1986; Berger and Ofek 1996). Specifically, prior research

argues that PE sponsors earn returns by improving the corporate governance of their portfolio companies (e.g., Jensen 1989; Kaplan and Strömberg 2009; Katz 2009; Acharya et al. 2013). We expect that if PE buyers identify forgone opportunities caused by earnings myopia in public companies, then we should observe PE takeovers of these firms.

We examine our research question by first developing an earnings myopia measure using factor analysis (FA) based on five earnings myopia measures: frequent positive earnings surprises; strings of quarterly earnings increases; frequent quarterly earnings guidance; accounting restatements; and lower discretionary research and development (R&D) expense. While any individual measure can be correlated with other factors (e.g., performance, growth opportunities), FA reduces the dimensionality of the data and exploits common variation across the measures which is likely to capture the underlying construct of earnings myopia. FA also abstracts away variation unique to each variable, unrelated to the underlying construct of earnings myopia (Allee et al. 2021). For example, earnings management due to contracting incentives can cause restatements but is unlikely to correlate with guidance frequency. We find consistent evidence the first factor of the FA reflects earnings myopia based on the direction and size of its correlation with the individual myopia variables.

Using a large sample of all US public firms and a linear takeover probability model we find that firms with more myopic managers are associated with a higher likelihood of takeover by PE. The economic magnitude of this association is meaningful and comparable to other important economic determinants of takeovers. Our identification assumption relies on PE takeovers being driven by our measure of earnings myopia and not an underlying characteristic that drives both myopia and takeover. To provide comfort that this assumption holds, we perform two key analyses. First, we use a sample of private *strategic* takeovers as a benchmark or control

group.[2] Although acquisitions of public targets by strategic buyers are also going-private transactions, we expect these acquisitions to primarily be motivated by creating operational synergies between the acquirer and target (Bargeron et al. 2008; Gorbenko and Malenko 2014). Therefore, identifying takeovers for strategic reasons and using them as a benchmark controls for determinants of going private in general to ensure our results are specific to PE buyers. Additionally, we use takeovers by public companies ('public buyers') as an additional control group because these do not remove public capital markets incentives as targets continue as subsidiaries of public parent firms. Thus, these takeovers are less likely to create value by reducing myopic decisions by the target firm.

We do not find a positive association between managerial myopia and likelihood of takeover by private strategic buyers. This result suggests myopic firms' higher takeover likelihood is specific to PE buyouts. We also do not find a positive association between managerial myopia and likelihood of takeover by public buyers, further indicating that our findings are not likely to be due to earnings myopia being correlated with omitted variables that are determinants of takeover in general. Yet we do find that economic fundamental control variables have a similar association with takeover likelihood between the different buyer types, suggesting that our finding of a positive association between earnings myopia and PE buyouts is distinct for PE buyers.

Second, it is possible that earnings myopia is driven by managers 'window dressing' their poor performance. Thus, poor performance might motivate takeover by PE, but not other strategic or public buyers. We address this by re-examining the results of our PE takeover model

[2] PE buyers are financial firms referred to in practice as PE sponsors that create PE funds designed to acquire firms, often using leveraged buyouts, which then are referred to as portfolio companies. Private strategic buyers are non-financial firms without publicly traded equity.

while controlling for firms' total factor productivity (Imrohoroglu and Tuzel 2014). This enables us to explicitly control for the firm's underlying operational performance without using financial reporting measures, such as earnings, which can be manipulated due to myopia. We find that our results hold while controlling for operational performance. In fact, when we split our sample by high versus low productivity firm years and examine the effect of myopia on PE takeovers, we find that PE is most attracted to firms that are myopic but otherwise productive. In other words, if a firm is performing inefficiently *and* managers are exhibiting myopic behavior, PE buyers do not target them for takeover. This finding suggests our results are not attributable to poor performance. Further, this finding underscores the aforementioned practitioner concerns that shrinking capital markets are exposing investors to older, slower-growing industries, while more productive firms are taken private to avoid costs of earnings myopia.

We also examine whether the association between earnings myopia and PE buyouts is weaker when the potential takeover returns are lower, which we expect when public firms have governance mechanisms that can respond to myopia. If earnings myopia is costly to firms, then it might persist because either corporate governance is suboptimal or it is public firms' first-best option. We expect that firms with higher monitoring are more likely to respond to myopia by implementing governance reforms to decrease future myopia, likely causing a lower return to PE buyouts. Using long-run institutional ownership and board size to measure external and internal monitoring, respectively, we find that the association between earnings myopia and takeover likelihood by PE buyers is greater when there is less monitoring. This result suggests that PE buyers earn larger returns when target firms lack effective corporate governance and is consistent with myopia causing PE buyouts because of capital market pressure that corporate governance cannot decrease.

We then turn our analysis to the premiums PE buyers are willing to pay in order to take over myopic firms. If myopia represents a cost that cannot be fully alleviated by public capital market participants, we expect PE buyers to identify this cost and pay a premium over market price that it less than or equal to the cost of myopia. Consistent with this, we find that PE buyers are willing to pay a premium over market price of approximately 5.63 percent, providing an approximate (lower bound) measure of the economic magnitude of the costs of earnings myopia.

Last, we use a generalized difference-in-differences design to test whether firms acquired in PE buyouts show a decrease in earnings myopia compared to all firms with available data that are not acquired in PE buyouts. For this analysis we follow Harford and Kolasinski (2014) and Guo et al (2011) and examine post-buyout financial information for firms acquired by PE buyouts who continue to file public financial reports because of public debt *or* that issue post-buyout financial reports because of a post-buyout IPO. Overall, we find results consistent with PE buyers earning a return by decreasing earnings myopia due to public capital markets and increasing a firm's total productivity.[3]

Our study makes several contributions. First, we extend the managerial myopia literature by developing an earnings myopia measure using FA. The benefit of this measure is that it reflects the common variation in various myopia measures and can better isolate the construct of earnings myopia or managers' short-term focus on earnings.

Second, we extend the managerial myopia literature by showing that managerial myopia is sufficiently costly to motivate PE takeovers and that PE buyouts are an important mechanism

[3] Prior research finds that private firms have less earnings management than public firms, as well as that firms with initial public offerings that are portfolio companies of PE sponsors have less earnings management than firms without (e.g., Katz 2009; Givoly et al. 2010). Our analysis, while related, is important in identifying that public firms with higher myopia then have a decrease in myopia after going private, consistent with PE buyers specifically earning a return from buyouts of public firms by decreasing myopia.

in reducing suboptimal myopia driven by capital market pressure. In doing so, we contribute to the literature examining the cost of managerial myopia and mechanisms that decrease this cost (e.g., Cohen and Zarowin 2008, Bhojraj et al. 2009; Klein and Zur 2009).

Third, we contribute to the literature examining the impact of accounting quality on the market for corporate control. This literature generally finds that poorer accounting quality inhibits takeover though lower likelihood of takeover, failed deals, higher premiums, and higher likelihood of goodwill write-downs (e.g., Skaife and Wangerin 2013; McNichols and Stubben 2014; Amel-Zadeh and Zhang 2015; Chen et al. 2018). Our research question differs from these studies in that we examine earnings myopia relative to capital market pressure as opposed to poor accounting quality.[4] More importantly, we examine whether the unfavorable impact of earnings myopia can result in increased takeover likelihood by certain buyers. Studies examining the role of accounting quality in acquisitions should consider how the implications of going private transactions differ from other transactions.

Fourth, our study contributes to the literature examining PE buyouts and informs regulators about the role of PE in decreasing managerial myopia. This contribution is particularly important given the decreasing trend in US public firms (Weild and Kim 2009; Doidge et al. 2017). Regulators and lawmakers have raised concerns that PE buyouts negatively impact firms' stakeholders and social welfare (Davis et al. 2019). We provide evidence of a motivation for PE buyouts that is less objectionable. Specifically, decreasing managerial myopia is quite different from the often-cited critiques of PE takeovers, such as asset stripping, employment reductions, or exploiting indebtedness to transfer wealth to PE sponsors. Our results suggest that PE buyouts create value by decreasing inefficient managerial decision-making driven by incentives related to

[4] Poor accounting quality can be caused by innate factors or contracting incentives that are not the result of public capital market incentives.

public equity capital markets. Further, we find that PE buyouts of public firms result in increased R&D spending.

2. Prior Literature and Hypothesis Development

2.1 Private Equity Buyouts

Prior research on PE buyouts generally finds that buyouts are driven by removing inefficiencies by switching to concentrated ownership, improving governance, and increasing leverage (Jensen 1989; Kaplan and Stein 1993; Kaplan and Strömberg 2009; Guo et al. 2011; Axelson et al. 2013; Davis et al. 2019). Kaplan and Strömberg (2009) provide a thorough discussion of the operation of PE firms and summarize the literature as indicating that PE activity creates economic value on average. Guo et al. (2011) find that PE buyouts of public firms create substantial returns for buyers that can be explained in part by operating performance improvements, changes in industry valuation multiples, and tax savings from increased leverage. In addition, Guo et al. (2011) find that several measures associated with improved governance, such as changing the CEO, increasing leverage, and separating the CEO and Chairman role with new CEOs, result in better improvements in operating performance. Although some of these changes are likely to affect managerial myopia, the decreased capital market pressure is arguably one of the more significant changes.

PE buyouts have faced longstanding scrutiny from politicians, regulators, and firms' stakeholders (e.g., employees). These parties argue that PE buyouts harm several stakeholders because they result in employee termination, decreased investment, and other negative social impacts. Davis et al. (2019) use micro-level US Census data to examine the effects of PE buyouts and show that their effect on employment, employee pay, and labor productivity differs based on target ownership (public vs private) and market conditions. Overall, PE buyouts of

public firms are associated with employment decreases while those of private firms are associated with increased employment, higher labor productivity, and higher employee compensation. These results suggest that PE buyouts of public firms have some of the negative impacts argued by critics of these transactions. Harford and Kolasinski (2014) examine other criticisms of PE buyouts that buyers transfer wealth from lenders funding buyouts and/or from the counterparty when exiting buyouts through IPOs or post-buyout sale of target firms. Harford and Kolasinski (2014) do not find evidence consistent with PE sponsors earning superior returns through wealth transfer. Overall, this literature provides some evidence consistent with PE buyouts of public firms having a negative impact on firm stakeholders.

Prior research in accounting on going-private transactions focuses on the regulatory and litigation costs for public corporations, especially in the face of the Sarbanes-Oxley Act (SOX). Badertscher et al. (2014) find that private firms with public debt pay lower audit fees than public firms, consistent with higher litigation risk. Engel et al. (2007) and Leuz et al. (2008) find that some firms decide to go private and go dark because of the increased regulatory costs from SOX. Leuz et al. (2008) find that firms with weaker governance are more likely to go dark (i.e., deregister with the SEC and trade in OTC markets), compared to both control firms and going-private firms, to avoid costly SEC reporting requirements.

2.2 Managerial Myopia

Managerial myopia, or short-termism, refers to managers making decisions based on the short-term earnings impact rather than maximizing long-term firm value. A general finding of this literature is that incentives induce myopic behavior and this myopia harms long-term firm value (e.g., Bushee 1998; Bhojraj et al. 2009; Cohen and Zarowin 2010). Managerial myopia also attracts activist investors that can earn returns by actively influencing firms to reduce

incentives for myopic decision-making (e.g., Bushee 1998; Brav et al. 2008; Klein and Zur 2009; Khurana et al. 2018). For example, Bushee (1998) finds that firms with higher long-term institutional shareholders are less likely to cut R&D to meet earnings benchmarks while firms with higher transient institutional investors are more likely to cut R&D. Brav et al. (2008) find that activist hedge funds increase payout and operating performance as well as increase CEO turnover though the hedge funds seldom seek control. Therefore, activist investors can decrease managerial myopia by influencing corporate governance if they earn sufficient returns.

Several papers have compared the motives for taking minority equity positions in public firms while using activist campaigns against investors buying out target firms in going-private transactions (e.g., Shleifer and Vishny 1988; Maug 1998; Bebchuk and Hart 2001; Burkart and Lee 2021). For example, Burkart and Lee (2021) develop an analytic model that finds certain conditions where blockholders can earn superior returns as an activist as opposed to a hostile takeover but that activists can also earn returns by brokering takeovers. Overall, investors in inefficient firms can choose between activism and buyouts, but it is difficult ex-ante to identify and measure the costs of each choice. Also, different investor types are likely to undertake different strategies where hedge funds and institutional investors are more to use activism and PE firms are more likely to acquire.

Stein (1988) models the interplay between takeover activity and myopia from a different angle. In particular, he argues that managers make myopic decisions that increase earnings to avoid a takeover because of concerns about losing employment. Similarly, Khurana et al. (2018) find that firms respond to hedge fund activism by increasing real earnings management, suggesting that investor activism is not necessarily likely to decrease myopic behavior. We expect multiple incentives drive managers to make myopic decisions, and the incentives directly

caused by public capital markets can increase takeover through PE buyouts. It is possible that part of the incentive for managers to make myopic decision is to avoid takeover or scrutiny by activist investors, which ultimately drives PE buyouts.

Prior literature on accounting quality and acquisitions generally finds that poor accounting quality of potential target firms inhibits acquisitions through lower likelihood to receive a bid, increased deal withdrawals, higher premiums, and poorer performance (e.g., Skaife and Wangerin 2013; McNichols and Stubben 2014; Amel-Zadeh and Zhang 2015; Chen et al. 2018). However, poorer accounting quality can negatively impact the long-term value of firms and create an investment opportunity for more efficient acquirers, particularly PE firms. This literature generally does not examine the importance of differing incentives of PE versus strategic buyers. For example, Amel-Zadeh and Zhang (2015) find that firms announcing restatements are less likely to be acquired consistent with these firms' higher information risk impeding corporate control market mechanisms, but do not examine buyer types.[5]

Prior research also examines the different incentives between public and private firms and the impact on myopia.[6] The general consensus of this literature is that, relative to private firms, public firms face capital market pressures that distort their investment decisions and create greater incentives to manage earnings (Ke et al. 1999; Beatty et al. 2002; Givoly et al. 2010; Asker et al. 2015).[7] Ke et al. (1999) and Beatty et al. (2002) examine banks and insurance

[5] Further, Amel-Zadeh and Zhang (2015) examine the immediate effect of restatements on takeover probability when information asymmetry is likely highest while we use the impact of restatements within the prior three years in our myopia measure.

[6] Prior literature also examines whether managers manage earnings downward before management buyouts (MBOs) to decrease the cost of the MBO and facilitate financing (DeAngelo 1986; Fischer and Louis 2008). For MBOs with PE financing this incentive would work against our finding a positive association between myopia and PE takeover.

[7] Another stream of literature examines whether IPO firms with PE sponsors have different earnings quality than those without (e.g., Katz 2009; Goktan and Muslu 2018). Katz (2009) find that US IPO firms with PE sponsors have higher earnings quality than those without and attribute this to better governance and management, as well as

companies where private firms are required to publicly disclose financial statements. Givoly et al. (2010) compares firms with public equity against private firms with public debt that are required to file financial statements with the SEC.[8] The above studies find that private firms have less earnings management than public firms.[9] However, these studies generally do not differentiate between whether the private firms previously were public and do not examine whether public-to-private PE buyouts are motivated by earnings myopia. The majority of PE buyouts are private-to-private transactions (Davis et al. 2019). In terms of investment activity, Asker et al. (2015) use a dataset of private US firms, and show that public firms make more myopic investment decisions, particularly when the firm's returns are sensitive to earnings changes. We extend these studies by focusing on whether a motivation for firms to go private is the efficiency gains from removing public capital market incentives.

2.3 Earnings Myopia and PE Takeover

If managerial myopia negatively impacts public firms' long-term value then we expect managerial myopia to result in investors with long positions exiting (or investors taking short positions), activist investors attempting influence managers' decision-making, and PE buyouts. For myopic firms to attract PE buyouts, the returns to decreasing myopia need to be substantial and likely exceed that from the potentially less costly alternative of taking minority positions and using activism. Therefore, whether managerial myopia attracts PE takeover is a function of the extent to which earnings myopia caused by public capital market incentives is costly and the

reputational concerns of PE firms. Goktan and Muslu (2018) find that among European IPO firms those with listed PE sponsors have higher earnings quality than those with unlisted PE sponsors.

[8] Ball and Shivakumar (2005) compare U.K. public and private firms and find that public firms report losses in a timelier manner than private firms.

[9] Burgstahler et al. (2006) finds the opposite result using European public and private firms.

likelihood potential corporate governance reforms are spurred by investor activism.[10] We therefore propose the following hypothesis:

H1: Earnings-related managerial myopia is positively associated with the likelihood of takeover by PE buyers.

We expect PE firms to be less likely to acquire public firms when the returns to reducing myopic decision-making through buyouts are lower. Returns to PE buyouts are likely to be lower when public firms have greater external and internal monitoring that spurs governance changes in response to earnings myopia. That is, despite earnings myopia occurring, we expect firms are more likely to decrease myopia after it occurs when they have more monitoring. Prior research suggests that both internal and external monitoring are associated with less earnings myopia (Bushee 1998; Brav et al. 2008; Klein and Zur 2009; Khurana, Li, and Wang 2018). If monitors spur governance changes that decrease earnings myopia and its long-term impact on firm value, then the return to PE buyouts will be lower. We therefore propose the following hypothesis:

H2: The association between earnings-related managerial myopia and the likelihood of takeover by PE buyers is lower for firms with greater corporate governance.

We argue that if myopic behavior is not fully mitigated by the other market mechanisms, such as investor activism or price pressure, it can result in a takeover opportunity for PE buyers. Following this argument, myopia can also influence the price premium offered by PE buyers. Consider for example, a myopic firm currently trading at market value $\chi = \gamma - \alpha$. Where γ represents the underlying value of the firm's operations (absent myopia) and α represents the discount assigned to market-induced myopic inefficiencies that are not expected to dissipate if

[10] Jensen and Meckling (1976) and Grossman and Hart (1980) show that free-riding by shareholders can decrease the returns to investor activism. However, we do not expect managerial myopia to be associated with the extent to which free-riding impacts the likelihood of activism against private takeover.

the firm is public.[11] The PE buyer should identify the intrinsic value of the firm as $\gamma > \chi$ after the myopic pressure is eliminated through takeover. The ability to eliminate this inefficiency that cannot otherwise be mitigated through the public markets enables a PE buyer to offer a premium of p over market value, such that $p \leq \alpha$, or stated differently, $p + \chi \leq \gamma$.

H3: Earnings-related managerial myopia is positively associated with private equity premiums offered over market price.

3. Research Design

We use Securities Data Company's (SDC) Mergers and Acquisitions database to identify firms that receive completed takeover bids for the period 1999 to 2017. Our sample period begins in 1999 because Audit Analytics restatement database coverage begins in 1997, allowing for adequate years of restatement data. We include acquisitions of US public targets that are classified as a merger (M) or acquisition of assets (AA) and require the transaction value is available. PE acquisitions are those identified by SDC as having a financial buyer and as either going private, LBO, or MBO (Harford and Kolasinski 2014). Private strategic acquisitions are those identified by SDC as having a strategic buyer (i.e., nonfinancial company) and as either going private, LBO, or MBO (Harford and Kolasinski 2014). We merge these acquisitions into the sample of Compustat US firm-years between 1998 through 2017 and test whether firms receive a takeover bid in the subsequent year. We compute additional variables using databases from IBES and Audit Analytics. Table 1 presents our sample selection procedure to obtain our sample used in the multivariable takeover likelihood analysis (Panel A) and post-buyout analysis (Panel B). Our final takeover probability sample include 57,349 firm-year observations of which

[11] Grossman and Hart (1980) develop a model for the premium included in tender offers. Our parsimonious example stems from the basic premise of that model that bidders will not offer a premium higher than the value they can create through the merger. We are holding everything else equal and focus only on the merger gains due to eliminating earnings myopia and ignore all other sources of merger gains.

there are 586 PE buyers, 336 private strategic buyers, and 2,374 public buyers.

3.1 Measures of Earnings-Related Managerial Myopia

There are multiple potential measures of earnings-related managerial myopia that can reflect the outcome of managers' focus on short-term earnings. Specifically, we focus on measures are frequency of just meeting/beating analysts' forecasts (*EARNINGS_SURPRISES)*, strings of increasing quarterly earnings (*EARNINGS_INCREASE_STRINGS*), adverse restatements (*RESTATEMENT*), frequency of quarterly earnings guidance (*FREQ_GUIDANCE*), and discretionary research and development expense (*DISC_R&D*).

Managers myopically focused on earnings are more likely to use earnings management and expectations management resulting in them more frequently meeting or just beating earnings targets (Burgstahler and Dichev 1997). *EARNINGS_SURPRISES* is an indicator variable equal to one if a firm reports at least one small positive quarterly earnings surprise in year *t*-2 to year *t*, and zero otherwise. Similarly, *EARNINGS_INCREASE_STRINGS* is an indicator variable equal to 1 if a firm reports four quarterly year-over-year increases to earnings during the fiscal year over the prior 2 years, zero otherwise. Firms that overstate earnings in violation of GAAP are more likely restate their earnings. *RESTATEMENT* is an indicator variable equal to one if the firm announces an adverse restatement in year *t*-2 to year *t*, and zero otherwise. Adverse restatements are those Audit Analytics classifies as adversely impacting the firm's financial statements, such as by decreasing net income or cash flows from operations. Earnings guidance has been suggested by CEOs as a key source of myopia (Dimon and Buffett 2018), and research has shown that a myopic focus on short-term earnings is associated with more frequent earnings guidance (Call et al. 2014; Brochet et al. 2015). *FREQ_GUIDANCE* is the number of quarters in year *t* that a firm issues quarterly earnings guidance. Myopic managers decrease research and

development expenditures to increase earnings (Bushee 1998; Roychowdhury 2006). Discretionary R&D expenses are calculated as the residual from regressing R&D expense scaled by total assets on the inverse of lagged assets, lagged sales scaled by lagged assets, and lagged *MTB*. Appendix A present detailed variable definitions.

Importantly, this vector of myopia measures captures considerable information about a firm. Although there is likely to be some component representing management's myopic focus on capital market expectations, there is also likely to be information representing earnings management activities, managerial ability, the information environment, and other firm characteristics that are separate from market-induced managerial myopia. Our goal is to examine the specific pressure imposed by capital markets that drive managers to have a short-term orientation in their decision-making (i.e., myopia). Therefore, we perform a factor analysis (FA) to decompose the above variables into a common factor that is likely to be associated with earnings myopia from public markets. Specifically, FA enables us to examine whether a latent construct exists in the data in such a way that correlates with our measures of earnings induced myopia as expected, isolate the myopia construct and other potential latent constructs, and remove the variation that is unrelated to earnings induced myopia (Allee et al. 2021).[12] We evaluate the results of the FA and identify the first factor as *MYOPIA,* representing our primary independent variable of interest in our takeover models. We discuss the factor analysis in further detail below.

3.2 Takeover Probability Model

[12] Allee et al. (2021) discuss the differences between factor analysis and principal components analysis (PCA). In summary, PCA imposes the existence of factors within the data and correlates variables with these factors (e.g. the factor is endogenous to the variables). Alternatively, factor analysis assumes each variable is endogenous to a potential factor within the data, allowing for a unique (residual) effect for each variable. PCA is used if all variables are different measures of the same construct, whereas factor analysis is used if observed variables are linked together by a latent construct in the data. In an untabulated analysis, results are consistent if we use a measure of *MYOPIA* from a PCA.

To test the association between PE takeover likelihood and earnings myopia we compare firms' likelihood of being acquired by PE buyers compared to both private strategic buyers and public buyers. Our takeover probability model is based on the findings of prior studies (e.g., Dietrich and Sorensen 1984; Palepu 1986; Ambrose and Megginson 1992; Cremers et al. 2009; Edmans et al. 2012). Specifically, we estimate the following equation using both a linear probability model and multinomial logistic regression:

$$TAKEOVER_{i,t+1} = \alpha_0 + \alpha_1 MYOPIA_{i,t} + \alpha_7 LONGTERM\_INVESTORS_{i,t} + \alpha_8 ANALYST\_COVERAGE_{i,t} + \alpha_9 SIZE_{i,t} + \alpha_{10} MTB_{i,t} + \alpha_9 LEVERAGE_{i,t} + YEAR\ FIXED\ EFFECTS + INDUSTRY\ FIXED\ EFFECTS + \varepsilon_{i,t} \quad (1)$$

where $TAKEOVER_{i,t+1}$ represents our various dependent variables capturing takeover by different buyer types, $TO\_PE_{,t+1}$, $TO\_STRAT_{,t+1}$, and $TO\_PUBLIC_{,t+1}$. $TO\_PE_{i,t+1}$ is an indicator variable that equals one if firm *i* receives a completed takeover bid from a PE buyer in fiscal year *t*+1, and zero otherwise. $TO\_STRAT_{i,t+1}$ is an indicator variable that equals one if firm *i* receives a completed takeover bid from a strategic (i.e., nonfinancial) private buyer in fiscal year *t*+1, and zero otherwise. $TO\_PUBLIC_{i,t+1}$ is an indicator variable that equals one if firm *i* receives a completed takeover bid from a public buyer not classified as a private financial or private strategic buyer in fiscal year *t*+1, and zero otherwise. We estimate both separate linear probability model regressions for these dependent variables and a multinomial logistic regression where the dependent variable is a categorical variable that equals one if $TO\_PE_{,t+1}$ is equal to one, two if $TO\_STRAT_{,t+1}$ is equal to one, and three if $TO\_PUBLIC_{,t+1}$ is equal to one, and zero otherwise.[13]

We expect a positive association between *MYOPIA* and takeover by PE buyers. We do

[13] We utilize a linear probability model because we utilize industry fixed effects as part of our analysis of the likelihood of a takeover. Fixed effects can cause issues with interpretation of coefficients in a non-linear model (e.g., the incidental parameters problem, Greene 2004). However, our results are not sensitive to this choice and we find similar results using a logistic regression.

not expect earnings myopia to necessarily attract takeover by private strategic buyers or public buyers. Although private strategic buyers remove public capital markets incentives from targets, we expect strategic buyers to be motivated by creating operational synergies (Bargeron et al. 2008; Gorbenko and Malenko 2014). Bargeron et al. (2008) and Gorbenko and Malenko (2014) find that private strategic acquirers pay higher premiums than both public buyers and PE buyers consistent with private strategic buyers being motivated by operational synergy gains that PE buyers cannot generate. Public buyers do not remove public capital market incentives because the target will continue operating as a subsidiary or division of a public firm. We include control variables based on findings of prior research (Dietrich and Sorensen 1984; Palepu 1986; Cremers et al. 2009; Edmans et al. 2012). In addition, we include year and industry fixed-effects in our regressions to control for factors that impact merger waves across time and industries.

4. Empirical Results

4.1 Univariate Analysis

Table 2 presents the distribution over our acquisition sample by year and the buyer type. PE buyouts occur throughout our sample period and have peaks in the late 1990s and in the mid-2000s. Private strategic buyers and public buyers follow a similar pattern. Table 3 presents descriptive statistics for the variables in our model by the buyer type.

We begin with a comparison of earnings myopia measures between PE and private strategic buyer transactions in Panel E of Table 3. Strategic buyers are private nonfinancial firms that we expect primarily acquire targets for strategic operational reasons that create synergies. We expect PE buyers to be most likely to select targets with myopic managers to create value by removing public capital market incentives. Focusing on our measures of managerial myopia, we find that firms acquired by PE buyers are more likely to have small positive earnings surprises,

more frequent strings of positive earnings increases, adverse restatements, and more frequent quarterly guidance. This comparison is consistent with managerial myopia being associated with PE buyouts compared to private strategic buyouts.

However, there are other important differences in the financial characteristics of targets between buyer types. Compared to strategic buyers, PE buyers are associated with buyouts of targets that have higher long-term institutional investors, higher analyst coverage, and higher market-to-book ratios. The median total assets with PE buyers is also significantly higher than with private strategic buyers. These differences are consistent with strategic buyers targeting smaller public firms that are lower priced, and potentially in distress, while PE buyers target larger mature public firms where they can use operating cash flows to cover debt costs and payouts (Bargeron et al. 2008).

4.2. Factor Analysis

Our goal is to identify a construct for earnings-induced myopic behavior by managers. Individual characteristics such as management earnings guidance, discretionary R&D, small positive earnings surprises, etc., are imperfect measures of this otherwise unobservable construct. Therefore, we use factor analysis to identify how our various measures of myopic behavior are linked together by a latent construct within the data (Thurstone 1947; Allee et al. 2021).[15] FA allows us to effectively combine the various measures of earnings myopia into an underlying construct that isolates the information most likely to identify earnings myopia, unrelated to other information contained in the individual proxies (e.g., earnings management from contractual incentives, management ability, and firm performance).

[15] The Bartlett test of sphericity for these earnings myopia variables rejects the null hypothesis that the variables are not inter-correlated ($p < 0.001$), suggesting that the data are appropriate for factor analysis (Bartlett 1951; Allee et al. 2021).

Table 4 reports the results of the factor analysis, displaying the correlation between the original five measures of earnings myopia and any correlation with an absolute value greater than 0.15.[16] First, we perform a parallel analysis to identify the factors that should be retained from our factor analysis. The parallel analysis compares the eigenvalues obtained using our dataset, compared to what would be expected from a corresponding set of random data. Those factors with eigenvalues greater than that of the random dataset are retained (Horn 1965; Zwick and Velicer 1986). Figure 1 displays the results of this analysis. We observe that the data generate two factors with eigenvalues greater than that of a random noise dataset, suggesting that these two components capture important information from the five original variables and warrant consideration.[17] The first identified factor is characterized by a strong positive correlation with the existence of small positive earnings surprises (*EARNINGS_SURPRISES*), a pattern of four consecutive year-over-year quarterly increases to earnings (*EARNINGS_INCREASE_STRINGS*), and the number of quarters in which management provides earnings guidance to capital market participants (*FREQ_GUIDANCE*), all consistent with an underlying construct reflecting management focusing on short-run earnings pressures. Additionally, the first component is negatively associated with the measure of discretionary R&D expenditures (*DISC_R&D*), consistent with limiting more uncertain investment that requires an immediate expense in order to meet short term earnings pressures (Bushee 1998; Roychowdhury 2006). As such, we label

[16] Following the suggestion of Hinson and Utke (2021), we use an oblique promax rotation. Oblique rotation allows, but does not force, correlation between factors, which is likely in accounting settings.

[17] Note that a PCA generates *n* factors for *n* variables with an average eigenvalue of 1 across all factors. As such, with PCA, researchers often retain factors with eigenvalues greater than 1.0 (i.e., the Kaiser criterion). However, eigenvalues from FA represent the variation explained by the underlying factor and do not necessarily average 1.0. Additionally, researchers have increasingly criticized the Kaiser criterion as a method for factor extraction (Bandalos and Boehm-Kaufman 2009), with Zwick and Velicer (1986) finding that parallel analysis is the most accurate method for factor retention. As such, we utilize the parallel analysis approach for factor retention. In an untabulated analysis using PCA, our first 2 factors, which load similarly to FA, both have eigenvalues greater than 1.

this component as *MYOPIA* to use in our takeover analyses.

Next, we retain the second factor produced from this analysis, though it explains less of the variance than the first factor and is associated with only one myopia measure. This factor retains a positive correlation with prior year adverse earnings restatements (*RESTATE*). Because this component is correlated with adverse financial restatements, we propose that this likely captures information related more specifically to GAAP earnings management within the firm and label the component *EM*. As we discuss in section 3, while earnings myopia and earnings management are related, it is the conceptual measure of managers' short-term orientation in their decision-making due to capital market pressure in which we are intending to capture. In other words, Factor 2 (*EM*) is useful in that it suggests that we can abstract away some of the information likely related to accruals management activities that do not necessarily exist due to short-term capital market pressures, but rather pressures potentially related to contracting on debt and compensation. We control for this measure in our primary specifications.

4.3 Probability of Takeover by Private Equity Buyers

In Table 5, we present results from estimating equation (1) using a linear probability model with the dependent variable being *TO_PE* (Columns 1 and 2), *TO_STRAT* (Columns 3 and 4), and *TO_PUBLIC* (Columns 5 and 6). Because industry fixed-effects absorb potentially important information regarding the determinants of a takeover, we exclude them from the odd-numbered columns. Columns 1 and 2 indicate that the *MYOPIA* measure is significantly positively associated with the probability of a takeover by a PE firm ($p<0.01$). This suggests that PE firms identify costs from foregone opportunities associated with managers' myopic focus on short-term earnings and generate returns by removing capital market pressures.

These results are also economically significant. For comparison, we consider the

unconditional probability of takeover by PE buyers, which is 1.0% (586 / 57,349) and focus on the coefficients in column 2. The coefficient on *MYOPIA* is 0.0045, indicating that a one standard deviation increase in *MYOPIA* is associated with an increase in takeover probability by PE buyers by 0.24% (0.5318 x 0.0045), which is a 24% (0.24% / 1.0%) increase relative to the unconditional takeover probability. The effect of *MYOPIA* also has a similar absolute magnitude to that for *MTB*, which is an important takeover determinant reflecting firms' valuation. A one standard deviation increase in *MTB* is associated with a decrease in takeover probability by PE buyers by 0.0033% (1.593 x -0.0021), which is a 33% (0.0033% / 1.0%) decrease relative to the unconditional takeover probability. Overall, earnings myopia is an economically significant determinant of PE takeover, suggesting that earnings myopia has considerable long-term costs that is driving firms to go private.

One concern in interpreting the above result is if earnings myopia is associated with target-specific factors that affect takeover probability (i.e., correlated omitted variables), such as financial distress. While measuring *MYOPIA* as a common factor associated with several characteristics of myopic behavior helps to identify information specific to myopic behavior, we further examine the association between *MYOPIA* and the probability of takeover by private strategic buyers. If there are factors correlated with earnings myopia that affect takeover by private buyers in general, then we should observe a similar association between *MYOPIA* and takeover by private strategic acquirers. However, in columns 3 and 4 we do not find evidence of earnings myopia increasing the likelihood of a takeover by strategic buyers. In fact, we find evidence that *MYOPIA* is negatively associated with the probability of a takeover by a private strategy buyer ($p<0.05$). This suggests that private strategic buyers are not targeting firms with higher earnings myopia as we would expect if there was an omitted variable correlated with

myopia that captured attractive takeover targets in general. Further, the results suggest that private strategic buyers avoid targets with higher earnings myopia, likely due to reduced strategic synergies as short-term focused managers cut investment to meet earnings goals. This result is also consistent with Stein's (1988) argument that managers myopically focus on earnings to deter takeover.

Importantly, control variables generally have the same coefficient signs between columns indicating that PE and private strategic buyouts have similarities among other dimensions. The coefficient on *MTB* is significantly negative for both buyers, consistent with more highly valued firms being less likely to be acquired because these firms are more likely to be overvalued (Cremers et al. 2009; Edmans et al. 2012). The coefficient on total assets is significantly negative in both panels, consistent with there being greater transaction costs to acquiring larger firms (Palepu 1986; Cremers et al. 2009). We also find that the coefficient on leverage is significantly positive for both buyers, consistent with Cremers et al. (2009) and potentially indicating that more distressed firms are more likely to become takeover targets because of their debt costs. Importantly, similar results among these economic fundamentals suggest that private strategic buyouts represent an adequate comparison group for PE buyouts to test the impact of earnings myopia. Finally, in columns 5 and 6, we examine the effect of *MYOPIA* on the likelihood of a takeover by a public buyer. Here, we fail to find a significant association between earnings myopia and the probability of a takeover by another public firm. This result is not unexpected as the capital market pressures are similar between both the buyer and the target.

In Table 6, we present results using a multinomial logit regression with the dependent variable capturing the probability of takeover by PE buyers, private strategic buyers, and public buyers. An advantage of this analysis is that the comparison group of non-takeover firm-years

(i.e., base group) for each of the takeover types includes exclusively non-takeover observations and the coefficients are jointly estimated. However, we cannot use high-order fixed effect structures within a multinomial logit due to the incidental parameters problem (Greene 2004).

We continue to find a consistent result that earnings myopia is significantly positively associated with the probability of takeover by PE buyers (column 1) and not private strategic buyers (column 2) nor public buyers (column 3). We also find the coefficient on *MYOPIA* in column 1 is significantly different from the coefficients in both column 2 and 3, with coefficient differences and chi-squared statistics presented at the bottom of the table. This result confirms that our findings are not due to fundamental economic factors that generally affect takeover.

4.4 Cross-sectional Analysis of Earnings Myopia and PE Takeover

Results suggest that PE buyers identify firms with managers myopically focused on short-term earnings goals rather than generating long-run value. To provide further support for this interpretation, we examine cross-sectional variation in the likely returns provided to PE firms that eliminate *MYOPIA* through a takeover. First, as previously discussed, a takeover is not the only method to reduce myopic behavior. For example, long-term oriented institutional investors can use their voice to enact change, reducing value-eroding myopic behavior (Bushee 1998; Brav et al. 2008; Klein and Zur 2009; Khurana et al. 2018). Therefore, if institutional investors identify myopia and respond by mitigating future myopic behavior through activism, then the residual returns to a PE takeover are likely to be limited. If this is the case, then we would expect a reduction to the relation between *MYOPIA* and PE takeover if the firm is owned by a significant percentage of long-term institutional investors (*LONGTERM_INST_PCT*).

Next, the firm's general governance mechanisms are likely to influence the returns to PE takeover. For example, conditioned on the existence of myopic behavior by managers, firms with

weaker governance are likely to permit greater value erosion through weaker monitoring, exacerbating the effects of myopia and creating greater returns to a takeover. To evaluate the general governance environment of a firm, we use BoardEx data to gather information regarding the size of a firm's board of directors (*BOARD_SIZE*). We expect governance quality to generally increase in the size of a firm's board, limiting the value provided by a takeover.

Table 7 presents the results of these cross-sectional analyses in our takeover probability model. Columns 1 and 2 include the interaction between *MYOPIA* and *LONGTERM_INST_PCT*. With this interaction, the coefficient *MYOPIA* presents the relation between myopic behavior and PE takeover as long-term institutional ownership approaches zero. The interaction coefficient indicates how the probability of takeover changes as long-term institutional ownership approaches one (100%). In both columns 1 and 2 the effect of *MYOPIA* is significantly positive, suggesting that when long-term institutional ownership approaches 0, PE buyers identify returns to eliminating capital market pressures. However, the interaction between *MYOPIA* and *LONGTERM_INST_PCT* is significantly negative, suggesting that as institutional investors identify returns to activism, the remaining returns to takeover are reduced. In other words, PE buyers target firms for takeover when traditional activism channels are less likely to be successful.

Next, columns 3 and 4 report the interaction between *MYOPIA* and *BOARD_SIZE*. With this interaction, the coefficient *MYOPIA* presents the relation between myopic behavior and PE takeover as board size gets smaller (approaching zero). The interaction coefficient indicates how the probability of takeover changes for each additional member of the board. We continue to find a significantly positive relation between *MYOPIA* and PE takeover when board size is small. However, as the firm's board gets larger (*MYOPIA*BOARD_SIZE*), it reduces takeover

likelihood. In other words, as a firm's general governance quality likely increases, PE firms identify more limited returns to takeover. Taken together, these results provide additional support for our primary inference that PE firms identify returns through eliminating myopia pressures that are otherwise less likely to be mitigated by shareholder governance channels.

4.5 Robustness – Analysis of Firm Performance

A key identifying assumption requires our myopia measure to be unrelated to an alternative characteristic that is also associated with PE takeover. In our primary analyses, we examine the relation between *MYOPIA* and takeover by other private buyers to confirm that our measure is not related to an unobserved characteristic that generates general takeover interest. Nevertheless, myopic behavior may be associated with short-term window dressing for poor-performing firms and this poor performance is the underlying driver of PE takeover. Therefore, as a robustness check, we control for firm-level total factor productivity (*TFP*) in our takeover model following the method introduced by Imrohoroglu and Tuzel (2014). Explicitly controlling for *TFP* enables us to capture the variation in a firm's ability to efficiently utilize productive assets (employees and capital) to produce goods and services. Furthermore, this measure does not rely on financial earnings, which can be manipulated by myopic managers. Table 8 presents the results of this analysis.[18]

In column 1, we report the effect of *MYOPIA* on probability of takeover by PE firms while controlling for *TFP*. *MYOPIA* continues to be positively associated with the likelihood of a takeover by PE ($p<0.01$). We also find that the coefficient on *TFP* is positive (column 1) though just below statistical significance at conventional levels. This result suggests that, on average, poor performance is not a significant driver of PE takeover. Next, in columns 2 and 3, we split

[18] The calculation of *TFP* requires additional variables that limit the sample size from our primary results. See Appendix A for further discussion of *TFP*.

the sample by above and below median *TFP* firm-years to evaluate how *MYOPIA* relates to takeover, conditioned on low versus high firm productivity. The results indicate that *MYOPIA* is only positively associated with the likelihood of takeover for firms that are highly productive (above median TFP firm-years). This suggests that PE buyers attempt to mitigate costs from myopic behavior by managers of otherwise *strong* performing firms. Therefore, they acquire firms where they can reduce myopic behavior and unleash the value of an otherwise productive firm. Alternatively, if managers of *poorly* performing firms exhibit earnings-induced myopia, PE buyers do not identify significant enough benefits from reducing these costs.

4.6 Takeover Premiums

We next examine the association between myopia and offer price premium in our sample of takeovers. Our dependent variable, *PREMIUM*, is calculated as the percentage difference between acquisition price per share and the target's four-week prior stock price. We measure earnings myopia using our factor measure of *MYOPIA* and, for ease of economic interpretation, we measure it separately as an indicator variable set equal to 1 for those firms with *MYOPIA* factors in the top quintile of our sample, 0 otherwise (*HIGH_MYOPIA*). We control for the original controls outlined in equation (1) and add an indicator variable for hostile acquisitions (*HOSTILE*), the overall deal value (*DEAL_VAL*), an indicator for a competing bid (*COMPETING*) and an indicator for a tender offer (*TENDER*).

The results of our OLS estimation are presented in Panel A of Table 9. Column 1 (2) reports the effect of *MYOPIA* (*HIGH_MYOPIA*) on acquisition premiums, with the coefficients positive and significant ($p < 0.05$).[20] In terms of economic magnitude, a firm in the top quintile of *MYOPIA* receives a 5.63 percent premium over market price by a PE firm. This result

[20] These tests result in a reduced sample from our primary analysis as data to construct *PREMIUM* and *MULTIPLE* are not available for all acquisitions.

suggests an economically significant inefficiency from earnings induced myopia (i.e., $\alpha \geq 0.0722$). Next, columns 3 through 6 repeat these analyses for private strategic and public takeovers. We see no significant effect of *MYOPIA* on premiums offered by private strategic buyers, consistent with strategic buyers not specifically identifying this as an arbitrage opportunity. We then find a negative effect of *MYOPIA* on premiums offered by public buyers ($p < 0.01$), consistent with public buyers discounting the effects of myopia compared to other takeover opportunities because they cannot eliminate capital market incentives.

Our theoretical intuition suggests that PE buyers pay a premium due to an alleviated inefficiency imputed into the market price. It does not, however, suggest that we should see PE firms identify generally higher intrinsic values associated with the operations of these firms (e.g., apply higher multiples of offer price to fundamentals). Therefore, in Table 9, Panel B, we repeat these analyses, but replace our dependent variable with the acquisition value over sales (*MULTIPLE*).[21] As expected, we find an insignificant relation between measures of earnings myopia and price multiples offered by PE buyers. We do, however, find a negative relation between *MYOPIA* and valuation for public buyers, as these firms are unable to alleviate market pressures and therefore assign a lower value to myopic takeover targets. Taken together, the results support hypothesis H3.

5. Additional Analyses

5.1 Post-Buyout Analysis

Our hypothesis development suggests that PE buyers select targets with higher earnings myopia to earn a return from reducing myopic decision-making, thereby increasing management's focus on generating long-run value. If this is descriptive, then we expect to

[21] Our model is the same as the *PREMIUMS* test, except we remove *DEAL_VALUE* as this is highly correlated with the numerator of *MULTIPLE*. Inferences are unchanged by this step.

observe a decrease in myopia and an increase in productivity following the buyout. A hurdle with such an analysis is that, by the very nature of being taken private, we are limited in the observations available for such an analysis. Still, following Harford and Kolasinski (2014) and Guo et al (2011), we can use Compustat to identify targets that issue post-buyout financial statements in SEC filings either because they continue to have public debt or subsequently have an IPO. Next, to limit potential biases associated with the unique nature of PE buyer's targets, we set up a generalized difference-in-differences analysis that is limited to firms that are ultimately acquired by PE (*PE_BUYER*). Therefore, the identification from this analysis relies on the staggered post buyout analysis of the effects of PE takeover *within* firms that are acquired by PE.[22] We estimate the following equation using OLS:

$$Y_{,t} = \beta_0 + \beta_1 POST \times PE\_BUYER_{i,t} + \beta_2 PE\_BUYER_{i,t} + \beta_3 SALES_{i,t} + \beta_3 SIZE_{i,t} + \beta_3 LEVERAGE_{i,t} + FIXED\ EFFECTS + \varepsilon_{i,t} \quad (2)$$

Where $Y_{,t}$ represents outcome variables that can be calculated using data from financial statements of private firms. We emphasize that, by the very nature of being taken private, some variables associated with *MYOPIA* are guaranteed to decrease (e.g., managers no longer issue earnings forecasts and there are no longer analyst forecasts to meet or beat). Still, we examine three measures that are likely to change as myopic behavior is decreased: discretionary R&D (*DISC_R&D*), an indicator variable for a GAAP loss (*LOSS_IND*) and the firms' overall GAAP earnings (*ROA*). Most importantly, we also examine the effect of PE takeover on firm's total factor productivity (*TFP*) to examine how a firm's productive use of resources changes following PE takeover. Our earlier analysis suggests that the relation between *MYOPIA* and PE

[22] For this first analysis, we broaden our sample to all available firm-year observations that are ultimately taken over by PE during our sample period. This therefore includes some firm-years that did not have a measure of *MYOPIA* available. In further analysis outlined in Table 10, Panel B, we limit the sample to those that have a pre-takeover measure of *MYOPIA* available.

takeover is concentrated among firms with above median productivity, suggesting the PE buyers target otherwise efficient firms that are suffering from costs associated with myopia. In other words, while these firms are generally productive, myopic behavior indicates that they are less productive than otherwise possible. Because we use a mix of private and public observations, we do not control for MTB, ownership structure, or analyst following. However, we add a measure of sales scaled by assets (*SALES*) to proxy for changing sales over time.[23] We control for firm and year fixed effects to mitigate the effect of time invariant unobservable firm characteristics and annual economic factors that affect all firms.

POST x PE_BUYER represents the post takeover change to these observable measures during our sample period. We report the effect of PE takeover on these measure in Table 10, Panel A. Because PE takeovers can also influence firm's size, leverage, and sales as part of the takeover strategy, we report *POST x PE_BUYER* in odd (even) columns (with)out control variables. Columns 1 through 6 indicate significant changes to measures associated with pre-takeover earnings myopia. Specifically, firms increase discretionary R&D, are more likely to report a GAAP loss, and report lower overall ROA following takeover. Next, columns 7 and 8 report a significant *increase* to *TFP* following takeover by PE. Thus, while GAAP profitability decreases following takeover, a firm's efficient use of employees and capital increases.

Finally, if myopic behavior creates an opportunity for PE buyers to increase productivity due the removal of capital market pressures, we expect the benefits to productivity to accrue primarily to PE takeovers of firms that were exhibiting more myopic behavior. Therefore, we next create a firm-level measure of takeover myopia that existed immediately prior to the

[23] Additionally, we slightly modify our measure of *DISC_R&D* so that the first stage model is endogenous to *SIZE* and *SALES*, rather than *MTB* as in our primary analyses. Controlling for *SALES* resolves potential biases associated with using a residual as a dependent variable (Chen, Hribar, and Melessa 2018).

acquisition year (*TO_MYOPIA*). We then interact this measure with *POST x PE_BUYER* to evaluate how TFP changes when a firm exhibited greater *TO_MYOPIA*. Table 10, Panel B, tabulates these results. We find that the increase to TFP accrues *more* to PE takeover targets that exhibited greater levels of myopic behavior prior to takeover.

5.2. Examining Individual Measures of Myopia

We draw our primary inferences from our measure, *MYOPIA*, identified through factor analysis. However, as an additional analysis, we estimate our takeover model for both PE and private strategic buyers examining each individual measure for myopia in Table 11, Panels A and B. This analysis is useful in that it 1) provides additional support for our main inferences, and 2) enables more meaningful interpretation of the economic magnitude of various measures of earnings myopia on takeover likelihood. For each panel, we alternate in our measures of earnings myopia (Columns 1 through 5). Then, in column 6 (7) we include all measures in the equation (including industry fixed-effects).

Consistent with the results above, the individual measures of earnings myopia indicate earnings myopia is positively associated with the likelihood of PE buyouts. Individually, all earnings myopia measured are statistically significant in the expected direction for the likelihood of a takeover by a PE buyer. Specifically, PE buyers are more likely to take over a firm that has a history of small positive earnings surprises (*EARNINGS_SURPRISES*), year-over-year increases to quarterly earnings (*EARNINGS_INCREASE_STRINGS*), more frequent management quarterly earnings guidance (*FREQ_GUIDANCE*), a history of adverse financial restatements (*RESTATEMENT*), and lower levels of discretionary R&D expenditures (*DISC_R&D*). When we include these variables together in columns 7 and 8, only *EARNINGS_INCREASE_STRINGS* becomes insignificant as it is likely subsumed by the other earnings myopia measures. Overall,

these results provide support for our main finding that PE buyers target firms with managers that make more earnings-related myopic decisions.

These results are also economically significant. For brevity, we focus on the coefficients in column 6. The coefficient on *EARNINGS_SURPRISES* is 0.0027 indicating that when a firm has at least one small positive quarterly earnings surprise this increases takeover probability by PE buyers by 0.27%, which is a 27% (0.27% / 1.0 %) increase relative to the unconditional takeover probability. The coefficient on *FREQ_GUIDANCE*, 0.0016, indicates that an increase from no guidance quarters to one quarter with guidance, the interquartile range, increases takeover probability by PE buyers by 0.16%, which is a 16% increase relative to the unconditional takeover probability. An adverse restatement announcement has a similar effect size increasing takeover probability by PE buyers by 33% (0.33% / 1.0%) relative to the unconditional probability. Lastly, an interquartile change in *DISC_R&D* (using non-takeover observations) is associated with a 0.08% (0.0616 x -0.0132 x 100) increase in takeover probability by PE buyers, which is an 8% (0.08% / 1.0%) increase relative to the unconditional probability.

Finally, we re-examine the likelihood of takeover by private strategic buyers in Panel B. We do not see evidence of earnings myopia increasing the likelihood of a takeover by strategic buyers. In some instances, we see opposite results, for example, firms with small positive earnings surprises (*EARNINGS_SURPRISES*) and a history of quarterly earnings increases (*EARNINGS_INCREASE_STRINGS*) are less likely to be acquired by a private strategic buyer. The negative association of these individual components with *TO_STRAT* is consistent with the assertion from our main analysis that there are potentially reduced strategic synergies as short-term focused managers divert resources to meet earnings goals.

6. Conclusion

We examine whether earnings-related myopic decision-making, or short-termism, by a manager increases a firm's likelihood of a PE buyout. To the extent that earnings myopia is driven by public capital market incentives then PE buyers can earn a return from increasing firm value by removing public capital market incentives through a buyout. Regulators and corporate executives have expressed concern about earnings myopia and prior literature suggests that it is costly to long-term firm value. Our findings suggest that the cost of earnings myopia and the potential gains from going private are substantial enough to induce private equity buyouts. Furthermore, we extend the earnings myopia literature by developing a measure using FA.

We find strong evidence that firms with higher earnings myopia have a significantly higher likelihood of takeover by PE buyers. As a comparison, we do not find evidence that firms with higher earnings myopia have a significantly higher likelihood of takeover by private strategic buyers or public buyers. We also find that the association between earnings myopia and private equity buyouts is greater when the potential takeover returns are lower because public firms have governance mechanisms that are likely to improve myopic firms. Furthermore, using a limited sample we find that firms decrease earnings myopia after PE buyouts. Finally, we find that PE buyers pay higher premiums to buy more myopic targets consistent with the returns to removing public capital market incentives increasing with myopia. Overall, our results suggest the cost of earnings myopia are substantial enough that they attract PE buyouts.

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Appendix A – Variable Descriptions	
TO_PE	An indicator set to 1 for the last firm-year observation prior to acquisition by a financial buyer. Financial buyers are identified as SDC acquisitions made by private financial buyers which perform either a go private, LPO, or MBO acquisition.
TO_STRAT	An indicator set to 1 for the last firm-year observation prior to acquisition by a strategic buyer. Strategic buyers are identified as SDC acquisitions made by private strategic buyers which perform either a go private, LPO, or MBO acquisition.
TO_PUBLIC	An indicator set to 1 for the last firm-year observation prior to acquisition by a buyer other than a financial or strategic buyer. These include all other mergers (M) and acquisition of assets (AA) identified by SDC.
MYOPIA	The first factor identified from our Exploratory Factor Analysis outlined in Table 4. MYOPIA is positively associated with small positive earnings surprises (EARNINGS_SURPRISES, quarterly strings of year-over-year earnings increases (EARNINGS_INCREASE_STRINGS) and negatively associated with discretionary R&D (DISC_R&D).
EM	The second factor identified from our Exploratory Factor Analysis outlined in Table 4. EM is only positively associated with adverse restatements (RESTATE) and is likely to be picking up earnings management activities due to other incentives or pressures. Alternatively, this measure may indicate poor general accounting quality resulting in earnings restatements.
LONGTERM_INST_PCT	Calculated as a firm's average annual ownership by institutions classified as dedicated and quasi-indexer less ownership by those classified as transient investors divided by common shares outstanding. Institutional ownership data retrieved from Thomson Reuters 13F filings. Classifications are based on Bushee (1998, 2001) and retrieved from Brian Bushee's personal website.

Appendix A – Variable Descriptions

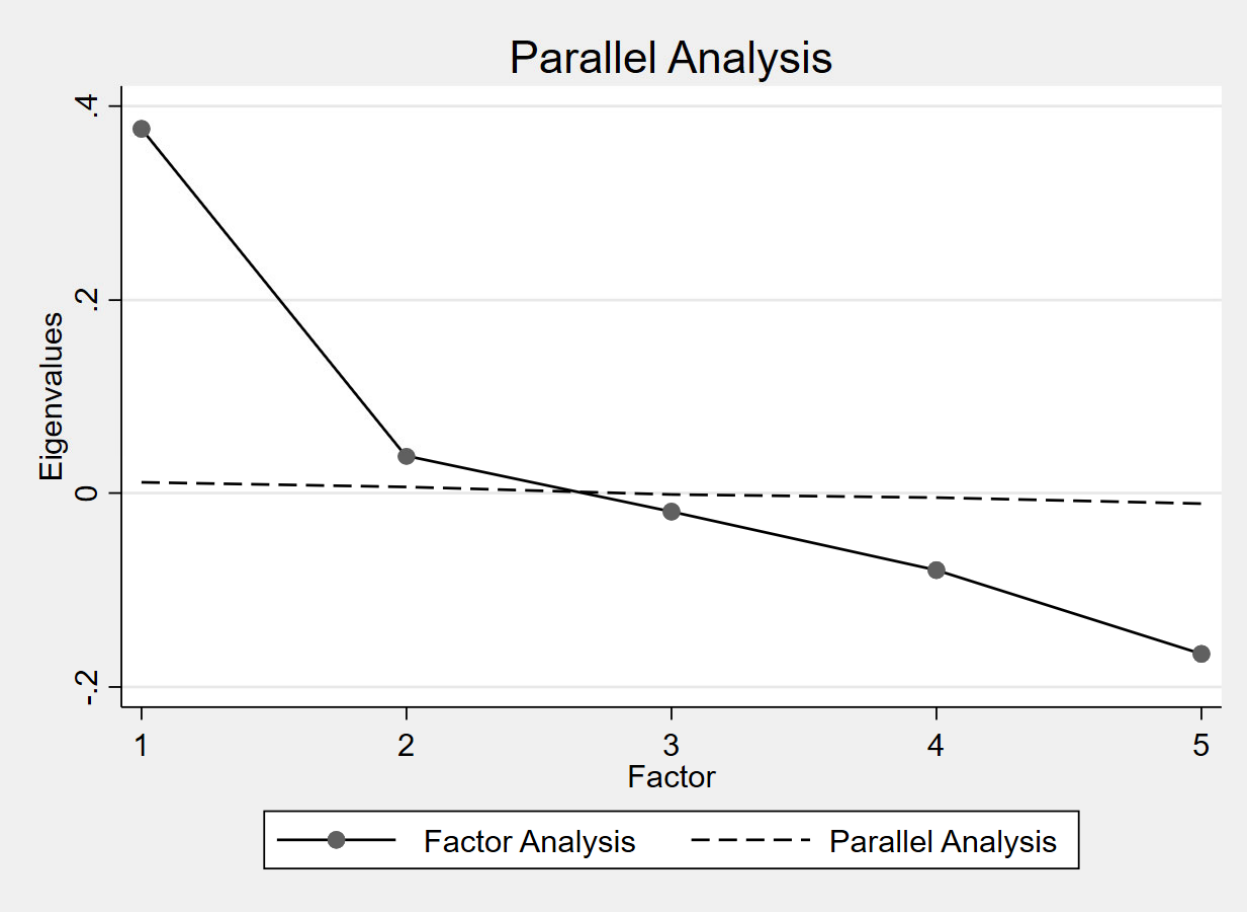
ANALYST_COV	Calculated as the log of total analysts covering a firm divided by the log of total assets: [log(1+Num_analysts)/log(1+ASSETS)]. Num_analysts is the annual number of unique analysts providing EPS forecasts for the firm. Analyst information retrieved from IBES. ASSETS is defined below.
EARNINGS_SURPRISES	An indicator variable equal to 1 if a firm reports at least one small positive quarterly earnings surprise over the current and prior two years (SPES_PRIOR2YR, defined below), 0 otherwise.
SPES_PRIOR2YR	The number of small positive quarterly earnings surprises over the current and prior two years. A small positive earnings surprise is identified by a quarterly EPS beat (0,1] over consensus forecasts. Data retrieved from IBES.
EARNINGS_INCREASE_STRINGS	An indicator variable equal to 1 if a firm reports four consecutive quarters of year-over-year earnings increases during fiscal years [*t*-1, *t*-2]. We do not include the current year as this may not always allow for four quarters of observations.
RESTATEMENT	The number of adverse financial restatements recorded over the current and prior 2 years. Data retrieved from Audit Analytics.
FREQ_GUIDANCE	Number of quarters per year that a firm issues quarterly earnings guidance values. Retrieved from IBES Guidance Detail file beginning 1993.
DISC_R&D	Discretionary R&D expenses calculated following Roychowdhury (2006) as the residual from the regression of R&D expense (Compustat: XRD) scaled by assets (Compustat: AT) on the inverse of one year lagged assets, one year lagged sales (Compustat: REVT) scaled by lagged assets, and one year lagged MTB, defined below. Regressions are run by year and industry.

Appendix A – Variable Descriptions

MTB	Calculated a market value of equity (Compustat: CSHO*PRCC_F) plus total liabilities (Compust: LT) divided by total assets (Compust: AT).
SIZE	The log of total assets (Compustat: AT).
LEVERAGE	Calculated as total long-term debt (Compustat: DLTT) divided by total assets (Compustat: AT).
SALES	Calculated as revenue (Compustat: REVT) divided by total assets (Compustat: AT).
PREMIUM	The percentage difference between acquisition offer price per share and the 4 week prior stock price (SDC Platinum).
MULTIPLE	The acquisition deal value divided by sales (SDC Platinum).
HOSTILE	An indicator variable equal to 1 when an acquisition is considered hostile (SDC Platinum)
DEAL_VALUE	The total value of an acquisition (SDC Platinum).
TOEHOLD	The percentage of acquirer's ownership prior to acquisition (SDC Platinum).
COMPETING	An indicator variable equal to 1 when an acquisition has competing bids (SDC Platinum).
TENDER	An indicator variable equal to 1 for tender offers (SDC Platinum).
PE_BUYER	A firm-level indicator variable for public firms that are targeted for takeover by a financial buyer. Financial buyers are identified as SDC acquisitions made by private financial buyers which perform either a go private, LPO, or MBO acquisition.

Appendix A – Variable Descriptions	
LOSS_IND	An indicator variable for firm-years in which a firm reports negative net income (Compustat: NI).
ROA	The measure of a firm's net income divided by lagged total assets (Computat: NI, AT).
TO_MYOPIA	A firm-level measure of MYOPIA captured immediately prior to the takeover by a PE buyer.
TFP	A measure, in log form, of the effectiveness with which capital and labor are utilized in the firm's production process. This is measured for each firm on an annual basis and controls for the effect of time and industry using a semiparametric procedure to estimate the parameters from a firm's production function using property, plant, and equipment (capital) and number of employees (labor) as inputs to a firm's sales. Imrohoroglu and Tuzel (2014) share the code to calculate this variable on Professor Tuzel's personal website at https://sites.google.com/usc.edu/selale-tuzel/home?authuser=2. To calculate firm-level TFP, we use data from Compustat, supplemented with the price index for gross domestic product (GDP) as a deflator for firm sales (Bureau of Economic Analysis), the price index for private fixed investment as a deflator for capital (Bureau of Economic Analysis), and the national average wage index from the Social Security Administration.

Figure 1
Parallel Analysis for Factor Retention from Exploratory Factor Analysis



Notes to Figure 1:
This figure represents the parallel analysis performed to determine the number of factors to retain from our factor analysis. This analysis creates a random dataset with the same number of observations and variables as our original data. A correlation matrix is then computed from the randomly generated data and the eigenvalues of this correlation matrix are computed. If the eigenvalues from the random dataset are larger than the eigenvalues from our factor analysis, we observe these as random noise and exclude from further analysis (see Hayton, Allen, and Scarpello 2004).

Table 1
Sample Selection for Multivariate Regressions

Panel A: Sample Selection for Takeover Analysis	Firm-Years	Acquisition-Years
Compustat NA Public Firm-Years Between 1998-2017	92,665	5,531
Not Missing Compustat Variables	86,902	5,251
Not Missing Management Earnings Guidance	77,347	4,723
Not Missing IBES Earnings Forecasts	60,702	3,820
Not Missing Audit Analytics Adverse Restatements	57,349	3,296

Notes to Table 1:
This table presents the sample selection procedure.

Table 2
Acquisition Frequency by Year and Buyer Type

Year of Acquisition Completion	Private Equity Buyers	Private Strategic Buyers	Public Buyers	Total
1999	5	5	39	49
2000	28	27	239	294
2001	8	30	163	201
2002	15	21	88	124
2003	33	23	111	167
2004	14	7	111	132
2005	34	13	131	178
2006	56	19	133	208
2007	63	25	150	238
2008	30	25	121	176
2009	18	14	85	117
2010	34	21	125	180
2011	34	13	113	160
2012	39	16	101	156
2013	30	18	90	138
2014	20	6	97	123
2015	23	12	135	170
2016	28	17	112	157
2017	33	10	97	140
2018	41	14	133	188
Total	586	336	2374	3296

Notes to Table 2:
This table presents the frequency distribution of acquisitions by completion year and buyer type.

Table 3
Descriptive Statistics by Buyer Type

Panel A: Private Equity Buyouts

Variable	Obs	Mean	Median	Std. Dev.	25%	75%
LONGTERM_INST_PCT	586	0.2494	0.1989	0.2511	0.0000	0.4348
ANALYST_COV	586	0.2882	0.3059	0.1318	0.2105	0.3796
EARNINGS_SURPRISES	586	0.6075	1.0000	0.4887	0.0000	1.0000
EARNINGS_INCREASE_STRINGS	586	0.2577	0.0000	0.4377	0.0000	1.0000
RESTATEMENT	586	0.2389	0.0000	0.5073	0.0000	0.0000
FREQ_GUIDANCE	586	0.9693	0.0000	1.5456	0.0000	1.0000
DISC_R&D	586	-0.0209	-0.0127	0.0702	-0.0694	-0.0021
MTB	586	1.5659	1.2885	0.9099	1.0446	1.7385
SIZE	586	1769.2380	443.9855	6121.5370	153.0060	1346.1300
LEVERAGE	586	0.2140	0.1612	0.2266	0.0000	0.3596

Panel B: Private Strategic Buyouts

Variable	Obs	Mean	Median	Std. Dev.	25%	75%
LONGTERM_INST_PCT	336	0.1770	0.1155	0.2105	0.0009	0.3023
ANALYST_COV	336	0.2320	0.2461	0.1479	0.1374	0.3376
EARNINGS_SURPRISES	336	0.4196	0.0000	0.4942	0.0000	1.0000
EARNINGS_INCREASE_STRINGS	336	0.1696	0.0000	0.3758	0.0000	0.0000
RESTATEMENT	336	0.1905	0.0000	0.4499	0.0000	0.0000
FREQ_GUIDANCE	336	0.4554	0.0000	1.1135	0.0000	0.0000
DISC_R&D	336	-0.0134	-0.0119	0.0968	-0.0739	-0.0014
MTB	336	1.3006	1.0619	0.8664	0.8844	1.4084
SIZE	336	1631.1550	200.6445	7077.0460	84.3345	678.8980
LEVERAGE	336	0.1973	0.1085	0.2335	0.0000	0.3414

Panel C: Public Buyouts

Variable	Obs	Mean	Median	Std. Dev.	25%	75%
LONGTERM_INST_PCT	2,374	0.2317	0.2126	0.2441	0.0351	0.4051
ANALYST_COV	2,374	0.3066	0.3166	0.1350	0.2357	0.3940
EARNINGS_SURPRISES	2,374	0.6234	1.0000	0.4846	0.0000	1.0000
EARNINGS_INCREASE_STRINGS	2,374	0.2346	0.0000	0.4239	0.0000	0.0000
RESTATEMENT	2,374	0.1681	0.0000	0.4276	0.0000	0.0000
FREQ_GUIDANCE	2,374	0.6917	0.0000	1.3206	0.0000	1.0000
DISC_R&D	2,374	0.0087	-0.0069	0.1084	-0.0406	0.0207
MTB	2,374	1.8564	1.3745	1.4725	1.0599	2.0848
SIZE	2,374	6306.1610	506.0390	48529.4100	123.1700	1952.4880

Panel D: Non-Takeover Observations

Variable	Obs	Mean	Median	Std. Dev.	25%	75%
LONGTERM_INST_PCT	54,054	0.2316	0.1914	0.2517	0.0000	0.4176
ANALYST_COV	54,054	0.2896	0.3015	0.1297	0.2235	0.3724
EARNINGS_SURPRISES	54,054	0.5684	1.0000	0.4953	0.0000	1.0000
EARNINGS_INCREASE_STRINGS	54,054	0.2460	0.0000	0.4307	0.0000	0.0000
RESTATEMENT	54,054	0.1584	0.0000	0.4133	0.0000	0.0000
FREQ_GUIDANCE	54,054	0.7213	0.0000	1.3395	0.0000	1.0000
DISC_R&D	54,054	-0.0057	-0.0097	0.1045	-0.0608	-0.0008
MTB	54,054	1.9374	1.3905	1.5930	1.0571	2.1449
SIZE	54,054	8561.9770	764.2515	62479.2400	183.6690	3047.0710
LEVERAGE	54,054	0.1879	0.1240	0.2060	0.0049	0.3043

Panel E: Univariate Comparison

	PE Buyouts		Strategic Buyouts		Difference	
Variable	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
EARNINGS_SURPRISES	0.6075	1.0000	0.4196	0.0000	0.1879***	1.0000***
					(5.59)	(5.51)
EARNINGS_INCREASE_STRINGS	0.2577	0.0000	0.1696	0.0000	0.0881***	0.0000***
					(3.09)	(3.08)
RESTATEMENT	0.2389	0.0000	0.1905	0.0000	0.0484	0.0000
					(1.45)	(1.42)
FREQ_GUIDANCE	0.9693	0.0000	0.4554	0.0000	0.5139***	0.0000***
					(5.35)	(5.16)
DISC_R&D	-0.0209	-0.0127	-0.0134	-0.0119	-0.0075	-0.0008
					(1.35)	(0.94)
LONGTERM_PCT	0.2494	0.1989	0.177	0.1155	0.0724***	0.0834***
					(4.46)	(3.78)
ANALYST_COV	0.2882	0.3059	0.2320	0.2461	0.0562***	0.0598***
					(5.96)	(6.05)
MTB	1.5659	1.2885	1.3006	1.0619	0.2653***	0.2266***
					(4.33)	(7.00)
SIZE	1769.2380	443.9855	1631.1550	200.6445	138.0830	243.3410***
					(0.31)	(5.87)
LEVERAGE	0.2140	0.1612	0.1973	0.1085	0.0167	0.0527
					(1.06)	(1.19)

Notes to Table 3:
This table reports descriptive statistics for variables used in our models for PE acquisitions (Panel A), private strategic acquisitions (Panel B), public acquisitions (Panel C), and non-takeover firm-year observations (Panel D). Panel E presents a comparison of descriptive statistics for PE acquisitions versus private strategic acquisitions and tests the difference between means and medians. T-statistics are presented in parenthesis. *, **, and *** denote two-tailed statistical significance at 10%, 5%, and 1%, respectively.

Table 4
Factor Analysis, Displaying > |0.15| Correlation

Variable	[Factor 1] MYOPIA	[Factor 2] EM	Uniqueness
EARNINGS_SURPRISES	0.3899		0.8475
EARNINGS_INCREASE_STRINGS	0.2557		0.9334
FREQ_GUIDANCE	0.3397		0.8845
RESTATE		0.1618	0.9696
DISC_R&D	-0.2002		0.9501
Variance (Eigenvalue)	0.3766	0.0384	

Notes to Table 4:
This table reports the results from a factor analysis of the five earnings myopia measures. Correlation coefficients between the individual earnings myopia measures and the components, with an absolute value greater than 0.15, are presented on top. Presented on the bottom row is the Eigenvalue for each factor. Factors with Eigenvalues greater than that of random noise (from the parallel analysis in Figure 1) are retained from the factor analysis.

Table 5
LPM Prediction of Takeover

VARIABLES	(1) *TO_PE*	(2) *TO_PE*	(3) *TO_STRAT*	(4) *TO_STRAT*	(5) *TO_PUBLIC*	(6) *TO_PUBLIC*
MYOPIA	**0.0058*** **	**0.0045*** **	**-0.0014** **	**-0.0016** **	**-0.0012**	**0.0023**
	(6.28)	**(4.65)**	**(-2.23)**	**(-2.43)**	**(-0.70)**	**(1.29)**
EM	0.0098***	0.0088***	0.0025	0.0023	-0.0080*	0.0015
	(3.91)	(3.32)	(1.37)	(1.17)	(-1.75)	(0.31)
LONGTERM_INST	0.0009	0.0000	0.0011	0.0017	0.0111***	0.0167***
	(0.41)	(0.00)	(0.88)	(1.27)	(2.77)	(4.04)
ANALYST_COV	0.0043	-0.0022	-0.0096***	-0.0086**	0.0617***	0.0569***
	(1.25)	(-0.57)	(-3.03)	(-2.54)	(8.21)	(7.23)
MTB	-0.0020***	-0.0021***	-0.0017***	-0.0016***	-0.0051***	-0.0056***
	(-9.56)	(-9.71)	(-9.71)	(-9.34)	(-9.07)	(-9.83)
SIZE	-0.0027***	-0.0019***	-0.0019***	-0.0020***	-0.0045***	-0.0049***
	(-12.10)	(-7.55)	(-10.12)	(-9.49)	(-9.40)	(-9.26)
LEVERAGE	0.0112***	0.0118***	0.0038*	0.0035*	-0.0050	0.0011
	(4.88)	(4.90)	(1.93)	(1.74)	(-1.20)	(0.25)
Constant	0.0283***	0.0252***	0.0235***	0.0237***	0.0613***	0.0644***
	(14.54)	(13.08)	(12.85)	(12.81)	(15.86)	(16.36)
Observations	57,349	57,349	57,349	57,349	57,349	57,349
Adj. R-squared	0.005	0.007	0.005	0.005	0.006	0.010
Year FE	Y	Y	Y	Y	Y	Y
Industry FE	N	Y	N	Y	N	Y
Cluster	Firm	Firm	Firm	Firm	Firm	Firm

Notes to Table 5:
This table reports the results of a linear probability model testing the association between earnings myopia and probability of takeover by a PE buyer (columns 1 and 2), a private strategic buyer (columns 3 and 4), and a public buyer (columns 5 and 6). The dependent variable in columns 1 and 2 is an indicator variable that equals one if firm *i* receives a completed takeover bid from a PE buyer in fiscal year *t*+1, and zero otherwise. The dependent variable in columns 3 and 4 is an indicator variable that equals one if firm *i* receives a completed takeover bid from a strategic private buyer in fiscal year *t*+1, and zero otherwise. The dependent variable in columns 5 and 6 is an indicator variable that equals one if firm *i* receives a completed takeover bid from a public buyer in fiscal year *t*+1, and zero otherwise. Standard errors used to calculate t-statistics, presented in parentheses, are White adjusted and clustered by firm. Variable definitions are presented in Appendix A. *, **, and *** denote two-tailed statistical significance at 10%, 5%, and 1%, respectively.

Table 6
Multinomial Logit Prediction of Takeover

VARIABLES	(1) *TO_PE*	*MFX*	(2) *TO_STRAT*	*MFX*	(3) *TO_PUBLIC*	*MFX*
MYOPIA	0.5288***	**0.0053*** **	-0.2323*	**-0.0014***	0.0115	**-0.0003**
	(6.35)		(-1.91)		(0.28)	
EM	1.0843***	0.0109***	0.3972	0.0022	-0.2199*	-0.0093*
	(5.66)		(1.46)		(-1.82)	
LONGTERM_INST	0.5130***	0.0050***	0.3606**	0.0019*	0.2802***	0.0107***
	(3.23)		(2.03)		(3.15)	
ANALYST_COV	0.8733***	0.0082**	-0.2608	-0.0020	1.3926***	0.0547***
	(2.61)		(-0.64)		(7.65)	
MTB	-0.3336***	-0.0032***	-0.7544***	-0.0043***	-0.1225***	-0.0044***
	(-6.83)		(-5.81)		(-6.73)	
SIZE	-0.2807***	-0.0027***	-0.3828***	-0.0022***	-0.1248***	-0.0047***
	(-12.31)		(-10.84)		(-9.60)	
LEVERAGE	1.0726***	0.0107***	0.9453***	0.0054***	-0.0384	-0.0023
	(5.49)		(3.12)		(-0.34)	
Constant	-2.7954***		-1.8107***		-2.5605***	
	(-16.20)		(-7.31)		(-25.55)	
Test: MYOPIA Column 1 = Column 2 (3)			**0.7611*** [32.02]**		**0.5173*** [27.55]**	
Observations	57,350		57,350		57,350	
Fixed Effects	Year		Year		Year	
Cluster	Firm		Firm		Firm	

Notes to Table 6:
This table reports the results of testing the association between earnings myopia and probability of takeover by a PE buyer vs. a private strategic buyer vs. a public buyer using multinomial logistic regression. The dependent variable is a categorical variable that equals one if firm *i* receives a completed takeover bid from a PE buyer in fiscal year *t*+1, two if firm *i* receives a completed takeover bid from a strategic private buyer in fiscal year *t*+1, three if firm *i* receives a completed takeover bid from a public buyer in fiscal year *t*+1, and zero otherwise. Standard errors used to calculate z-statistics, presented in parentheses, are White adjusted and clustered by firm. Marginal effects coefficients are reported to the right of each column. Chi-squares from tests of the difference between Columns 1 and 2 (3) are reported in brackets. Variable definitions are presented in Appendix A. *, **, and *** denote two-tailed statistical significance at 10%, 5%, and 1%, respectively.

Table 7
Cross-sectional Analysis: LPM Prediction of Takeover

VARIABLES	(1) *TO_PE*	(2) *TO_PE*	(3) *TO_PE*	(4) *TO_PE*
MYOPIA	0.0086***	0.0075***	0.0103***	0.0092***
	(7.19)	(5.95)	(4.37)	(3.80)
MYOPIA*LONGTERM_INST	**-0.0125*** **	**-0.0134*** **		
	(-3.64)	**(-3.90)**		
LONGTERM_INST	0.0018	0.0007		
	(0.78)	(0.28)		
MYOPIA*BOARD_SIZE			**-0.0007*** **	**-0.0008*** **
			(-2.80)	**(-2.88)**
BOARD_SIZE			0.0001	0.0002
			(0.40)	(1.06)
ANALYST_COV	0.0020	-0.0049	0.0065	-0.0001
	(0.58)	(-1.29)	(1.50)	(-0.02)
MTB	-0.0021***	-0.0022***	-0.0019***	-0.0020***
	(-10.28)	(-10.21)	(-7.17)	(-7.22)
SIZE	-0.0028***	-0.0019***	-0.0023***	-0.0018***
	(-12.21)	(-7.54)	(-8.17)	(-6.11)
LEVERAGE	0.0118***	0.0121***	0.0104***	0.0109***
	(5.14)	(5.01)	(4.22)	(4.18)
Constant	0.0297***	0.0263***	0.0241***	0.0219***
	(14.89)	(13.35)	(10.64)	(9.65)
Observations	57,349	57,349	44,301	44,301
Adj. R-squared	0.005	0.007	0.005	0.007
Year FE	Y	Y	Y	Y
Industry FE	N	Y	N	Y
Cluster	Firm	Firm	Firm	Firm

Notes to Table 7:
This table reports the results of a linear probability model testing whether the association between earnings myopia and probability of takeover by a PE buyer is lower when firms have greater monitoring. The dependent variable is an indicator variable that equals one if firm *i* receives a completed takeover bid from a PE buyer in fiscal year *t*+1, and zero otherwise. Standard errors used to calculate t-statistics, presented in parentheses, are White adjusted and clustered by firm. Variable definitions are presented in Appendix A. *, **, and *** denote two-tailed statistical significance at 10%, 5%, and 1%, respectively.

Table 8
LPM Prediction of Takeover – Total Factor Productivity

VARIABLES	(1) *TO_PE*	(2) *TO_PE* [LOW TFP]	(3) *TO_PE* [HIGH TFP]
MYOPIA	**0.0052*** **	**0.0023**	**0.0074*** **
	(3.55)	**(1.04)**	**(3.75)**
EM	0.0033	0.0010	0.0037
	(0.82)	(0.18)	(0.61)
LONGTERM_INST	-0.0078**	0.0009	-0.0173***
	(-2.16)	(0.17)	(-3.30)
ANALYST_COV	-0.0050	0.0038	-0.0195*
	(-0.74)	(0.42)	(-1.72)
MTB	-0.0028***	-0.0034***	-0.0019***
	(-6.78)	(-4.68)	(-3.63)
SIZE	-0.0033***	-0.0029***	-0.0034***
	(-7.57)	(-3.81)	(-6.01)
LEVERAGE	0.0177***	0.0102*	0.0249***
	(4.13)	(1.66)	(4.14)
TFP	0.0018	0.0041**	-0.0049**
	(1.53)	(2.02)	(-2.30)
Constant	0.0408***	0.0382***	0.0450***
	(10.77)	(7.30)	(7.40)
Test: MYOPIA Column 2 = Column 3		**0.0051*** **[2.95]**	
Observations	32,140	16,071	16,069
R-squared	0.009	0.007	0.014
Year FE	Y	Y	Y
Industry FE	Y	Y	Y
Cluster	Firm	Firm	Firm

Notes to Table 8:
This table reports the results of a linear probability model testing the association between earnings myopia and probability of takeover by a PE buyer after controlling for total factor productivity (*TFP*). The dependent variable is an indicator variable that equals one if firm *i* receives a completed takeover bid from a PE buyer in fiscal year *t*+1, and zero otherwise. Columns 2 and 3 report results of analysis split by below (column 2) and above (column 3) median *TFP*. Standard errors used to calculate t-statistics, presented in parentheses, are White adjusted and clustered by firm. Chi-squares from tests of the difference between Columns 2 and 3 are reported in brackets. Variable definitions are presented in Appendix A. *, **, and *** denote two-tailed statistical significance at 10%, 5%, and 1%, respectively.

Table 9
Association between Takeover Premiums and Earnings Myopia
Panel A: Takeover Premiums

	TO_PE = 1		*TO_STRAT* = 1		*TO_PUBLIC* = 1	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	*PREMIUM*	*PREMIUM*	*PREMIUM*	*PREMIUM*	*PREMIUM*	*PREMIUM*
MYOPIA	**0.0518****		**-0.0125**		**-0.0979*****	
	(2.06)		**(-0.29)**		**(-3.48)**	
HIGH_MYOPIA(0/1)		**0.0680****		**-0.0276**		**-0.0563****
		(2.21)		**(-0.41)**		**(-2.15)**
EM	-0.0495	-0.0570	0.1385	0.1384	-0.0763	-0.0559
	(-0.76)	(-0.88)	(0.73)	(0.73)	(-1.63)	(-1.14)
LONGTERM_INST	-0.1518***	-0.1576***	0.0699	0.0725	-0.0673	-0.0707
	(-2.75)	(-2.83)	(0.42)	(0.43)	(-1.15)	(-1.18)
ANALYST_COV	-0.0936	-0.0695	-0.1940	-0.1930	0.2087**	0.1547*
	(-0.44)	(-0.33)	(-0.80)	(-0.78)	(2.74)	(1.86)
MTB	-0.0600***	-0.0621***	0.0196	0.0193	-0.0411**	-0.0382**
	(-2.97)	(-3.15)	(0.52)	(0.51)	(-2.86)	(-2.68)
SIZE	-0.0703***	-0.0692***	-0.0427	-0.0433	-0.0595***	-0.0663***
	(-4.72)	(-4.82)	(-1.13)	(-1.16)	(-5.43)	(-5.45)
LEVERAGE	0.2377***	0.2350***	0.5371**	0.5404**	0.0960*	0.1098*
	(3.89)	(3.98)	(2.23)	(2.23)	(1.80)	(1.92)
HOSTILE(0/1)	0.1731**	0.1820**	-0.1114	-0.1091	0.2905**	0.2728**
	(2.41)	(2.58)	(-0.39)	(-0.38)	(2.16)	(2.10)
DEAL_VAL	0.0000**	0.0000**	0.0000	0.0000	0.0000***	0.0000***
	(2.33)	(2.31)	(0.22)	(0.25)	(4.18)	(4.43)
TOEHOLD	0.9714**	0.9608**	-0.3930	-0.3869	-0.3685**	-0.3383**
	(2.17)	(2.12)	(-1.06)	(-1.02)	(-2.55)	(-2.29)
COMPETING	0.0101	0.0109	0.2774	0.2780	0.1597***	0.1528***
	(0.13)	(0.15)	(1.33)	(1.33)	(3.30)	(3.16)
TENDER	0.1010*	0.0974*	-0.1444	-0.1422	0.1333***	0.1404***
	(1.79)	(1.73)	(-1.66)	(-1.61)	(3.86)	(4.16)
Constant	0.8484***	0.8271***	0.5450**	0.5511**	0.7540***	0.8138***
	(9.38)	(9.50)	(2.63)	(2.66)	(9.55)	(9.39)
Observations	468	468	203	203	1,971	1,971
Takeover Sample	PE	PE	STRAT	STRAT	PUBLIC	PUBLIC
Adj. R-squared	0.094	0.096	0.033	0.033	0.131	0.123
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Year	Year	Year	Year	Year	Year

Table 9 (continued)
Panel B: Acquisition Offer Price Multiple of Sales Revenue

	TO_PE = 1		*TO_STRAT* = 1		*TO_PUBLIC* = 1	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	*MULTIPLE*	*MULTIPLE*	*MULTIPLE*	*MULTIPLE*	*MULTIPLE*	*MULTIPLE*
MYOPIA	**-0.1418**		**-0.0764**		**-0.2008**	
	(-0.82)		**(-0.16)**		**(-1.51)**	
HIGH_MYOPIA(0/1)		**0.0440**		**-0.6080**		**-0.1943***
		(0.24)		**(-1.10)**		**(-1.78)**
EM	-1.0935***	-0.9984***	-0.1568	-0.2115	-0.8024*	-0.7749*
	(-3.30)	(-2.99)	(-0.19)	(-0.24)	(-2.08)	(-2.01)
LONGTERM_INST	-0.1837	-0.1789	-0.5477	-0.4634	-0.0886	-0.0863
	(-0.61)	(-0.57)	(-0.53)	(-0.45)	(-0.30)	(-0.29)
ANALYST_COV	0.9085	0.6419	-0.4215	-0.2941	1.9803***	1.8947***
	(1.40)	(1.15)	(-0.35)	(-0.24)	(3.73)	(3.62)
MTB	1.0237***	1.0208***	1.1382***	1.1300***	1.0868***	1.0935***
	(6.76)	(6.48)	(6.00)	(5.73)	(12.22)	(12.29)
SIZE	0.1416**	0.1251*	0.3720**	0.3840**	0.1355***	0.1279***
	(2.09)	(1.97)	(2.14)	(2.35)	(3.05)	(2.97)
LEVERAGE	-0.4863	-0.4844	-0.6169	-0.5562	-1.2941***	-1.2820***
	(-1.53)	(-1.50)	(-0.49)	(-0.42)	(-4.30)	(-4.23)
HOSTILE(0/1)	-1.4117***	-1.3203***	-0.6198	-0.6814	-0.0627	-0.0963
	(-5.12)	(-5.02)	(-0.79)	(-0.91)	(-0.15)	(-0.23)
TOEHOLD	0.2395	0.2267	1.2218	1.4352	-1.1109	-1.0716
	(0.20)	(0.19)	(0.56)	(0.66)	(-1.17)	(-1.13)
COMPETING	-0.1028	-0.1003	-0.4740	-0.4987	-0.3134	-0.3267*
	(-0.26)	(-0.25)	(-1.36)	(-1.52)	(-1.68)	(-1.75)
TENDER	-0.3375	-0.3309	0.2733	0.3236	-0.0037	0.0086
	(-1.43)	(-1.38)	(0.72)	(0.85)	(-0.03)	(0.06)
Constant	-0.5837	-0.4331	-1.2810	-1.3242**	0.1383	0.2305
	(-1.13)	(-0.95)	(-1.58)	(-2.22)	(0.35)	(0.59)
Observations	481	481	217	217	2,063	2,063
Takeover Sample	PE	PE	STRAT	STRAT	PUBLIC	PUBLIC
Adj. R-squared	0.518	0.517	0.383	0.388	0.471	0.471
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Year	Year	Year	Year	Year	Year

Notes to Table 9:
This table reports the results of testing the association between earnings myopia and both the offer premium (Panel A) and offer price as a multiple of sales revenue (Panel B). The sample includes completed acquisitions by PE buyers (column 1 and 2), private strategic buyers (column 3 and 4), and public buyers (columns 5 and 6). *PREMIUM* is calculated as the percentage difference between acquisition offer price per share and the 4 week prior stock price. *MULTIPLE* is calculated as the total acquisition value divided by revenue. We include industry fixed effects. Standard errors used to calculate t-statistics, presented in parentheses, are White adjusted and clustered by year. Variable definitions are presented in Appendix A. *, **, and *** denote two-tailed statistical significance at 10%, 5%, and 1%, respectively.

Table 10
Staggered Difference-in-Differences within PE Takeover Observations
Panel A: Post PE Takeover Effects on Measures of Myopia and Productivity

VARIABLES	(1) DISC_RD	(2) DISC_RD	(3) LOSS	(4) LOSS	(5) ROA	(6) ROA	(7) TFP	(8) TFP
POSTxPE_BUYER	**0.0099***	**0.0110****	**0.0824****	**0.0907****	**-0.0250***	**-0.0251***	**0.0836****	**0.0690***
	(1.82)	**(2.11)**	**(2.14)**	**(2.17)**	**(-1.92)**	**(-1.71)**	**(2.33)**	**(1.69)**
Observations	6,187	6,187	6,187	6,187	6,187	6,187	4,273	4,273
Adjusted R-squared	0.799	0.802	0.277	0.292	0.347	0.369	0.564	0.599
Controls	N	Y	N	Y	N	Y	N	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm

Panel B: Pre-Takeover MYOPIA and Productivity

VARIABLES	(1) TFP	(2) TFP
POSTxPE_BUYER	-0.0155	-0.0183
	(-0.33)	(-0.39)
POSTxPE_BUYERxTO_MYOPIA	**0.1487****	**0.1288***
	(2.25)	**(1.95)**
Observations	3,263	3,263
Adjusted R-squared	0.546	0.568
Controls	N	Y
Firm FE	Y	Y
Year FE	Y	Y
Cluster	Firm	Firm

Notes to Table 10:
This table reports the results of a generalized difference-in-differences analysis of the post-period following a takeover by a *FIN_BUYER*. To mitigate selection bias, we limit our analysis within firms that are ultimately acquired by PE Buyers, using staggered differences in the timing of the *POST* buyout for identification. Because we utilize Compustat data that is either backfilled for future public offerings, or available for firms with public debt, we do not limit the sample to public firms. In Panel A, Columns 1 & 2 examine the effect on discretionary R&D expenditures. Columns 3 and 4 examine the effect on an indicator for an annual net loss (*LOSS_IND*). Columns 5 and 6 examine the effect on GAAP earnings (*ROA*). Columns 7 and 8 examine the effect on total factor productivity (*TFP*). *PE_BUYER* represents a firm-level indicator for a firm that is ultimately taken over by a PE buyer during our sample and is subsumed by firm fixed-effects. *POSTxPE_BUYER* represents the post takeover effect. In Panel B, we evaluate the interactive effect of higher pre-takeover *MYOPIA* (*TO_MYOPIA*) on increases to *TFP*. *TO_MYOPIA* is a firm-level measure that is subsumed by firm fixed-effects. Standard errors used to calculate t-statistics, presented in parentheses, are White adjusted and clustered by firm. Variable definitions are presented in Appendix A. *, **, and *** denote two-tailed statistical significance at 10%, 5%, and 1%, respectively.

Table 11
Individual Myopia Measures and Probability of Takeover by PE and Private Strategic Acquirers: Linear Probability Model
Panel A: Likelihood of Takeover by PE Buyer

VARIABLES	(1) *TO_PE*	(2) *TO_PE*	(3) *TO_PE*	(4) *TO_PE*	(5) *TO_PE*	(6) *TO_PE*	(7) *TO_PE*
EARNINGS_SURPRISES	0.0035***					0.0027***	0.0024***
	(3.89)					(3.03)	(2.65)
EARNINGS_INCREASE_STRINGS		0.0020**				0.0015	0.0013
		(1.98)				(1.45)	(1.26)
FREQ_GUIDANCE			0.0018***			0.0016***	0.0008*
			(4.62)			(4.01)	(1.88)
RESTATEMENT				0.0033***		0.0033***	0.0026**
				(2.60)		(2.64)	(2.05)
DISC_R&D					-0.0175***	-0.0132***	-0.0172***
					(-5.19)	(-3.78)	(-4.32)
LONGTERM_INST_PCT	0.0023	0.0030	0.0020	0.0032	0.0024	0.0009	-0.0000
	(1.07)	(1.39)	(0.93)	(1.46)	(1.09)	(0.41)	(-0.00)
ANALYST_COV	0.0052	0.0080**	0.0037	0.0086**	0.0104***	0.0032	-0.0017
	(1.47)	(2.29)	(1.04)	(2.45)	(2.90)	(0.87)	(-0.43)
MTB	-0.0023***	-0.0023***	-0.0023***	-0.0023***	-0.0020***	-0.0020***	-0.0021***
	(-11.13)	(-11.22)	(-10.92)	(-11.00)	(-9.55)	(-9.73)	(-9.64)
SIZE	-0.0024***	-0.0024***	-0.0024***	-0.0023***	-0.0025***	-0.0026***	-0.0019***
	(-11.20)	(-10.90)	(-11.05)	(-10.61)	(-11.28)	(-11.83)	(-7.56)
LEVERAGE	0.0112***	0.0109***	0.0113***	0.0103***	0.0101***	0.0113***	0.0117***
	(4.89)	(4.75)	(4.98)	(4.55)	(4.44)	(4.95)	(4.87)
Constant	0.0246***	0.0247***	0.0254***	0.0240***	0.0250***	0.0247***	0.0223***
	(13.35)	(13.36)	(13.68)	(12.93)	(13.51)	(13.20)	(11.97)
Observations	57,349	57,349	57,349	57,349	57,349	57,349	57,349
Adj. R-squared	0.005	0.004	0.005	0.005	0.005	0.006	0.007
Year FE	Y	Y	Y	Y	Y	Y	Y
Industry FE	N	N	N	N	N	N	Y
Cluster	Firm	Firm	Firm	Firm	Firm	Firm	Firm

Table 11 (Continued)
Panel B: Likelihood of Takeover by Private Strategic Buyer

VARIABLES	(1) *TO_STRAT*	(2) *TO_STRAT*	(3) *TO_STRAT*	(4) *TO_STRAT*	(5) *TO_STRAT*	(6) *TO_STRAT*	(7) *TO_STRAT*
EARNINGS_SURPRISES	-0.0015**					-0.0014*	-0.0016**
	(-2.07)					(-1.96)	(-2.25)
EARNINGS_INCREASE_STRINGS		-0.0013*				-0.0012*	-0.0014*
		(-1.88)				(-1.74)	(-1.96)
FREQ_GUIDANCE			-0.0002			-0.0001	-0.0001
			(-0.81)			(-0.57)	(-0.50)
RESTATEMENT				0.0007		0.0006	0.0005
				(0.79)		(0.67)	(0.54)
DISC_R&D					-0.0023	-0.0036	-0.0041
					(-0.67)	(-1.01)	(-0.96)
LONGTERM_INST_PCT	0.0011	0.0008	0.0009	0.0008	0.0006	0.0011	0.0017
	(0.84)	(0.65)	(0.67)	(0.60)	(0.51)	(0.82)	(1.26)
ANALYST_COV	-0.0101***	-0.0111***	-0.0110***	-0.0114***	-0.0111***	-0.0091***	-0.0079**
	(-3.19)	(-3.59)	(-3.47)	(-3.67)	(-3.57)	(-2.80)	(-2.28)
MTB	-0.0017***	-0.0017***	-0.0017***	-0.0017***	-0.0017***	-0.0016***	-0.0016***
	(-10.04)	(-10.02)	(-10.06)	(-10.05)	(-9.18)	(-9.01)	(-8.60)
SIZE	-0.0019***	-0.0019***	-0.0020***	-0.0020***	-0.0020***	-0.0019***	-0.0020***
	(-10.25)	(-10.35)	(-10.43)	(-10.47)	(-10.51)	(-10.17)	(-9.54)
LEVERAGE	0.0040**	0.0040**	0.0042**	0.0042**	0.0042**	0.0036*	0.0034*
	(2.06)	(2.09)	(2.15)	(2.16)	(2.16)	(1.86)	(1.69)
Constant	0.0246***	0.0246***	0.0245***	0.0244***	0.0246***	0.0245***	0.0249***
	(13.41)	(13.41)	(13.36)	(13.29)	(13.44)	(13.30)	(13.30)
Observations	57,349	57,349	57,349	57,349	57,349	57,349	57,349
R-squared	0.005	0.004	0.004	0.004	0.004	0.005	0.005
Year FE	Y	Y	Y	Y	Y	Y	Y
Industry FE	N	N	N	N	N	N	Y
Cluster	Firm	Firm	Firm	Firm	Firm	Firm	Firm

Notes to Table 11:
This table reports the results of testing the association between earnings myopia and both probability of takeover by a PE buyer (column 1) and probability of takeover by private strategic buyer (column 2) using OLS regression. The dependent variable is a categorical variable that equals one if firm *i* receives a completed takeover bid from a PE buyer in fiscal year *t*+1, two if firm *i* receives a completed takeover bid from a strategic private buyer in fiscal year *t*+1, three if firm *i* receives a completed takeover bid from a buyer not included in the first two categories in fiscal year *t*+1, and zero otherwise. Standard errors used to calculate t-statistics, presented in parentheses, are White adjusted and clustered by firm. Variable definitions are presented in Appendix A. *, **, and *** denote two-tailed statistical significance at 10%, 5%, and 1%, respectively.