

# Setting the Bar: The Evaluative and Allocative Roles of Organizational Aspirations

Dongil D. Keum,<sup>a</sup> J. P. Eggers<sup>b</sup>

<sup>a</sup>Management Division, Columbia Business School, New York, New York 10027; <sup>b</sup>Stern School of Business, New York University, New York, New York 10012

Contact: [dk2721@columbia.edu](mailto:dk2721@columbia.edu),  <https://orcid.org/0000-0001-8661-7199> (DDK); [jeggers@stern.nyu.edu](mailto:jeggers@stern.nyu.edu),

 <https://orcid.org/0000-0003-3344-1155> (JPE)

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**Abstract.** This study explores the determinants of organizational aspirations, proposing that aspirations play dual roles that create important tension for managers. On one hand, aspirations serve an evaluative role as a benchmark for assessing performance. On the other, they have an allocative role in influencing the acquisition of limited resources. Our theory suggests that managers strategically adapt organizational aspirations to balance the tension between the two concerns. They set more aggressive aspirations when facing increased pressure to acquire resources, but set more conservative targets when the costs of missing performance targets are higher. In the context of annual management forecasts, which allow us to directly observe performance targets and their deviation from traditional aspiration measures, we find that external factors influencing the intensity of resource pressure and the cost of missing performance targets determine the aggressiveness of organizational aspirations. This study highlights a novel antecedent of aspirations that complements existing explanations, linking agency and governance research with behavioral theory.

**Keywords:** aspirations • performance target • behavioral theory • resource allocation • governance • agency

## Introduction

The importance of performance targets (or aspirations) for our understanding of organizations has drawn interest from researchers in a variety of fields and across multiple levels of analysis (Locke and Latham 1990, Greve 2003). In particular, a large body of behavioral research uses performance versus aspirations to examine organizational risk taking and adaptation (Cyert and March 1963, Greve 2003, Lounsbury and Beckman 2015). Despite extensive research on the consequences of falling short of or exceeding organizational aspiration levels, the question of how aspirations are determined has received comparatively limited attention (Shinkle 2012).<sup>1</sup> This lack of attention to the origins of aspiration levels paints managers as passively accepting performance targets based on historical and social reference points. However, recent research in behavioral agency suggests that managerial agency plays an active role in shaping organizational responses to performance feedback (e.g., Lant and Shapira 2008, Chrisman and Patel 2012, Lim and McCann 2013). Does managerial agency also play a strategic role in how organizational aspirations are set in the first place?

We suggest that aspirations play a dual role, creating important tension in the aspiration-setting process. On one hand, falling short of organizational aspirations influences important outcomes, including the likelihood of chief executive officer (CEO) turnover (Lant et al. 1992),

capital allocation (Arrfelt et al. 2013), executive compensation (Matsunaga and Park 2001), and the cost of capital (Roberts and Sufi 2009, Shivakumar et al. 2011). Given these important managerial consequences of falling short, managers have motive for downward striving (shifting aspirations downward) that results in more conservative performance targets and improves the chances of exceeding them. This perspective emphasizes the evaluative role of aspirations—they are the targets against which performance is measured *ex post*.

But organizational aspirations also serve another important role. Performance targets are often communicated to an array of external stakeholders and inform their resource allocation decisions among competing strategic options (Arrfelt et al. 2013). Given limited foresight and knowledge, resource holders rely at least in part on disclosed performance targets to decide where to allocate scarce resources. The expected returns embodied in performance targets can lead fund managers to adjust an investment portfolio (Bushee 1998), creditors to adjust the terms of loans (Roberts and Sufi 2009), firms to enter and exit different lines of business, or managers to fund one project over another (Wu 2013). This role of aspirations in affecting resource allocation has been underscored in research on organizational goals (Ansoff 1987, Fiegenbaum et al. 1996, Chen 2008, Hu et al. 2017), managerial decision making (Gavetti and Levinthal 2000),

management forecasts (Cotter et al. 2006, Hirst et al. 2008), and corporate governance and managerial agency (Williamson 1975, Meyer et al. 1992, Harris and Raviv 1996). Given the importance of external resources for firm strategy, managers therefore face an incentive to upward strive—increase performance expectations to acquire necessary resources. This captures the allocative role played by organizational aspirations.

Such dual roles of organizational aspirations as the basis of both evaluation and resource allocation create an important yet understudied tension in the process of setting performance targets. If baseline aspirations emerge through a typical blend of historical performance and social benchmarking, managers face competing motivations to either increase or decrease their aspirations. If aspirations are set too conservatively, the manager may not be able to acquire the requisite resources. If aspirations are set too aggressively, however, there is an increased risk of underperforming the target, which has substantial negative managerial and organizational ramifications. As a result, aspirations must be “moderately ambitious” (Jordan and Audia 2012, p. 213), carefully balancing the costs and benefits of upward and downward striving in setting performance targets.

This study investigates how the allocative and evaluative roles of aspirations affect the aspiration-setting process and lead to strategic deviations from baseline aspirations based on historical and social reference points. To understand how the tension between evaluative and allocative roles is resolved, we integrate two key concepts—the role of resource pressure, whereby some situations impose greater difficulties in securing new external resources, and the governance role of key external stakeholder groups, who not only hold critical resources but also evaluate firm performance and influence the costs of missing performance targets.<sup>2</sup> The central premise is that the intensity of resource pressure and the cost of missing performance targets determine the relative importance of evaluative and allocative considerations, which in turn affect whether performance targets are adjusted upward to facilitate acquiring resources or downward to reduce the risk of missing performance targets.

We test our theory in the context of annual management forecasts, which allow us to directly observe earning targets disclosed to key resource-controlling external stakeholders. We find that increased pressure to acquire resources from high debt induces upward striving in setting performance targets, even at the increased risk of underperformance. Consistent with the increased cost of missing the performance target, small and transient institutional ownership increases downward striving and results in setting more conservative performance targets, but we observe the

opposite effect from block institutional ownership that reduces short-term evaluative pressure (Parrino et al. 2003, Bushee and Goodman 2007). These findings are consistent across multiple robustness checks and approaches to estimating aggressiveness and support our theory that managers set performance targets by balancing the risks of underperformance with the need to be ambitious in order to obtain necessary resources.

By jointly considering the evaluative and allocative aspects of organizational aspiration and highlighting their tension, we provide a more holistic characterization of how organizational aspirations are set and their multiple roles. In particular, we highlight that managers play an active role in setting aspirations rather than being passive subjects of evaluation and recipients of resources (Lim and McCann 2013). Although historical and social aspirations serve as important anchor points, managers strategically adjust performance targets to balance allocative and evaluative concerns. Such findings integrate behavioral theory with alternative perspectives that espouse a more strategic approach to setting performance targets (e.g., Ansoff 1987, Fiegenbaum et al. 1996) and demonstrate the importance of considering both the traditional, social-historical perspective as well as our novel perspective to properly assess how performance targets are set in organizations. By demonstrating how external stakeholders, specifically creditors and institutional investors, shift the relative emphasis between allocative and evaluative considerations, our study also answers calls for extending behavioral research to take an open-system perspective and consider multiple actors inside and outside the organization (Gavetti et al. 2007, Vissa et al. 2010). From an applied policy perspective, our findings raise practical concerns about trends of holding increasing amounts of cash (Bates et al. 2009) and advocate reducing financial slack to increase upward striving in setting performance targets, often demanded in practice by private equities and hedge funds (Brav et al. 2008). The increased financial security of carrying significant amounts of cash may come at the cost of lowering performance targets, which may promote organizational complacency and discourage investments in research and development (R&D) and innovation.

## Theory and Hypotheses

### Behavioral Models of Setting Organizational Aspirations

The most prominent perspective on organizational aspirations is the Behavioral Theory of the Firm (Cyert and March 1963, Greve 2003, Shinkle 2012). The Behavioral Theory of the Firm views aspiration levels as emerging through a political process of bargaining for scarce resources and building coalitions that aggregate

the conflicting preferences of different internal subunits. Because of bounded rationality and limited information, decision makers rely on historical and social aspirations as anchor points to simplify the evaluation and budgeting process. As a result, organizational aspirations are adjusted gradually over time in response to performance feedback that triggers “the search for alternative internal allocations” (Cyert and March 1963, p. 271; Levinthal and March 1981). This incremental adjustment process, however, can produce significant negative managerial and organizational consequences for organizations that underperform aspirations, including CEO turnover (Lant et al. 1992), increased board monitoring (Tuggle et al. 2010), divestment (Shimizu 2007), and reduced capital allocation (Arrfelt et al. 2013). Subsequent behavioral research has refined and extended the general model of setting organizational aspirations posited by Cyert and March (1963) in two main directions.

First, scholars have refined how social reference groups are selected and combined with historical reference points to form an organizational aspiration level (Lounsbury and Beckman 2015). Questioning the average performance of an industry-wide reference group as a meaningful social reference point (Porac et al. 1989), these works suggest that firms use much more specific reference groups based on their salience, such as a subset of industry competitors with higher but achievable status (Moliterno et al. 2014) or other business units within the firm (“internal” or “political” social reference points) (Gaba and Joseph 2013, Hu et al. 2017). In addition, although earlier research tended to view organizational aspiration as a weighted average of historical and social aspirations, Washburn and Bromiley (2012) and Blettner et al. (2015) suggest that firms dynamically shift attention between the historical reference point and different social reference points. Collectively, these studies strongly link organizational aspirations to historical and social comparisons but also raise the possibility that managers may have much more latitude in setting performance targets than suggested by earlier research. In particular, the availability of multiple different reference points and the resulting ambiguity in identifying social reference points (Hu et al. 2017) provide managers with sufficient justification for setting aspirations that may be somewhat higher or lower than social and historical aspirations alone.

A subset of studies explores antecedents of organizational aspirations beyond social and historical reference points and relates most closely with the aim of this paper. March and Shapira (1987, 1992) propose that underperforming firms faced with the risk of bankruptcy adjust their reference point downward to a survival threshold, indicating that financial constraints may play an important role in how managers

approach setting performance targets. Audia et al. (2015) suggest self-enhancement as an alternative motive for downward striving in setting aspirations. Using experimental methods, they find that participants assuming the CEO position generally select accurate social comparison groups based on similarity, but low performance or the need to manage impressions increases the opportunistic selection of poorly performing groups for positive comparisons. In contrast to this strategic downward deviation from social aspiration, Cyert and March (1963), Bromiley (1991), and Lant (1992) consider upward striving in setting performance targets. Managers at overperforming firms tend to be dissatisfied with beating the historical or social reference points and set more aggressive and stretched targets, in part to disrupt organizational complacency and motivate employees and organizations for improvement and innovation (Ansoff 1987, Fiegenbaum et al. 1996, Sitkin et al. 2011).<sup>3</sup> Taken together, these studies suggest both upward and downward deviations from baseline organizational aspirations based on social and historical reference points.

In contrast to the empirical support at the individual level of analysis (e.g., Lant 1992, Lant and Shapira 2008, Audia et al. 2015), these additional antecedents have found limited empirical support at the organizational level (Massini et al. 2005). Notably, the two empirical studies that directly observe organizational aspirations (Mezias et al. 2002, Washburn and Bromiley 2012) find limited support for both downward and upward striving in setting organizational aspirations while confirming the importance of social and historical reference points. More provocatively, Sakhartov and Folta (2013) use computational modeling to show that variable risk taking, which has been used to infer the significance of social and historical aspirations, is also consistent with rational, maximizing agent behaviors. These studies suggest that the origins of organizational aspirations are more complex than initially believed (Moliterno et al. 2014) and provide an opportunity for our study to offer more clarity on how aspirations are set.

Extant studies on the antecedents of organizational aspirations leave two important questions for future research that we seek to address in this paper. First, there is limited consideration of managerial agency in the aspiration-setting process despite the benefits of downward striving that help managers to reduce pressures of accountability and secure a positive evaluation (Jordan and Audia 2012). Recent research on behavioral agency highlights the importance of managerial agency and incentives, such as stock option grants or board structure, in determining how firms respond to performance feedback (Chrisman and Patel 2012, Lim and McCann 2013, Desai 2016), but the role of managers in how performance targets are set in the first place has received remarkably limited attention (Audia et al. 2015). In

describing how aspirations are made, Greve (2003, p. 40) describes that “...managers need to make their own aspiration levels. It turns out that there are multiple ways of doing so, with historical and social aspiration levels being the most important” (emphasis added). Most extant research on aspirations, however, has given little agency to managers, necessitating a more balanced perspective that explores the role of managers. Notably, both Ansoff (1987) and Fiegenbaum et al. (1996) argue that forward-looking strategic planning by management plays a critical role in determining the aggressiveness of organizational aspiration levels, an idea that we explore more below.

Secondly, and building on the first point, to the extent that resource and organizational contexts affect the aspiration-setting process, the next logical question to ask is where these pressures come from. Recent behavioral research has expanded its initial internal focus to account for how external stakeholders, such as public endorsements (Desai 2008) or evaluation by rating agencies (Rowley et al. 2017), affect the selection of goal dimensions (e.g., profitability versus nonfinancial goals) as well as direction and strength of firm response to negative performance feedback. We suggest that the firm’s external stakeholders place pressure on managers to both set adequate performance targets and meet those targets. In addition to their internal role of evaluating employees and assigning responsibilities, performance targets serve an external role of informing stakeholders of a firm’s performance targets and setting their expectations. They are communicated to an array of stakeholders through quarterly earnings calls, press conferences and annual reports, board meetings, and management forecasts released to suppliers, shareholders, analysts, and debt-holders (Pownall et al. 1993, Coller and Yohn 1997). In turn, these stakeholders actively adjust both the quantity and terms of resource allocations based on disclosed performance targets (Cotter et al. 2006). As a result, although organizational aspirations may be determined internally, managers must consider their consequences in the broader external resource environment (Ansoff 1987, Fiegenbaum et al. 1996). This suggests that the understudied role of external stakeholders in the aspiration formation process warrants more careful examination (Gavetti et al. 2007, Vissa et al. 2010).

Building from the realization that existing research largely ignores the role played by managers in setting aspirations—despite both the incentives and opportunities for managers to play a key role—we seek to offer a holistic theory of how interactions between external stakeholders and managers affect the process of aspiration setting in organizations, thus filling an important gap in our understanding and offering a theory that may help clarify some of the complexity in the aspiration-setting process.

### Resource Pressure: Aspiration as Evaluative and Allocative

As discussed above, previous behavioral research on setting organizational aspirations generally adopts an evaluative view of aspirations as the targets against which performance is measured. The fact that performance below aspirations has been linked to CEO turnover (Lant et al. 1992), lower executive compensation (Matsunaga and Park 2001), and increased board monitoring (Tuggle et al. 2010) among other outcomes further cements the perspective of aspiration as evaluative in its role.

The central argument of this paper, however, is that aspiration levels also play a key role in the resource-allocation process with important implications for how organizational aspiration levels are set. Extensive theoretical and empirical research on capital allocation describes prioritizing the allocation of scarce resources among competing projects, business units, and across different firms based on their expected performance potential (e.g., Chen 2008, Arrfelt et al. 2013). Even as decision makers have only a vague understanding of the performance potential of the next period, scarce resources are allocated based on expected returns (Wu 2013), such that performance targets associated with a specific project or a firm will affect the share and the cost of resources that they are able to secure from key stakeholders. As a result, when faced with intense pressure to secure resources, managers have strong motive to reduce downward striving and increase performance targets in order to secure requisite resources at lower costs. Looking at a firm’s internal budgeting process, Harris and Raviv (1996) propose a theoretical model of agency conflicts where managers seek rents by reporting inflated performance targets. Similarly, Hu et al. (2017) examine multidivisional firms and theorize that the need to secure sufficient allocation against other sister divisions will influence the relative weight given to social or historical reference points, but whether this internal competition for resources drives upward or downward striving will vary according to a firm’s relative performance level.

The allocative motive to set aggressive performance targets through upward striving contrasts starkly with managerial motives emerging from the evaluative role of aspiration levels. To the extent that managers expect their performance to be graded against performance targets set ex ante, managers have motive to proactively lower the targets to increase the likelihood of meeting the target and secure a positive evaluation (Audia et al. 2015). This effectively encourages downward striving from the performance target suggested by historical and social aspirations, either by selecting safer projects with lower pay-offs or simply adopting a more conservative range in the distribution of expected performance (Ciconte et al. 2014). As a

result, managers face an important yet understudied tension when setting performance targets: downward striving to increase the chances of receiving a positive evaluation or upward striving to receive a larger share of the resources on better terms.

We exploit the fact that the conditions motivating downward versus upward striving are distinct—the motive for upward striving emerges from resource pressure, whereas the motive for downward striving emerges from evaluative risk and is facilitated by a lack of monitoring. We propose that the conditions that affect either the intensity of resource pressure or the costs of missing performance targets will affect the aggressiveness of aspiration levels set and communicated by managers. When resource pressure is high, aspiration levels will rise to secure sufficient resources. When the cost of underperformance increases, aspiration levels will be adjusted downward to secure a positive evaluation. This overall perspective is summarized in Figure 1, which suggests that baseline aspirations may be set through the traditional processes of historical and social benchmarking, but managers subsequently adjust performance targets to balance the costs and benefits of upward and downward striving.

**Aspiration Level as an Outcome of the Tension Between the Allocative and Evaluative**

The model discussed above suggests that firms will set upward-striven, aggressive performance targets when the motive for upward striving resulting from increased resource pressure outweighs the motive for downward striving from the need to receive positive evaluation. One key factor affecting the balance between these two concerns is the degree to which firms face resource constraints. There is increased risk of a shortage of resources vis-à-vis operational demand for financially constrained firms (Cheng and Kesner 1997), and the limited flexibility in their ability to acquire external financial resources should increase the salience of the allocative aspect of performance targets and motivate upward striving. Such resource-driven upward striving

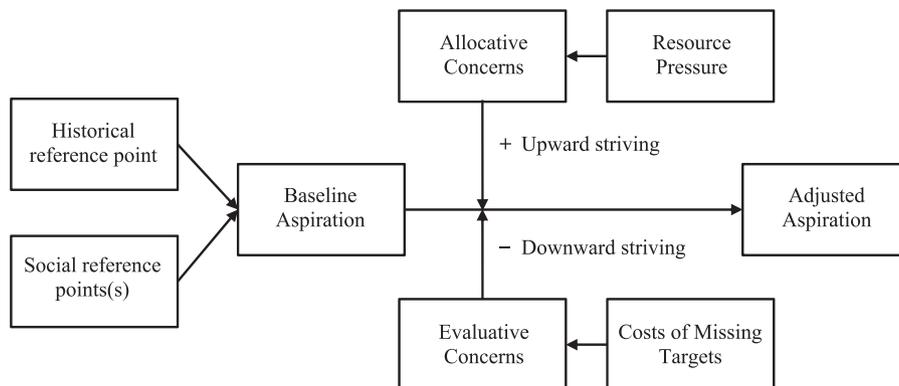
is in line with the notion of “swinging for the fences” under pressure (e.g., Sanders and Hambrick 2007) but conflicts with March and Shapira (1987) who theorize the risk of bankruptcy to lower organizational aspiration to a survival threshold. We expect the proposed upward striving based on resource constraint to be a more general consideration that operates at broader ranges of firm performance beyond extreme situations.

Building from existing work in finance (e.g., Almeida and Campello 2007), we use the amount of a firm’s outstanding debt as a measure of financial constraint and resource pressure. Higher levels of debt (as opposed to equity) suggest that the firm has already exhausted available avenues to acquire further capital and faces a more binding resource constraint. These firms have limited options to attract additional external capital and are more likely to set aggressive performance targets through upward striving to make themselves more attractive. Furthermore, high leverage typically invites external scrutiny on cash flows (Nini et al. 2012), which diminishes the ability of the manager to downward strive to ensure exceeding financial expectations. Even the cost of existing financial resources depends in part on expected future performance, as more than 80% of long-term debts are renegotiated based on future prospects of the firm (Roberts and Sufi 2009). Thus, managers at firms facing higher external financial constraints face strong motive to set aggressive targets through upward striving.

**Hypothesis 1 (H1).** *Higher levels of outstanding debt increase upward striving and result in setting more aggressive performance targets.*

Beyond debt holders, we examine institutional investors as another important stakeholder. As the majority shareholder of most U.S. firms, institutional investors can influence the aggressiveness of organizational performance by influencing the evaluation of managers (Gillan and Starks 2000, Parrino et al. 2003). Notably, institutional investors frequently engage in direct interventions, such as demanding CEO turnover or a seat among the

**Figure 1.** Allocative and Evaluative Considerations in Setting Organizational Aspiration Level



board of directors (Kahn and Winton 1998, Hotchkiss and Strickland 2003), as well as indirect intervention through the stock market that can nonetheless have significant effects on managerial compensation and evaluation.<sup>4</sup> Fire sales or speculative investment in firm stock, for example, in response to positive or negative earnings surprises, can cause significant swings in firm value (Kahn and Winton 1998, Hotchkiss and Strickland 2003), and this indirect channel became a more important consideration with the recent increase in the sensitivity of CEO turnover to stock prices (Kaplan and Minton 2012) and equity-based compensation (Murphy 2003, Lim and McCann 2013). In examining the evaluative effects of institutional ownership on firm and managerial behaviors, extensive research emphasizes the importance of distinguishing large investors with long-term orientation from small, transient investors (i.e., institutions with short-term orientation and high portfolio turnover). Notably, Zhang and Gimeno (2016) find that firms with more long-term oriented investors increase the aggressiveness of competitive responses under quarterly earnings pressure, whereas short-term transient investors soften it. Similarly, Bushee (1998) finds that small transient institutional ownership increases the risk of opportunistic reduction in R&D spending, whereas block institutional ownership has the opposite effect.

Based on these contrasting effects on the strengths of evaluative pressure and firm risk taking, we expect block institutional ownership to increase upward striving, whereas small institutional ownership increases downward striving in setting performance targets. Specifically, we expect block institutional ownership to encourage upward striving in setting performance targets by attenuating negative market reactions to missing the performance target (Parrino et al. 2003, Bushee and Goodman 2007) and also reducing performance sensitivity of CEO turnover (Aghion et al. 2013). These factors limit the evaluative pressures that managers expect to face, allowing more upward striving to acquire resources. Block institutional investors also provide careful monitoring of portfolio firms' operations and can penalize setting downward-strived targets that fall significantly below historical performance or industry performance benchmarks. In contrast, small, transient institutional ownership is expected to increase the cost of missing performance targets and evaluative pressure. Their limited equity share permits quick selling in response to negative news (Chen et al. 2007), while providing little incentive to provide careful monitoring that can check downward striving. In fact, they can actually increase the risk of forced CEO turnover (Skinner and Sloan 2002, Parrino et al. 2003), and extensive research criticizes small, transient institutional ownership as exacerbating managerial risk aversion and undermining firm value through decreased investment

in R&D and innovation.<sup>5</sup> Taken together, we test the following two hypotheses:

**Hypothesis 2 (H2).** *Higher levels of small institutional ownership increase downward striving and result in setting more conservative performance targets.*

**Hypothesis 3 (H3).** *Higher levels of block institutional ownership increase upward striving and result in setting more aggressive performance targets.*

## Methods and Data Management Forecasts

We test the proposed tension between the allocative and evaluative aspects of organizational aspiration in the context of management earnings forecasts. As voluntary disclosures of managerial expectations of a firm's future performance, management forecasts (typically expressed as earnings per share (EPS)) represent a public expression of a firm's performance target intended to inform investors and stakeholders (for a review, see Hirst et al. 2008 and Beyer et al. 2010). Since the introduction of Regulation Fair Disclosure in October 2000 that requires any release of firm information to be public, management forecasts have become increasingly common with approximately 50% of public firms releasing some form of management forecast by 2004, compared with 10%–15% in the mid-1990s (Anilowski et al. 2007). However, current management literature on aspiration level has not used management forecasts even though they provide direct observations of firm-level performance targets (cf. Mezas 1988).

We note some key features of annual management forecasts that make the empirical context uniquely suited to testing our theory. First, they are presented to a wide number of current and potential external resource providers and have substantial implications for the cost of capital. Notably, in addition to influencing the cost of debt and bid-ask spread (Coller and Yohn 1997, Roberts and Sufi 2009), more than 50% of analysts revise their forecasts within five days of management guidance (Cotter et al. 2006). Second, they often include reviews of the past performance as well as justifications for the future performance target, such as changes in industry outlook as well as corresponding adjustments in resource allocation and strategic initiatives (e.g., reduction or increase in investment, acceleration or delay in product launch) (Baginski et al. 2004). They also provide support for the argument that firms are not passive subjects of evaluation and recipients of resources in the capital market; rather, they engage in strategic interactions with the capital market. Notably, managers often walk down overly optimistic earnings expectations to reduce the risk of market disappointment and increase the chance of positive surprise (Kross et al. 2011).<sup>6</sup>

Taken together, management forecasts illustrate the strategic and allocative role of organizational aspirations that creates the tension with their evaluative role, which we seek to clarify in our paper.

The potential challenge from using management forecasts is the concern that performance targets communicated through management forecasts are merely strategic disclosures aimed to manage external performance expectations. For example, managers could be simply communicating an upwardly biased expected performance targets in response to increased allocative pressure with limited implications to actual performance targets used internally or the types of projects or investments a firm adopts. However, there are several features of management forecasts that effectively constrain such “cheap talk.” Although the contents of management forecasts vary significantly across firms, annual management forecasts often disaggregate key items in the income statement by major business units (e.g., revenues, cost of goods sold), provide detailed information on key strategic initiatives, and also include questions and answers by participants in the call (Hirst et al. 2007).<sup>7</sup> It is also important to distinguish annual forecasts that occur every 12–14 months and contain substantial strategic elements from quarterly forecasts which are disclosed toward the end of each quarter and focus on updating interim financial results based on accrual of new information.

### Dependent Variable: *Aggressive*

Consistent with previous literature in finance and accounting (Hirst et al. 2008), we impute the aggressiveness of performance targets by comparing them with realized outcomes (Koch 2002). An earnings target above the realized value is considered an upward-striven, aggressive performance target. Our theory predicts that firms with low debt ratio and large small-institutional ownership are more likely to engage in downward striving and, as a result, exceed their stated performance target. Conversely, block institutional ownership is expected to increase upward striving, which results in missed targets. Obviously, not every missed (beat) performance target represents an ex post aggressive (conservative) target, but our argument is that, on average, across a large data set, performance that is below the target is likely to be caused by aggressive targets, and vice versa. In our primary models, the dependent variable, *Aggressive*, is a continuous measure of the stated performance target minus the realized performance.

Whether a performance target is aggressive depends critically on the point of comparison, and we test the robustness of our theory to two alternative baselines that are akin to inference based on historical and social aspirations. Earlier accounting research uses two different approaches to estimating a firm’s EPS in the next period (Fama and French 2000, Hou et al. 2012). The most

popular model is a cross-sectional model where data from firms in the same industry are pooled to predict the next period’s earnings, conditional on a firm’s current earning level. This “cross-sectional earnings model” draws close resemblance to social aspiration, including the criticism that the entire industry does not provide accurate comparison groups.<sup>8</sup> Alternatively, the next period’s EPS has been estimated using a firm’s own historical trend.<sup>9</sup> Because firms differ significantly in their earning levels, the estimated earnings are scaled by the stock price at the end of the fiscal year to facilitate cross-firm comparisons (Garfinkel 2009). The correlation with the actual realized performance is 0.95 for management forecasts, 0.66 for estimates based on historical trends of the last three years, and 0.41 for cross-sectional estimates. The high correlations confirm the importance of historical and social aspirations, but the highest correlation with management forecasts also suggests some degree of managerial agency in the aspiration setting process.

### Data

We obtain data on all annual management forecasts available on the Institutional Brokers’ Estimate System (IBES) guidance database from 2002 to 2012. If a company made multiple forecasts regarding EPS for the same fiscal year, the earliest forecast is used to assess whether the target is aggressive or conservative, as subsequent forecasts can reflect adjustments in response to stakeholder reactions and performance feedback (Rogers and Stocken 2005). The management forecast is also required to be issued at least six months prior to the end of the fiscal period to preserve a meaningful degree of uncertainty, yielding 8,914 observations. The actual realized earnings per share are revealed only two to three months after the end of the fiscal period, creating on average a distance of 12 months between the release of performance targets and their realization. For firms that provide a range instead of a specific EPS target, we consider the target to be the midpoint of the stated range (Rogers and Stocken 2005). These observations are then matched to IBES, Thompson Reuters Institutional Holdings, and Compustat Fundamental Annual data based on six-digit Committee on Uniform Securities Identification Procedures numbers. To prevent extreme outliers from influencing the overall results, we trim *Aggressive* at the 99th and 1st percentiles, but all of the results are robust to their inclusion. Because of missing data in different parts of each database, our baseline sample consists of 5,952 firm-year observations.

### Variables

**Debt and Financial Slack.** *Debt ratio* is debt in current liability divided by the total asset. In measuring a firm’s overall financial slack and dependence on external finance, we also use the Kaplan-Zingales (KZ) measure

**Table 1.** Sample Statistics for Management Forecasts

Variable	Observations	Mean	Standard deviation	1	2	3	4	5	6	7	8	9	10	11
1. <i>Aggressive</i>	5,952	0.04	0.50	1.00										
2. <i>Debt ratio</i>	5,952	0.21	0.18	0.04	1.00									
3. <i>Debt ratio: long-term</i>	5,952	0.18	0.17	0.01	0.96	1.00								
4. <i>Debt ratio: short-term</i>	5,952	0.03	0.05	0.10	0.34	0.05	1.00							
5. <i>Debt ratio: long-term debt due this year</i>	5,861	0.01	0.03	0.06	0.28	0.11	0.61	1.00						
6. <i>Small institutional ownership</i>	5,952	0.53	0.16	-0.14	0.01	0.03	-0.07	-0.03	1.00					
7. <i>Block institutional ownership</i>	5,952	0.27	0.14	0.14	-0.03	-0.03	-0.01	0.01	-0.27	1.00				
8. <i>Number of analysts</i>	5,952	10.73	6.89	-0.08	0.01	0.02	-0.03	0.01	0.40	-0.14	1.00			
9. <i>Total asset (log)<sub>t-1</sub></i>	5,952	7.03	1.62	-0.07	0.35	0.34	0.12	0.11	0.37	-0.23	0.58	1.00		
10. <i>Revenue growth<sub>t-1</sub></i>	5,952	0.11	0.23	0.02	-0.09	-0.09	-0.03	-0.02	0.05	0.00	0.01	-0.20	1.00	
11. <i>Financial slack (KZ index)<sub>t</sub></i>	5,952	0.02	0.14	0.05	0.07	0.06	0.03	0.06	-0.15	0.04	-0.06	-0.11	-0.04	1.00
12. <i>Distance to bankruptcy<sub>t</sub></i>	5,952	-2.11	9.28	0.06	0.10	0.08	0.06	0.03	0.04	-0.02	-0.02	0.10	-0.11	0.02

(Kaplan and Zingales 1997). A higher value of KZ index indicates a higher dependence on external finance.

**Institutional Ownership.** Following prior research, we define block institutional ownership as the total percentage of firm shares owned by investors with more than five percent of a firm’s outstanding shares, and small institutional ownership as the sum of institutional shares with less than five percent. Institutional ownership fluctuates over the course of the year, and we take the maximum value of the quarterly data obtained from Thompson Reuters Institutional Holdings Database (Bushee 1998). Using the mean and minimum value over the four quarters or using the values of the first quarter yields marginal differences.

**Selection Control.** The voluntary nature of management forecast raises concerns of biases in sample selection (McNichols 1989). Most of the recent studies on management forecasts employ a Heckman selection model (Heckman 1979) to address this issue and suggest several instruments for calculating the inverse Mills ratio, including R&D intensity, the risk of litigation, the number of analysts covering the firm in the past, and whether the firm issued the forecast in the prior period (Tucker 2007). Firms are heavily penalized in the stock market if they discontinue issuing management forecasts because it insinuates the presence of unfavorable information (Chen et al. 2011), and we find past disclosure behavior to be the most powerful predictor of the decision to issue management forecasts that is uncorrelated with whether the disclosed performance target is aggressive or not. Although we use this single instrument in calculating the inverse Mills ratio to minimize data attrition, using R&D intensity as an alternative or additional instrument does not qualitatively change any of the results.<sup>10</sup>

**Other Control Variables.** All specifications include firm and year fixed effects. We also control for various factors that have been shown to affect the accuracy and direction of earnings forecasts. We control for firm size and growth rate in t-1, as small or growing firms tend to suffer from a disproportional decline in stock price from earnings disappointment (Skinner and Sloan 2002) and may release more conservative earnings forecasts. Koch (2002) finds that firms at the brink of bankruptcy are more likely to issue upwardly biased management forecasts, and we use Altman’s Z score (Altman 1983) as a proxy for distance to bankruptcy. A higher value of Altman’s Z score indicates higher financial slack and lower risk of bankruptcy, and closely following Koch (2002), we identify firms with Altman’s Z scores below 0 as nondistressed firms. Next, we control for the number of analysts covering the firm each year. They provide close monitoring of a firm’s activities, convey information to broader external stakeholders (Hilary and Shen 2013), and exercise significant influence over the behavior of the firm and other stakeholders (Zuckerman 1999, Benner 2010). Previous research shows that analyst coverage increases the quality and frequency of corporate disclosures (Yu 2008), but has not explored how it affects the upward or downward striving in setting performance targets.

Finally, to address the concern that some CEO characteristics, such as overconfidence or stock options, may increase both financial leverage and the aggressiveness of performance target, we also include firm-CEO fixed effects in one of our robustness checks. We consider there to be a CEO turnover when there is a change in the name of the CEO reported in the Execucomp database. Results are robust to the inclusion of additional controls, including market-to-book ratio, past return on assets and earnings before

**Table 2.** Main Results: Issuing Aggressive Management Forecast

	(1)	(2)	(3)	(4)	(5)
<i>Debt_ratio</i> <sub><i>i,t</i></sub>		0.231* [0.094]			0.171+ [0.098]
<i>Small inst. ownership</i> <sub><i>i,t</i></sub>			-0.462** [0.103]		-0.251* [0.121]
<i>Block inst. ownership</i> <sub><i>i,t</i></sub>				0.479** [0.091]	0.297** [0.106]
<i>Asset (log)</i> <sub><i>i,t-1</i></sub>	0.148** [0.027]	0.139** [0.027]	0.148** [0.032]	0.135** [0.026]	0.133** [0.033]
<i>Analyst coverage</i> <sub><i>i,t</i></sub> (log)	0.106** [0.034]	0.109** [0.030]	0.153** [0.036]	0.119** [0.032]	0.141** [0.037]
<i>Revenue growth</i> <sub><i>i,t-1</i></sub>	0.031 [0.052]	0.029 [0.053]	0.055 [0.057]	0.049 [0.056]	0.053 [0.045]
<i>Financial slack</i> <sub><i>i,t</i></sub>	0.001 [0.001]	0.001 [0.001]	0.001 [0.001]	0.001 [0.001]	0.001 [0.001]
<i>Distance to bankruptcy</i> <sub><i>i,t</i></sub>	0.150 [0.111]	0.123 [0.119]	0.112 [0.128]	0.139 [0.117]	0.102 [0.120]
<i>Inverse Mills ratio</i> <sub><i>i,t</i></sub>	-0.029* [0.012]	-0.029* [0.011]	-0.032** [0.012]	-0.027* [0.012]	-0.029* [0.013]
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.069	0.071	0.078	0.078	0.081
Observations	5,952	5,952	5,952	5,952	5,952

Notes. Block bootstrapped standard errors are in brackets. FE, fixed effects; inst., institutional.

+*p* < 0.10; \**p* < 0.05; \*\**p* < 0.01.

interest and taxes growth, and various controls for a firm's internal financial slack, including sales ratio (working capital divided by total asset) and current ratio (current assets divided by current liabilities).

### Specification

We use the following fixed-effects ordinary least squares specification:

$$\begin{aligned}
 \text{Aggressive}_{i,t+1} = & \alpha_i + \alpha_t + \beta_1 \text{Debt ratio}_{i,t} \\
 & + \beta_2 \text{Small instit. ownership}_{i,t} \\
 & + \beta_3 \text{Block instit. ownership}_{i,t} \\
 & + \beta_4 \text{Analyst coverage}_{i,t} \\
 & + \text{Inverse Mills ratio}_{i,t} \\
 & + \text{Controls} + \varepsilon_{i,t}.
 \end{aligned}$$

The performance target and other independent variables of interest are usually disclosed through management forecasts during the early part of the fiscal year, but whether the performance target was set aggressively or conservatively is revealed to both managers inside the firm and the external market usually a few months after the end of financial year, often resulting in "earnings surprises" (Matsumoto 2002). In calculating standard errors, the selection model requires correcting for the fact that the inverse Mills ratio takes a predicted value either by using the

asymptotic covariance matrix or taking the non-parametric approach such as bootstrapping (Greene 2003). We report results based on the block bootstrapping method.

### Results

Table 1 reports summary statistics for management forecasts. Performance targets disclosed through management forecasts closely capture the actual realized firm performance within small margins of error, deviating by four cents on average. When we dichotomize firms into missing or beating their target, firms moderately lean toward being conservative, disclosing aggressive annual earnings forecasts 44% of the time. Approximately 90% of firm debts are long-term debts that mature in three to five years. The average institutional ownership is 80%, which is higher than the average of 51% among Compustat firms in the 2000s, but directionally consistent with Ajinkya et al. (2005), who find a higher likelihood of management forecasts in firms with significant institutional ownership from the demand for increased transparency. The average sample firm is covered by 10.7 analysts in a given fiscal year.

Model (1) includes control variables. Larger firms are more likely to issue aggressive management forecasts, in line with the finding by Skinner and Sloan (2002) that small growth firms are more heavily penalized in the stock market when missing the target. Analyst coverage is positive and significant, consistent with earlier

**Table 3.** Mechanisms: Issuing Aggressive Management Forecast

	Different types of debt				Types of ownership	
	Short- vs. long-term debt (1)	Maturing long-term debt (2)	Low internal slack (3)	High internal slack (4)	Transient ownership (5)	Value-oriented ownership (6)
<i>Debt_ratio: Short<sub>i,t</sub></i>	0.710** [0.196]	0.706* [0.357]	0.840* [0.404]	0.328 [0.304]	0.785** [0.210]	0.807** [0.210]
<i>Debt_ratio: Long<sub>i,t</sub></i>	0.097 [0.107]	-0.053 [0.140]	-0.058 [0.249]	0.115 [0.106]	0.131 [0.097]	0.141 [0.102]
<i>Small inst. ownership<sub>i,t</sub></i>	-0.242+ [0.137]	-0.210 [0.170]	-0.237 [0.207]	-0.294* [0.148]		
<i>Block inst. ownership<sub>i,t</sub></i>	0.298** [0.098]	0.273+ [0.146]	0.411* [0.171]	0.059 [0.126]		
<i>Transient ownership<sub>i,t</sub></i>					-0.539** [0.160]	
<i>Quasi-index ownership<sub>i,t</sub></i>					0.411** [0.087]	
<i>Dedicated ownership<sub>i,t</sub></i>					0.166 [0.182]	
<i>Growth investors<sub>i,t</sub></i>						0.072 [0.103]
<i>Value investors<sub>i,t</sub></i>						0.292* [0.129]
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.083	0.100	0.098	0.068	0.084	0.075
Observations	5,952	2,856	3,029	2,923	5,952	5,952

Notes. Block bootstrapped standard errors are in brackets. FE, fixed effects; inst., institutional.  
<sup>+</sup> $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ .

research suggesting that active monitoring reduces managers' ability to manipulate information in their favor (Yu 2008). Both proxies of general financial slack—KZ index and distance to bankruptcy—are insignificant. Models (2)–(4) in Table 2 report the results based on individual variables of interest. The coefficient on *Debt ratio* is positive and significant ( $p < 0.05$ ), indicating that highly indebted firms are more likely to engage in upward striving and issue an aggressive management forecast (Model 2). The negative *Small inst. ownership* and positive *Block inst. ownership* in Models (3) and (4) provide support for H2 and H3 and verify the importance of distinguishing between these two types of ownerships. Running all of the variables of interest simultaneously yields consistent results in Model (5). Overall, the results provide consistent support for our proposed model of how organizations set their performance targets and verify H1, which tests the effects of the allocative pressure from increased debt, as well as H2 and H3, which examine varying evaluative pressures from different types of institutional ownership. In terms of economic significance, we find that one standard deviation increase in *Debt ratio*, *Small inst. ownership*, and *Block inst. ownership* increases the probability of earnings disappointment by 3.9, -3.1, and 3.1 percentage points,

respectively (average effects based on linear fixed effects model). These represent sizable changes in the aggressiveness of performance targets issued by the managers.

### Mechanisms: Different Types of Debt and Institutional Ownership

Next, we conduct a series of additional analyses in Table 3 that provide a more nuanced test of our baseline results. We first divide debt into long-term and short-term debt. As debt that matures within a year and requires immediate payment or refinancing, short-term debt potentially serves as a more binding and salient resource constraint compared with long-term debt (Almeida et al. 2012). As a result, we expect the allocative pressure from short-term debt to be greater than that of long-term debt. Consistent with this argument, Model (1) indicates that upward striving from debt is entirely driven by short-term debt, with marginal effects from long-term debt. Second, one might worry that firms experiencing lower-than-expected performance are also more likely to increase short-term borrowings during the course of the year and miss their earnings target. To address this concern, we leverage findings of Almeida et al. (2012) that show long-term borrowing decisions made several years

**Table 4.** Social, Historical, and Other Alternative Baselines

	Alternative baseline		
	Historical (1)	Social (2)	Top (3)
<i>Debt_ratio: Short<sub>i,t</sub></i>	0.027 <sup>+</sup> [0.014]	0.152 <sup>+</sup> [0.092]	0.721 <sup>**</sup> [0.217]
<i>Debt_ratio: Long<sub>i,t</sub></i>	0.025 <sup>**</sup> [0.008]	−0.012 [0.018]	0.104 [0.100]
<i>Small inst. ownership<sub>i,t</sub></i>	−0.025 <sup>*</sup> [0.010]	0.084 <sup>*</sup> [0.033]	−0.270 <sup>*</sup> [0.133]
<i>Block inst. ownership<sub>i,t</sub></i>	0.023 <sup>*</sup> [0.010]	0.090 <sup>*</sup> [0.037]	0.297 <sup>**</sup> [0.115]
Controls	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.076	0.024	0.087
Observations	4,130	5,509	5,952

Notes. Block bootstrapped standard errors are in brackets. FE, fixed effects; inst., institutional.

<sup>+</sup> $p < 0.10$ ; <sup>\*</sup> $p < 0.05$ ; <sup>\*\*</sup> $p < 0.01$ .

earlier to be exogenous to a firm's performance in the year in which such debt matures. We isolate the fraction of short-term debt that comes from currently maturing long-term debt (*ddl* in Compustat). Such maturing long-term debt comprises roughly 50% of what is classified as short-term debt in Compustat. In Model (2), we use a fraction of *ddl* short-term debt instead of the entire short-term debt, but restrict the sample to firms with a debt ratio above the median ( $>0.20$ ) to capture firms with meaningful shares of such debt. There are minimal changes in the overall findings with slightly weaker statistical significance for other variables, in part because of the reduced sample size. We next examine whether the allocative pressure from external debt is moderated by the availability of alternative financial resources, such as large internal cash or a dividend payout that can be readily substituted for external borrowing. In Models (3) and (4), we divide our sample based on the mean value of the Kaplan-Zingales ratio. Short-term debt is significant only for the low slack sample, suggesting that high levels of internal financial slack moderate external resource pressure. Using an alternative measure of a firm's internal financial slack based on sales ratio (Chen and Miller 2007) yields consistent results.

Next, we employ alternative categorizations of institutional ownership. Model (5) divides institutional ownership into three different classes based on the classification by Bushee (1998): transient investors who trade aggressively on short-term performances; quasi-indexers who hold large, diversified portfolios and trade infrequently; and dedicated institutions that hold large, stable holdings in a small number of firms. Consistent with the increased evaluative pressure from their tendency to engage in large-scale selling in

response to missed targets, transient ownership reduces the aggressiveness of performance targets. Similar to block institutional ownership, quasi-index and dedicated ownership are both positive, but only quasi-index ownership achieves statistical significance. This is in line with Bushee (1998), where both types of investors are expected to reduce managerial risk aversion, but only quasi-index ownership has sufficient equity share to generate meaningful effects. Model (6) divides the institutional ownership based on an investor's preference for growth and value stocks based on measures by Abarbanell et al. (2003). Value investors tend to invest in stable firms with a high book-to-market ratio and behave similarly to block or dedicated investors, with low turnover compared with growth investors (Skinner and Sloan 2002). In line with the expectation, we find that value investors indeed encourage setting aggressive targets, but find null results from growth investors.

### Links to Historical, Social, and Other Aspiration Levels

Table 4 tests the validity of our theory using alternative baselines of assessing upward and downward striving. First, we impute *Aggressive* as the difference in the disclosed and historically and socially derived targets. In Model (1), based on the historical trend from the last three years, we find support for all three of our hypotheses. In Model (2) that uses cross-sectional estimates based on other firms in the same four-digit Standard Industrial Classification (SIC) codes, we find support for H1 (debt) and H3 (block ownership), but contrary to H2, small institutional ownership turns positive and significant. However, the slightly weaker results around social aspirations are in line with prior empirical results (Shinkle 2012) and underpin recent efforts at identifying a more realistic and narrower subset of comparison groups. Aside from establishing robustness of our results to alternative baselines, these results show how the evaluative and allocative considerations drive manager-driven, strategic deviations from social and historical reference points.

Model (3) uses the top of the range, rather than the midpoint, of the disclosed target as the baseline. In efforts to reduce accountability, managers may hide their true expectations of performance at the upper range of disclosed performance targets (Ciconte et al. 2014). Finance research on option backdating (Bizjak et al. 2009) also documents that there is a widespread practice of strategically low-balling the baseline of evaluating firm performance in order to increase the value of managerial compensation, suggesting the top of the range as a better proxy of a firm's performance potential. We find all of the results to be robust.

**Table 5.** Robustness Checks

	Firm-CEO fixed effects (1)	Exclude miss/beat < 5 cents (2)	Alternative Mills ratio (3)	Exclude Mills ratio (4)	Binary (5)
<i>Debt_ratio: Short<sub>i,t</sub></i>	0.594* [0.274]	0.701** [0.206]	0.670** [0.234]	0.719** [0.235]	3.117** [1.049]
<i>Debt_ratio: Long<sub>i,t</sub></i>	0.089 [0.106]	0.103 [0.135]	0.093 [0.148]	0.094 [0.092]	0.785 [0.490]
<i>Small inst. ownership<sub>i,t</sub></i>	-0.272* [0.115]	-0.294+ [0.164]	-0.418** [0.130]	-0.225* [0.108]	-1.044+ [0.606]
<i>Block inst. ownership<sub>i,t</sub></i>	0.298** [0.103]	0.383** [0.146]	0.182 [0.144]	0.314** [0.112]	0.949+ [0.560]
Controls	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.090	0.101	0.090	0.082	-1,770 <sup>a</sup>
Observations	5,934	4,689	3,901	5,952	4,623

Notes. Block bootstrapped standard errors are in brackets. FE, fixed effects; inst., institutional.

<sup>a</sup>Log likelihood based on fixed effect conditional logit regression.

+*p* < 0.10; \**p* < 0.05; \*\**p* < 0.01.

### Robustness Tests

Lastly, we address alternative explanations in Table 5. One potential concern is that there is a common driver for both increasing financial leverage and setting aggressive performance targets. Previous research in agency theory and managerial decision making suggests CEO overconfidence as one such factor (Malmendier and Tate 2005). We mitigate this concern by controlling for firm-CEO interaction fixed effects, reported in Model (1). We next test robustness to excluding firm-year observations that closely beat or miss the forecasted targets by less than five cents per share. Firms at the risk of closely missing their targets tend to manipulate both real and accounting activities to beat performance targets (i.e., earnings manipulation) (Bushee 1998, Roychowdhury 2006), and our results could be driven by increased incentives to cheat rather than setting aggressive or conservative targets. We leverage the fact that managers are constrained in the extent to which they can manipulate earnings because nonmarginal manipulations can be easily detected. Model (2) verifies the robustness of our results to excluding firm-year observations that beat or miss the forecasted targets by five percent per share. Consistent results are obtained from using alternative thresholds, including one, three, and 10 cents per share. All results remain directionally consistent with marginal changes in the coefficients from our baseline model. Model (3) uses R&D intensity in the past year as the alternative instrument for calculating the inverse Mills ratio, and Model (4) excludes the inverse Mills ratio. All results remain consistent except for some reduction in statistical significance for *Block inst. ownership* in Model (3). Lastly, Model (5) repeats the baseline Model (1) but dichotomizes *Aggressive* into 1 if positive and 0 if negative in a conditional logistics specification.<sup>11</sup>

It addresses the concern that some outlier observations that significantly beat or miss the target are driving our results. We find all of the results to be consistent but with some decrease in the statistical significance as we switch from a continuous measure to a coarse binary measure. As an additional robustness check, we verify that all of our results are robust to replacing the firm fixed effects with industry fixed effects based on four-digit SIC codes as well as scaling the dependent variables with the target earnings level (untabulated).

### Discussion and Conclusion

How do organizations set aspiration levels? This study proposes and tests a model of organizational aspiration setting that highlights the tension between the evaluative and allocative roles of organizational aspiration level. On one hand, managers have motive to downward strive and reduce performance targets to increase their chances of achieving those targets. On the other, managers need to upward strive and communicate aggressive performance targets in order to secure requisite resources at lower costs. Such characterization integrates three influential streams of research—behavioral theory, resource allocation, and corporate governance—that have remained largely independent in examining the antecedents to organizational aspirations and points to the importance of considering multiple perspectives as complementary accounts on the origins of organizational aspiration level.

Before discussing the implications of our theory and these findings, it is important to recognize key distinctions between how this study discusses aspirations and how previous research has done so. In testing our theory, we rely on management forecasts that allow direct observations of a firm’s performance targets. This complements prior research that has inferred them

indirectly based on differential responses to underperforming or overperforming certain prespecified thresholds and presents a significant empirical opportunity for future research. It also raises important issues. In particular, although these terms are used interchangeably in most research (e.g., Cyert and March 1963, Greve 2003), goals (or performance targets) that guide internal resource allocation *ex ante* and performance benchmarks used to evaluate their outcomes *ex post* are related, yet distinct, constructs. Importantly, previous research focuses on how performance feedback (compared with aspirations) drives organizational change and adaptation. This study takes as a given (based on prior research) that performance versus aspirations is behaviorally important for firms, but instead focuses on the antecedents of aspirations. Thus, although the link between our aspiration-setting perspective and the traditional performance feedback view of aspirations is clear in theory, this current paper does not demonstrate that link empirically. Making meaningful progress on these issues and furthering the link between performance targets, benchmarks, and aspirations likely requires getting inside the firm to obtain more comprehensive data.

That said, the theoretical process of aspiration-setting outlined in this paper offers important contributions for aspirations research on multiple fronts. First, although this study proposes strategic deviations from social and historical aspirations, our findings somewhat counter-intuitively reinforce the importance of these two reference points. The tension between the evaluative and allocative considerations discourages setting targets substantially above or below the two baselines. Moreover, in addition to the difficulty of building internal consensus among various units within the firm (Cyert and March 1963), the external and public nature of performance targets requires their justification to multiple external stakeholders with varying attention and interests. We expect this additional hurdle to further reinforce the reliance on social and historical reference points as the starting and simplifying baselines of organizational aspirations. The tension between the evaluative and allocative roles also helps to account for the limited empirical success in uncovering other antecedents of organizational aspirations, especially those related to upward striving. Looking for upward striving, without carefully accounting for firm governance or other factors that drive downward striving, results in underspecification with a significant bias toward a null finding. Overall, our theory articulates different pieces of the aspiration-setting process to form a more complete picture. This picture encompasses (1) *boundedly* rational managers that rely on social and historical reference points and (2) *boundedly rational* managers that actively advance their interests based on different strategic considerations (3) within the

contemporary context of increasing dominance of shareholder logic (Davis 2009) that complements the managerialist logic emphasized during the first publication of *A Behavioral Theory of the Firm* in 1963 (Cyert and March 1963, Gavetti et al. 2007).

A more nuanced understanding of the way performance targets emerges as well, as their multiple roles also have important implications to a broader strategy and management research. The question of why organizations in similar environments behave differently has been at the center of management and organizational research and has led to perspectives that emphasize heterogeneity in resources (Penrose 1959) and cognition (Porac et al. 1989, Gavetti et al. 2012). Our study suggests that organizational aspirations may be much more heterogeneous and dynamic than previously considered, emerging through interactions with various external stakeholders and also reflecting changing resource needs. As a consequence, the direction and the strengths of performance feedback can vary significantly even for peer firms in the same industry and with seemingly similar levels of past performance, generating divergence in R&D spending, resource allocation, and the degree of risk taking.

Our findings also help to elaborate and extend agency theory with respect to setting performance targets. Extensive research examines managerial shirking and suboptimal risk taking (Fama 1980), but exactly how or where managers seek to shirk or reduce risk taking has not yet been fully articulated beyond managerial bias toward selecting safer projects. Our findings suggest the process of setting performance targets as an important point of agency conflict and information asymmetry. Moreover, current agency research does not provide clear predictions as to how financial slack and managerial risk aversion may interact (Audia and Greve 2006). On the one hand, financial slack can reduce managerial risk-aversion by decreasing the risk of bankruptcy (March and Shapira 1987). On the other, it may lead to managerial complacency as well as tunneling resources toward wasteful pet projects (Nohria and Gulati 1996). Our findings support the latter. In fact, one of the core strategies of private equities and hedge funds include reducing firms' internal cash holdings and increasing external financial leverage (Brav et al. 2008). The consequent increase in resource pressure is likely to force upward striving in setting performance targets and, in turn, encourage risk taking. Our findings also raise practical concerns about the general trend among U.S. firms to hold increasing amounts of cash and liquid assets (Bates et al. 2009). The increased financial security may come at the cost of promoting organizational complacency.

This study also underscores the potential endogeneity in the process of setting organizational aspiration level,

raising caution for extant research that examines the consequences and moderators of performance feedback. Whereas most research has treated financial slack as a moderator of organizational response in response to performance feedback, our findings suggest that they are also important inputs to organizational aspirations. Relatedly, there is growing literature on how governance affects firm responses to performance shortfalls. However, it remains unclear whether the effect arises through moderating organizational responses (e.g., Desai 2016), reducing downward striving in setting performance targets, or by affecting both. More direct observations of a firm's performance targets will make much progress in resolving these issues, but research that directly observes organizational aspirations is still very scarce, and the examination of the process through which organizational aspirations emerge is largely absent.<sup>12</sup>

We conclude by noting some specific limitations of this study, which also may serve as potential future areas of research. First, we do not directly observe the allocative and evaluative pressures and instead rely on various proxies that have been shown to influence their intensity. Qualitative work that focuses on these pressures, and how managers cope with them, would significantly extend our theory. Second, although we believe that the external nature of aspirations and the tension they generate is a pervasive and robust phenomenon, our empirical examination is limited to a subset of public firms that issue management forecasts. How external audiences, such as activists, affect the external nature of aspirations and, in turn, the aggressiveness and dimensions of the aspirations of nonprofit organizations remains an important, yet little-explored, area of inquiry (Desai 2008, Ethiraj and Levinthal 2009, Rowley et al. 2017). Third, we note that the incremental model fit generated by our variables of interest is relatively small, despite the relatively large economic effects of the variables. This is in line with most of the prior research on performance feedback that achieves its explanatory power largely through firm fixed effects and adds only one to two percentage points in *R*-squared values through main independent variables of interest. We believe this is because setting aspirations is inherently a noisy process that brings together political, strategic, and managerial factors, as well as a number of internal and external considerations. This suggests the need for continued research, perhaps taking a more radical approach to looking for missing pieces in the examination of this fundamental topic. For example, although we highlight the vertical dimension of aspirations based on upward and downward striving, organizational aspiration is a multidimensional construct that also involves the horizontal dimension of competing goals (e.g., profitability versus other goals). Some studies also document the strategic obfuscation

of firm performance through the use more ambiguous language (Li 2008) and large acquisitions or strategic reorganizations (Gormley and Matsa 2011) that can render historical aspirations less relevant. This suggests the strength of commitment or clarity of aspirations as another underexplored dimension. We take our study as a first step toward highlighting the different aspects of organizational aspirations with hopes of stimulating future research.

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### Endnotes

<sup>1</sup> Following Cyert and March (1963), Mezas et al. (2002), and Greve (2003), this paper uses aspiration levels, goals, and performance targets interchangeably, although we explore important differences across these terms in the Discussion.

<sup>2</sup> Resource pressure closely relates the notion of "potential slack," defined as "future resources that can be generated from the environment by raising additional debt or equity capital" (Cheng and Kesner 1997, p. 2).

<sup>3</sup> Specifically, Bromiley (1991) proposes upward adjustment of 5% for firms with performance above the industry mean.

<sup>4</sup> They are sometimes referred as "disciplining through exit" and "disciplining through voice" (Edmans 2009).

<sup>5</sup> Refer to Edmans (2009) for a review of how small and block institutional ownership differ in their liquidity and ability to trade.

<sup>6</sup> It remains a question how firms are able to repeatedly engage in walking down external expectation without incurring penalty in the capital market (Kross et al. 2011).

<sup>7</sup> Transcripts of earning calls are often made publicly available. Refer to the GE website (<http://www.ge.com/investor-relations/events>) for some illustrations of the contents of management forecasts.

<sup>8</sup> Specifically, we estimate  $E_{i,t+1} = \alpha_i + \alpha_t + \beta_1 E_{i,t} + X + \varepsilon_{i,t}$  using the previous 10 years of data for each four-digit SIC code, where  $E_t$  denotes the earnings of firm  $i$  at year  $t$ . Refer to Hou et al. (2012) for a more detailed description of control variables ( $X$ ), including accrual and dividend payout.

<sup>9</sup> Specifically, we apply the average of the year-to-year growth rates in the past three years. Using a compound annual growth rate makes little difference in the overall results.

<sup>10</sup> The results from the first-stage regressions are available upon request. The appropriate model for deriving the inverse Mills ratio (IMR) has been subject to some debate. If the selection is done every year, Wooldridge (1995) suggests that the IMR should be predicted for each year. If there is a more stable driver of the selection process that affects the selection across multiple years, Greene (2010) proposes that pooling the observation provides the correct first stage. We follow Wooldridge and predict the inverse Mills ratio for each year, but all of the findings are robust to the alternative method.

<sup>11</sup> Model (5) needs to be interpreted with caution because the assumptions required to satisfy both unbiasedness and consistency in a two-step likelihood estimation (i.e., Heckman selection models

where the second stage uses a nonlinear estimator, such as Poisson, probit, or logit) are highly restrictive and cannot be verified (Greene 2003). Excluding the inverse Mills ratio in a standard logit specification yields consistent results.

<sup>12</sup>Two notable exceptions are Mezas et al. (2002) and Washburn and Bromiley (2012), who directly observe performance targets of different subunits within a single firm.

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**Dongil D. Keum** is an assistant professor at Columbia Business School. He received his PhD from Stern School of Business at New York University. His research explores firm innovation with a focus on its three determinants: organizational structure, resource adjustment ability, and public policy.

**J. P. Eggers** is an associate professor of management and organizations at New York University's Stern School of Business. His research interests focus on how technological and industry evolution affect firm strategy, with a particular emphasis on strategic decision making.