Antitakeover Provisions and Firm Value: New Evidence from the M&A Market

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ABSTRACT

New evidence from acquisition decisions suggests that antitakeover provisions (ATPs) may increase firm value when internal corporate governance is sufficiently strong. We document that, in Germany, firms with stronger ATPs, and particularly supermajority provisions, are better acquirers. Managers of high-ATP firms create value in acquisitions by making governance-improving deals. They are more likely to engage in acquisitions that reduce their own entrenchment level and less likely to invest in declining industries. The empirical evidence is consistent with a short-termist interpretation. Takeover threats can induce myopic investment decisions, which ATPs can mitigate. They lead managers to engage more often in value-creating long-term and innovative investing, and increase a firm's sensitivity to investment opportunities. Our findings contribute to a growing literature challenging conventional wisdom that the agency-increasing effect of ATPs empirically dominates the myopia-eliminating effect, suggesting that a more contextual view of the value implications of ATPs is necessary.

1. Introduction

Antitakeover provisions (ATPs) are a contentious topic in corporate governance research. Prior research held that ATPs tend to harm firm value because they partially insulate managers from takeover threats (Gompers et al. (2003), Bebchuk et al. (2009)). Two influential studies, Masulis et al. (2007) and Harford et al. (2012), argue that the firm value discount due to ATPs comes largely from acquisitions of the empire-building type by entrenched managers.

More recently, however, a growing literature has concluded that ATPs may actually be beneficial for firms in various contexts. One of the first studies is Chemmanur et al. (2011). They find that, in the context of IPOs, firms with better management quality and more ATPs outperform their peer firms both in terms of IPO valuation and post-IPO performance. Relatedly, Johnson et al. (2015) argue that ATPs can lead to higher IPO valuations and post-IPO performance because they help to credibly bond firms' commitments to their business partners. Similarly, Cen et al. (2016) document that ATPs can help firms that have corporate customers as important stakeholders achieve superior performance by strengthening their customer relationship. ATPs also increase firm value in hard-to-value industries (Humphery-Jenner (2014)) and for firms with low bargaining power as potential takeover targets (Stráška and Waller (2010)). Finally, Chemmanur and Tian (2018) use a regression discontinuity analysis to show that firms with more ATPs not only generate more patents, but more high-quality patents, indicating a causal effect of ATPs on innovation.

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Our research contributes to this literature in two primary ways. First, our paper presents the first study of ATPs in Germany, a corporate governance system that has often been compared to that in the U.S. (Shleifer and Vishny (1997), Allen and Gale (2001), Hopt (2015)). Because most ATP studies are based on U.S. firms, we believe our study provides important complementary evidence. As forcefully shown by Karpoff and Wittry (2018), the institutional context is key to inferences in corporate governance studies. Second, our study is the first to show that firms make better acquisitions if they have more and stronger ATPs in their corporate charters. The evidence contrasts starkly with that presented in the two benchmark studies of U.S. firms by Masulis et al. (2007) and Harford et al. (2012).

We draw on Chemmanur and Jiao's (2012) excellent theoretical framework to develop testable hypotheses for the ATP-value relation in the German context. Their theoretical model goes beyond that of Stein (1988, 1989), who establishes the possibility of managerial short-termism driven by asymmetric information. Chemmanur and Jiao (2012) demonstrate that, in an environment with asymmetric information about management quality, dual-class share structures and other ATPs may be value-enhancing in the presence of talented managers. Accordingly, their long-term value creation hypothesis establishes relations among the quality of a firm's management, the prevalence of ATPs in its corporate charter, and long-run value creation. We thus rely on Chemmanur and Jiao's (2012) framework in our research context to derive several hypotheses about the value creation by acquiring firms with a higher number of ATPs, as well as their specific sources.

Our overarching hypothesis is that, in the German institutional setting, firms with more and stronger ATPs create value in acquisitions. We derive this prediction in large part from the institutional feature that German firms historically relied less on external control mechanisms. Despite many recent corporate governance reforms that aimed to improve external control mechanisms, such as the European Takeover Directive, which sought to increase external control contestability (see Dissanaike et al. (2019)), internal control mechanisms such as a two-tier board structure, blocker monitoring, and co-determination of the supervisory board remain dominant features in the typical German firm (Goergen et al. (2008)). These internal control mechanisms create effective management accountability vis-à-vis important stakeholders in the firm. Because of their power to withdraw their contributions to the firm, as argued by Acharya et al. (2011), these stakeholders can efficiently discipline managers. Therefore, while there is some evidence of the long-run value-creating effects of ATPs in the U.S. (Chemmanur et al. (2011), Johnson et al. (2015), Cen et al. (2016), Chemmanur and Tian (2018)), these effects may be even more pronounced in the German institutional setting, given the lower reliance on external control mechanisms.1

For our empirical analyses, we hand-collected data on thirty-six ATPs for a sample of public firms in Germany. This dataset allows us to reconstruct the widely used corporate governance indices such as the G-Index (Gompers et al. (2003)), the E-Index as well as the O-Index (Bebchuk et al. (2009)), and the C-Index (Harford et al. (2012)). The empirical results confirm our main hypothesis that entrenchment indices are significant drivers of acquirers' cumulative abnormal announcement returns (CAARs). On average, ATPs have a positive valuation effect, i.e., acquirer announcement returns are higher in firms with stronger takeover defenses. As in Harford et al. (2012), we observe that the C-Index better explains CAARs than the E-Index. In all subsequent analyses, we thus focus on the C-Index, which is defined by the sum of dummy variables for a classified board structure (vis-à-vis a staggered board structure for the E-Index), a supermajority regarding transaction voting, limits on amending corporate charters and bylaws, golden parachutes, and poison pills. In stark contrast to the benchmark studies, Masulis et al. (2007) and Harford et al. (2012), the C-Index increases acquirer returns by about 0.50% per adopted ATP. This is a non-trivial figure given average CAARs of 0.63%.

To better understand our results, we investigate whether the C-Index impacts deal characteristics. Harford et al. (2012) find that the value destruction in acquisitions by entrenched managers in the U.S. is explained by target selection that increases managerial entrenchment. In contrast, we show that managers of German firms that adopt more ATPs (hereafter referred to as high-ATP firms) make a number of governance-improving deals which explain the observed superior acquirer returns.

First, firms with a higher C-Index are more likely to import blockholders. For example, they increase blockholders' monitoring by paying for acquisitions of public targets that involve large investors with own stock. This contrasts with the behavior of U.S. “dictators,” i.e., highly entrenched managers, who typically choose cash payments for such targets in order to avoid a weakening of their level of entrenchment. Second, the C-Index is positively related to the probability of acquiring targets listed on multiple stock exchanges. This reduces discretion through an increase of external scrutiny from multiple regulations (Gilson 2001). Third, the C-Index is negatively related to the probability of acquisitions in declining industries, which has been shown to be a primary value-destroying investment object for entrenched managers when shareholder rights are weak (Wurgler (2000)). Taken together, our results indicate that managers from high-ATP firms create value in acquisitions through superior target selection.

Having shown that ATPs do not exacerbate agency conflicts in our German sample, we next explore whether managerial myopia or short-termism explains ATPs' value creation. Short-termism may arise as a consequence of market pressure. Information asymmetry prevents managers from accurately communicating the true value of investments. In turn, shareholders may misunderstand any temporary earnings drop associated with long-term investments as bad news and depress the share price. This mechanism paves the way for opportunistic takeovers and making myopic decisions in general. For example, one approach to measure short-termist market pressure is to use the volume of recent and related acquisitions as a proxy for the threat of takeover (Gorton et al. (2009)). If the takeover threat creates myopic behavior, and acquirers fear becoming targets themselves, we should observe more valuable acquisitions by managers from high-ATP firms in industries with higher levels of takeover activity. This is precisely what we find: Takeover threats, measured using several different proxy variables, create short-termism. Managers in industries with high takeover

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1 A comprehensive comparison of the reliance on internal versus external control mechanisms in Germany and the U.S. is beyond the scope of our study. Related analyses in Shleifer and Vishny (1997) and Allen and Gale (2001) support our argument.
threats make worse acquisitions, but the marginal effect of ATPs in these industries is significantly positive. We conclude that ATPs can help eliminate short-termism.

Next, we examine how ATPs can help managers to defy short-termism. We identify three channels. First, we find supporting evidence for Humphrey-Jenner's (2014) hard-to-value theory. He maintains that hard-to-value firms, which are more likely to be targets in opportunistic takeovers and thus more often subject to short-termism, benefit from ATPs. For example, acquirers in the medical and pharmaceutical industries benefit most from ATPs, with an increase in announcement-related average CAARs as high as 1.34% per adopted ATP. Second, high-ATP firms have more value-creating R&D expenditures associated with an acquisition. The probability that a high-ATP firm increases its R&D expenditures following an acquisition with a positive CAAR is 27.1% higher. These results are consistent with Chemmanur and Tian (2018), who show that ATPs have a causal effect on innovation. Third, following Asker et al. (2015), we examine the investing behavior of managers of high-ATP firms. As expected, they invest more selectively and allocate capital more efficiently. In particular, while they invest less in absolute amounts, they react more sensitively to changes in investment opportunities. This finding again suggests that they are plagued less overall by short-termism.

Our results survive a number of robustness checks, including controls for the strength of internal corporate governance, such as the level of concentrated ownership, board size, and management quality, and other external governance mechanisms such as product market competition. Moreover, we discuss potential endogeneity concerns. A frequent objection in empirical corporate governance research relates to reverse causality. Instead of ATPs leading to good or bad acquisition decisions, reverse causality posits that good or bad managers may choose to adopt ATPs in the first place in order to enable value-increasing or -decreasing behavior. If this argument were true, we expect to find at least some variation in the use of ATPs, especially around CEO turnovers. However, we observe no significant time series variations in the adoption of ATPs, and thus reverse causality does not seem to be an issue in our sample. We also use a control function approach to model spurious correlations in the error term, and find that unobserved factors do not bias our results.

The remainder is organized as follows: Section 2 presents the necessary theory and develops our testable hypotheses. Section 3 provides the data description. Section 4 identifies the main effect of ATPs on acquirer returns. Section V examines the channels through which entrenched managers create value in acquisitions. Short-termism as a potential explanation for our findings is tested in Section 6. Section 7 presents the robustness checks, and Section 8 concludes.

2. Theory and testable hypotheses

2.1. Antitakeover provisions and acquirer returns

Starting point for studies of ATPs is the threat of takeover. Classical theory suggests that the threat of takeover reduces agency costs because it increases the probability that poorly performing agents will be dismissed (Manne (1965), Jensen and Ruback (1983), Holmström and Kaplan (2001)). This effect unfolds in two ways: (i) by creating ex ante incentives for managers to perform so that a takeover is not lucrative for potential acquirers in the first place, or (ii) by reducing agency costs ex post by replacing poorly performing managers upon completion of the takeover. Both effects receive strong empirical support (Lel and Miller (2015), Stráska and Waller (2014)).

Our main hypothesis, which is closely linked to Chemmanur and Jiao’s (2012) long-term value creation hypothesis, challenges the standard literature. They consider a framework in which the incumbent management of a private firm wishes to sell equity to outsiders in an IPO to raise external financing for its project using either a dual- or single-class share structure. The incumbent obtains both security benefits (from the equity he or she owns in the firm) and private benefits of control. Because Chemmanur and Jiao’s (2012) model can also be applied to ATPs in a more general context, it provides a theoretical underpinning for our analysis.

A firm can choose between a long- or short-term project. The long-term project is intrinsically more valuable since it maximizes long-term value. However, with information asymmetry between insiders and outsiders, adopting the long-term project may lead to undervaluing firm equity in the short-term. This is because it takes a longer time until the uncertainty of outsiders about the success or failure of the long-term project will be resolved. As a result, the takeover threat increases with the choice of the long-term project. An incumbent experiences a greater chance of losing control to a potential rival because outside investors may hold sufficient voting power and opt for the rival in a control contest, eventually replacing the incumbent. The incumbent may be talented or untalented; talented managers are relatively more efficient at implementing projects than untalented managers. The talent of the incumbent is private information and cannot readily be observed by outsiders. In this situation, the incumbent makes a joint decision about ATPs in the corporate charter, the type of project, and how much effort to exert in implementing the project.

Chemmanur and Jiao (2012) derive that, in equilibrium, the choice of the talented incumbent between adopting stronger or weaker ATPs depends on three mechanisms. First, insulation from the takeover market provided by stronger ATPs allows the incumbent to create more value by choosing the long-term rather than the short-term project. Second, insulation allows untalented incumbents to slack off and squander firm value without fear of losing control to potential rivals. Because of the information asymmetry about the quality of the incumbent, this loss-of-discipline effect is also reflected in a lower share price of the talented manager’s firm if he adopts stronger ATPs. Third, independent of the project type, the expected value of the incumbent’s control benefit is always greater under a corporate charter with stronger ATPs. If the incumbent’s reputation is high enough and the firm has

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2 This result is also in line with Humphrey-Jenner (2014), but it contrasts with Atanassov (2013), who documents that innovation declines when U.S. firms’ exposure to a takeover threat is reduced.

Electronic copy available at: https://ssrn.com/abstract=3315730
greater opportunities for long-term value creation, Chemmanur and Jiao’s (2012) model predicts that management will adopt stronger ATPs. This is because the long-term value creation effect dominates the reduction in share price arising from the loss-of-discipline effect, i.e., stronger ATPs will be value-enhancing for shareholders.

Note that management quality plays a crucial role in the long-term value creation hypothesis. In our analysis, we maintain Chemmanur and Jiao’s (2012) premise, but shift the focus to the relations among ATPs, firm quality, and the country’s corporate governance system under which the firm operates. A promising approach to understanding when and how ATPs affect firm value is to distinguish between firms in shareholder- and stakeholder-oriented financial systems (Shleifer and Vishny (1997), Allen and Gale (2001)).

Shareholder-oriented systems, such as the U.S., are characterized by a greater reliance on market-driven, external governance. Intense product market competition allows firms to operate within only a thin margin of error, and inefficiencies are immediately punished by reduced firm value and a higher takeover threat (Giroud and Mueller (2011)). Managers are disciplined predominantly through external forces, but the adoption of ATPs acts as a counterbalance. Therefore, the relative importance of external disciplining may explain why ATPs are associated with value destruction in shareholder-oriented environments, as suggested by Masulis et al. (2007) and Harford et al. (2012).

In contrast, stakeholder-oriented systems such as Germany rely more on internal governance to discipline managerial agents. Such mechanisms include, for example, blockholder monitoring, a two-tier (management and supervisory) board system, co-determination between shareholders and employees of the supervisory board, and creditor monitoring arising from long-term lending relationships (Goergen et al. (2008), Hopt (2015), Rapp and Strenger (2015)). Because important stakeholders elicit greater management accountability, firms with strong internal governance may resolve agency conflicts internally in a more efficient way. Therefore, ATPs may harm less, while at the same time still effectively curbing externally induced short-termism or myopia. Consistent with Chemmanur and Jiao’s (2012) long-term value creation hypothesis, our hypothesis holds that the net effect of ATPs on acquirer returns is positive in stakeholder-oriented countries such as Germany.

Our hypothesis is compatible with the model of internal governance in Acharya et al. (2011), where the self-serving actions of a CEO are limited by the potential reaction of powerful stakeholders. In their overlapping generations model, stakeholders care about the future of the firm and can withdraw their contributions if the CEO becomes overly entrenched. This should force the CEO to act in a more far-sighted (and less myopic) way and to invest for the future. Otherwise, without stakeholder participation, the CEO may jeopardize his compensation level. As a result, internal governance can mitigate agency problems and ensure that firms have substantial value, even with little or no external governance by investors.

Allen and Gale (2001) also consider an overlapping generations model with a short-term CEO and managers competing for the CEO role in the subsequent period. Similarly, the model assumes complementarities between the CEO and managers in cash flow production, which force the CEO to cooperate with managers (and stakeholders in general) and lengthen the effective horizon of his decision-making. They use this model of internal governance to motivate, as they argue, the relative merits of the stakeholder focus of governance in German firms compared to the shareholder focus in Anglo-Saxon firms.

Gillan et al. (2011) find that firms increase their internal scrutiny after adopting ATPs. Rapp and Strenger (2015) confirm this shift in governance for German firms. Therefore, the adoption of ATPs may not necessarily imply a loss of governance, but rather a shift of governance. This shift toward internal governance has the advantage that insiders possess private information, allowing them to better evaluate and eventually approve innovative projects. These types of projects would otherwise not be implemented without the adoption of APTs due to managerial myopia.

Finally, note that the “German Corporate Governance Code” (GCGC) provides the overarching governance framework for firms headquartered in Germany. Its ruling paradigm is that it guides the “sustainable creation of value in conformity with the principles of the social market economy (interest of the enterprise)” (GCGC (2018, p.2)). It stands in favor of a stewardship theory of the firm compared to a shareholder-value theory, which is why, in Germany, different stakeholder groups such as shareholders, employees, banks, and peers govern managerial decision making jointly. Historically, these influences have created strong internal governance mechanisms, driven partly by the need to discipline self-interested managers in the absence of active takeover markets. Active takeover markets have developed in most Continental European countries over the past two decades, but strong internal governance has not disappeared. Rather, both governing forces seem to co-exist (Rapp and Strenger (2015)). Therefore, legacy systems of relying on internal corporate governance tend to prevail and, at least in theory, can efficiently resolve agency conflicts.

Overall, we argue that firms in shareholder-oriented countries are likely to gain more from the disciplining effect of an active market for corporate control compared to strong internal governance firms in stakeholder-oriented countries, whilst firms in both systems are similarly affected by market-induced short-termism. Therefore, the adoption of ATPs may have a positive valuation effect in stakeholder-oriented countries like Germany. Our first testable hypothesis is:

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3 For a related debate in the international business literature on how the effect of foreign ownership and directors on corporate governance and firm performance depends on the institutional environment, see the excellent survey by Cumming et al. (2017), Cao et al. (2019) explain how the institutional environment, specifically legal investor protection, determines the extent of value creation for takeovers around the world.

4 See Allen and Gale (2001), chapter 12.

5 For more details, see https://www.dcgk.de/en/home.html.

6 We are not suggesting that failures of corporate governance practices will not occur in German firms. In fact, there have been several prominent corporate governance scandals in Germany in recent years. One case that was heavily discussed in the international media was the emissions scandal at the automaker Volkswagen. From their case study of this scandal, Elson et al. (2015, p.657) generally conclude that “the German corporate organizational governance structure of co-determination creates an environment in which a corporation must juggle the conflicting interests of the shareholder and the labor representatives, thereby limiting the prospects for long-term corporate success.”
Hypothesis 1. ATPs have a positive valuation effect in German firms, i.e., acquirer announcement returns are higher in firms with stronger ATPs.

2.2. Sources of value creation

The question that follows from the discussion so far is how managers in ATP firms create value in acquisitions. Acquisitions are well-documented manifestations of agency conflicts between managers and shareholders. Agency costs are higher when managers undertake acquisitions for self-interests, usually involving an expansion of managerial discretion. Examples of such acquisitions include, inter alia, empire building (Jensen (1986)) and defensive takeovers (Gorton et al. (2009)). Harford et al. (2012) show that entrenched managers are more likely to destroy value in these transactions. On the flip side, managers can send out a positive signal to shareholders when they reduce their entrenchment levels through acquisitions. Therefore, we examine target selection as a potential channel for the positive valuation effect and derive a set of interrelated hypotheses.

First, managers can engage in acquisitions that lead to an increase in internal monitoring. In particular, managers could use acquisitions to construct more valuable ownership structures by creating or importing large shareholders. Shareholders with large stakes and high private incentives for controlling managers will invest in costly information acquisition and exercise effective control (Stiglitz (1985), Tirole (2001)). Therefore, monitoring by large shareholders is expected to increase firm value and, in our context, acquirers create value when they import large shareholders.

Because ownership in private targets is usually concentrated, offering cash-only considerations to private targets to avoid importing a blocker may signal behavior to preserve entrenchment. Chang (1998) and Fuller et al. (2002) document that CAARs are higher in acquisitions of private targets that include an equity payment. An alternative explanation for this observation is a certification effect. Private targets accept equity payments only if they are convinced of the acquirer’s prospects, which usually requires access to private information. This effect implies increased scrutiny, at least temporarily, which self-interested managers are likely to avoid (Möller (2007)). Acquirer announcement returns may thus be higher in firms with stronger ATPs because they acquire private targets less frequently with cash-only payments.

In the case of public targets with existing blockolders, acquisitions increase internal monitoring when they are effected with equity. In this way, the target’s blockholder is imported to the acquiring firm’s shareholder basis and has the ability and incentive to monitor. Both Harford and Li (2007) and Aggarwal et al. (2011) show that large shareholders monitor, inter alia, by playing active roles in shareholder meetings. Therefore, if managers in high-ATP firms create more value in acquisitions, one explanation could be the higher frequency of stock-financed acquisitions of public targets with existing blockholders.

Second, firms can improve external governance in acquisitions. One way to do this is to acquire targets that are listed on more than one stock exchange, which must obey regulations in multiple jurisdictions and multiple stock exchanges. Gilson (2001) and Coffee (2002) document that cross-listed firms are subject to better corporate governance with implications for managerial discretion. Therefore, managers of firms with stronger ATPs create value by decreasing their discretion because of the increased scope of rules and regulations with which they must comply.

Third, value creation in acquisitions is often attributed to the avoidance of low-growth targets. Wurgler (2000, p.189) shows that capital allocation efficiency improves by “limiting overinvestment in declining industries rather than through improving the supply of finance to growing industries.” Levine (2017) also documents that efficient firms tend to acquire high-growth firms. In contrast, acquiring low-growth targets is consistent with “empire building” (Jensen (1986)) and “quiet life” motives (Bertrand and Mullainathan (2003)). If managers of high-ATP firms create value, we expect them to be less likely to acquire low-growth targets.

Based on these arguments, we test the following set of hypotheses related to superior target selection of high-ATP firms:

Hypothesis 2a. Firms with stronger ATPs are more likely to engage in acquisitions that import blockholders.

Hypothesis 2b. Firms with stronger ATPs are more likely to acquire cross-listed targets.

Hypothesis 2c. Firms with stronger ATPs are less likely to acquire low-growth targets.

2.3. Short-termism

The next question is why acquirers with more ATPs outperform. According to Stein (1988), if the takeover threat exceeds “healthy” levels, it can lead to myopic or short-termist behavior. As Holmström (1999), Shleifer and Vishny (1990), and Von Thadden (1995) argue, myopic managers focus on short-term profits and tend to forego projects that maximize a firm’s long-term value. Chemmanur and Jiao (2012) suggest that ATPs provide a solution to this problem: Managers who are insulated from the takeover market, at least in some firms, are more likely to choose targets that themselves maximize long-term value.

Empirical evidence of managerial myopia has proved elusive, largely because it is difficult to identify a counterfactual for how firms would have invested absent such myopia (see, for recent references, Kaplan (2017) and Asker et al. (2015)). In our specific context, much more direct tests are viable. For example, we can measure short-termist market pressures by the threat of takeover in

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7 Earnings response coefficients, measuring the sensitivity of stock prices to earnings announcements, are frequently used to estimate short-termism. However, they also have been the subject of criticism (Ball and Brown (1968)).
the acquirer's market and examine how managers' acquisition decisions in ATP firms are affected (for a similar approach, see Gorton et al. (2009)). In particular, we expect that the positive impact of ATPs on acquirer announcement returns will be stronger during times of higher takeover threats, due to reduced managerial myopia or short-termism.

If this prediction holds, a related question is how managers in high-ATP firms can defy short-termism. We hypothesize that ATPs, at least in some firms, can promote investing in innovative, value-creating projects. There are two arguments for this conjecture. First, there is heterogeneity across firms, so not all firms are exposed to the same level of takeover threats. Humphery-Jenner (2014) argues that some firms are more likely to become targets in a myopic market. Following his argument, if the takeover threat is driving short-termist behavior, we expect that firms that are more exposed to the threat of takeover will benefit more from adopting ATPs.

One class of firms that tends to be significantly threatened by a myopic market is hard-to-value (HTV) firms. Broadly speaking, the investment projects and corporate strategies of these firms are difficult to value, because “their investments can be long-term, rely on intellectual capital, and/or depend on key personnel” (Humphery-Jenner, 2014, p.669). HTV-firms often trade at a discount because of valuation difficulties, and if exchange-listed HTV-firms are undervalued, they are more likely to fall victim to opportunistic takeovers. Therefore, in HTV-firms, ATPs that protect from that risk may credibly encourage managers to undertake value-creating investments; in easier-to-value firms, they might lead to inefficient governance. Humphery-Jenner (2014) shows that HTV-firms often operate in the pharmaceutical and medical sectors, and thus acquirers from these sectors should benefit more from adopting ATPs.

Second, Stein (1988) and Chemmanur and Jiao (2012) predict that myopic managers underinvest in innovative projects because the value of such projects is often difficult to assess for investors in the short-run. We test the hypothesis that ATPs encourage managers to pursue investments that generate value-creating innovation. If acquirers with stronger ATPs are more likely to increase innovation in a way that creates value, R&D should increase around acquisitions, and the announcement returns should be higher in such transactions.

Finally, we draw on the literature to examine how investment behavior differs between firms with ATPs and those without. We use Asker et al.’s (2015) extension of Holmström’s (1999) framework to examine the sensitivity of investment to changes in investment opportunities in high-ATP firms. A focus on boosting short-term profits can distort investment decisions when investors have no or insufficient information about the optimal level of investment and its true value. For example, myopia leads managers to reduce depreciation charges to earnings (Graham et al. (2005)). Based on his literature survey, Almeida (2019) concludes that EPS targets, a major driver of short-termism, affect stock repurchases, R&D investments, capital expenditures, employment, and the structure of M&A deals. Asker et al. (2015) find that investment decisions are more responsive to investment opportunities, and thus capital is allocated more efficiently, in firms that are less exposed to short-termist pressures. Therefore, we expect that the responsiveness of investment to changes in investment opportunities will be higher in firms with stronger ATPs.

Overall, based on these theoretical considerations, we test the following set of hypotheses related to managerial short-termism:

**Hypothesis 3a.** The positive impact of ATPs on acquirer announcement returns is stronger during times when and in markets where the takeover threat is higher.

**Hypothesis 3b.** The positive impact of ATPs on acquirer announcement returns is stronger in hard-to-value firms.

**Hypothesis 3c.** Acquirers with stronger ATPs are more likely to invest in value-creating innovation.

**Hypothesis 3d.** Acquirers with stronger ATPs are more responsive in their investment to changes in investment opportunities.

### 3. Data

#### 3.1. Corporate governance data

We hand-collected data on thirty-six ATPs from annual reports, press releases, and company filings in the Thomson Reuters Corporate Governance database, building a comprehensive sample of firms that covers more than 80% of the market capitalization in Germany. The data suffice to reconstruct the widely used corporate governance indices, including the G-Index (Gompers et al. (2003)), the E-Index as well as the O-Index (Bebchuk et al. (2009)), and the C-Index (Harford et al. (2012)).

We also construct a composite index of all thirty-six provisions, including those recommended in the German Corporate Governance Code (GCCG), which is similar to the index constructed in Drobetz et al. (2004). While the C-Index and the E-Index are proxies for managerial entrenchment, the other indices can be regarded as proxies for the more general quality of corporate governance. Table 1 describes the individual ATPs and the construction of the indices.

#### 3.2. M&A data

We compile a comprehensive sample of 519 acquisitions announced between 2009 and 2014 by publicly listed acquirers for whom we have ATP data. The sample is from the Thomson Reuters SDC Platinum M&A Database. We impose standard sample requirements (Harford et al. (2012)), i.e., there must be a change in control, and accounting and stock price data must be available from Compustat and CRSP, respectively.

We use eleven-day market-adjusted cumulative abnormal acquirer returns (CAARs) around the announcement date to estimate the impact of an acquisition on shareholder value. The German Stock Market Index (DAX) is applied as the benchmark to adjust stock returns. This methodology is standard in the literature and yields results consistent with other methods, such as OLS market models.
| Provision | Definition |
| --- | --- |
| Classified board | Directors serve for different term lengths. Classified boards are inherently staggered. |
| Supermajority vote regarding significant transactions | Supermajority vote regarding charter amendments. |
| Poison pill | Limitation on shareholders’ voting power to amend the corporate charter. |
| Golden parachute | Cleanup on management compensation. |
| Blank check stock | Stock that, when authorized, gives the board broad discretion in establishing voting, dividends, and other rights when issued. |
| Limitations on shareholder ability to call special meetings | Limitations on shareholders’ ability to call special meetings (as opposed to acting through the regularly scheduled shareholders meeting). |
| Golden parachute | After the firm is taken over, executive officers get substantial benefits. |
| Limitations on director liability | Limitations on personal liability of directors. |
| Pre-emptive rights | Right to purchase new shares at the same terms as the public. |
| Unequal vote | Proportionate voting power changes based on certain conditions. |
| Sell-out rights | Right of shareholders to sell their shares to a third party. |
| Antitakeover provisions and corporate governance indices. The C-Index is constructed in accordance with Harford et al. (2012), the E-Index in accordance with Bebchuk et al. (2009), and the G-Index in accordance with Gompers et al. (2003). The GCGC-Index is constructed based on all recommendations provided by the German Corporate Governance Code (GCGC). ATP definitions come from Bebchuk et al. (2009) and the GCGC (where available). |

This table provides an overview of the antitakeover provisions (ATPs) that are used to construct the corporate governance indices. The C-Index is constructed in accordance with Harford et al. (2012), the E-Index in accordance with Bebchuk et al. (2009), and the G-Index in accordance with Gompers et al. (2003). The GCGC-Index is constructed based on all recommendations provided by the German Corporate Governance Code (GCGC). ATP definitions come from Bebchuk et al. (2009) and the GCGC (where available).
This table presents descriptive statistics of the corporate governance indices (Panels A and B) and provides a univariate comparison between acquirer cumulative average abnormal returns (CAARs) based on the C-Index (Panel C). The O-Index is computed as the difference between the G-Index and the E-Index. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.
to compute abnormal returns (MacKinlay (1997), Humphery-Jenner (2012)).

Table 2 provides an overview of the corporate governance indices and the CAARs. The measures of central tendency in Panel A suggest that fewer ATPs are adopted by German firms than in the U.S. Bebchuk et al. (2009) report an approximate mean of 3.00 for their E-Index, while the average E-Index in our sample is only about half of that (1.44). All five indices are highly correlated with each other (see Panel B), but only the two entrenchment indices, the C-Index and the E-Index, are significantly and positively correlated with the CAARs. The absolute magnitudes of the correlation coefficients are slightly higher than those shown in Masulis et al. (2007) (ranging from −0.043 to −0.060), but they are different in that they have opposite signs. In Panel C, we use the C-Index to divide our German sample into above-mean and below-mean acquirers. Above-mean acquirers have higher entrenchment levels and, as noted earlier, are often referred to as “dictators” in the corporate governance literature (Gompers et al. (2003)). A comparison of the mean and median CAARs between the two groups indicates that these dictators are significantly better acquirers.

In Table 3, we present summary statistics and variable definitions. As shown in Panel A, the average CAAR during the event window [−5; +5] around the announcement date is a statistically significant 0.63%, suggesting that, on average, German acquirers create value. Panel B describes the acquirer characteristics. Compared to U.S. acquirers, German acquirers are larger in terms of market value, more leveraged, and exhibit higher Tobin’s q. The deal characteristics in Panel C indicate that every second acquirer diversifies, three out of five deals involve a foreign target, one in five involves a public target, and hybrid considerations dominate the method of payment.

4. Antitakeover provisions and acquirer returns

4.1. Baseline results

The baseline model regresses CAARs on our various corporate governance indices (INDEX) and a set of variables that is standard in the M&A literature (see, e.g., Harford et al. (2012)). All variables are defined in Table 3. As an additional explanatory variable, we define relative deal size as deal size over acquirer’s firm size. A correlation matrix of all variables is shown in Table 4. In addition, we check variance inflation factors (VIFs). Since the highest VIF is below 2, multicollinearity among the explanatory variables does not appear to be an issue. Our baseline regression specification is:

\[
CAAR_{[−5;+5]} = \beta_0 + \beta_1 (INDEX) + \beta_2 (Tobin's q) + \beta_3 (Market value) + \beta_4 (Leverage) + \\
\beta_5 (Cross-listing) + \beta_6 (Stock price runup) + \beta_7 (Relative deal size) + \\
\beta_8 (Diversification) + \beta_9 (Cross-border) + \beta_{10} (Stock consideration) + \\
\beta_{11} (Hybrid consideration) + \beta_{12} (Public target) + \beta_{13} (Subsidiary target) + \\
\beta_{14} (Withdrawn bid) + \beta_{15} (% of shares acquired) + FEs + \epsilon
\]

Before estimating this model, we test the effects of our corporate governance indices on acquirer returns in univariate models to ensure the results reported in all subsequent analyses are not driven by the presence of control variables. Univariate regressions are presented in Table 5. For the sake of brevity, we only note here that the results are consistent in regard to statistical significance and economic magnitude with the results for the full model, as discussed below.

Table 6 shows the regression results for the full model in eq. (1). Significance values are based on heteroskedasticity-adjusted standard errors that are clustered by target nation and the acquirer’s two-digit SIC industry. The results are robust when we cluster by acquirer and transaction year. We control for year fixed effects (FEs), and we additionally consider industry and industry × year fixed effects in a robustness test in Table 7 below.

In columns (1) and (2) of Table 6, both the C-Index and the E-Index coefficients are significantly positive. This result confirms Hypothesis 1, suggesting that ATPs have a positive valuation effect in Germany, and acquirer announcement returns are higher in firms with stronger ATPs. They stand in stark contrast to the benchmark result for the U.S., found by Harford et al. (2012) and Masulis et al. (2007), that acquirer returns are lower for “dictators” firms.

Only the coefficients on the entrenchment indices are statistically significant. All three governance indices in columns (3), (4), and (5) are insignificantly related to acquirer returns, confirming Bebchuk et al. (2009) and Harford et al. (2012) in their selection of ATPs that “really matter.” Furthermore, the adjusted \(R^2\) values are highest for the C-Index and the E-Index.

The C-Index and E-Index coefficients suggest that, ceteris paribus, the adoption of one additional ATP increases acquirer returns by 0.56% and 0.69%, statistically significant at the 1% and 5% level, respectively. To compare the economic significance of the C-Index and the E-Index, we calculate the change in CAARs in response to a one-standard deviation increase in these indices. The CAARs increase by 0.74% and 0.65% per one-standard deviation increase in the C-Index and the E-Index, respectively. In nominal figures, a one-standard deviation increase in ATPs leads to per-deal increases in acquirer returns of USD 186 million (C-Index) and USD 163 million (E-Index), respectively. Since the effect of the C-Index is 14% larger than that of the E-Index, in what follows, we only report results for the C-Index (but they are robust to using the E-Index).

For the control variables, both the magnitude and the statistical significance of the estimated coefficients are fairly stable across
Table 3
Summary statistics.

| Variable | Variable definition | Mean     | SD       | Q1      | Median | Q3       |
|----------|---------------------|----------|----------|---------|--------|----------|
| Panel A: Acquirer cumulative announcement abnormal return | CAAR Eleven-day cumulative announcement abnormal return (CAAR) calculated over the event window (−5; +5) in trading days centered around the M&A announcement date using the market-adjusted model with the German stock index (DAX) as the market benchmark. | 0.63%    | 7.62%    | −2.76%  | 0.68%  | 4.34%    |
| Panel B: Acquirer characteristics | Tobin's q Sum of long-term debt, debt in current liabilities, and market equity over property, plant, and equipment (Erickson and Whited (2000)). | 1.79     | 2.68     | 0.68    | 1.05   | 2.14     |
| | Market value Acquirer’s market value four weeks prior to the M&A announcement in USD million. | 25,090   | 32,254   | 2588    | 10,060 | 43,690   |
| | Leverage Book value of debts over book value of total assets. | 0.69     | 0.17     | 0.59    | 0.68   | 0.75     |
| | Cross-listing Dummy variable that equals 1 if acquirer is listed at more than one stock exchange, and 0 otherwise. | 0.59     | 0.49     | 0.00    | 1.00   | 1.00     |
| | Stock price runup Cumulative daily stock price changes from one month prior to the beginning of the event window (i.e., day −6 with regard to the M&A announcement), adjusted for the daily returns of the German stock index (DAX) over the same period. | 0.01     | 0.09     | −0.03   | 0.01   | 0.05     |
| Panel C: Deal characteristics | Deal size Book value of target's total assets. | 25,481   | 36,465   | 640     | 1,699  | 12,189   |
| | Diversification Dummy variable that equals 1 if acquirer operates in a different 2-digit SIC industry than target, and 0 otherwise. | 0.47     | 0.50     | 0.00    | 0.00   | 1.00     |
| | Cross-border Dummy variable that equals 1 if acquirer undertakes M&A deal in another country than Germany, and 0 otherwise. | 0.62     | 0.49     | 0.00    | 1.00   | 1.00     |
| | Stock consideration Dummy variable that equals 1 if acquirer pays exclusively with equity, and 0 otherwise. | 0.10     | 0.30     | 0.00    | 0.00   | 0.00     |
| | Hybrid consideration Dummy variable that equals 1 if acquirer uses a mixed-form (stock and cash) consideration for the target, and 0 otherwise. | 0.70     | 0.46     | 0.00    | 1.00   | 1.00     |
| | Public target Dummy variable that equals 1 if target is listed at a stock exchange, and 0 otherwise. | 0.18     | 0.38     | 0.00    | 0.00   | 0.00     |
| | Subsidiary target Dummy variable that equals 1 if target is subsidiary or joint venture of the acquiring firm, and 0 otherwise. | 0.42     | 0.49     | 0.00    | 0.00   | 1.00     |
| | Withdrawn bid Dummy variable that equals 1 if acquirer did not complete the bid, and 0 otherwise. | 0.01     | 0.10     | 0.00    | 0.00   | 0.00     |
| | % of shares acquired Percentage of shares acquired by the bidding firm. | 70.77    | 37.24    | 41.19   | 90.00  | 100.00   |
Table 4
Correlation matrix.

|                | CAAR | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |
|----------------|------|----|----|----|----|----|----|----|----|----|
| 1. C-Index     | 0.09** |    |    |    |    |    |    |    |    |    |
| 2. E-Index     | 0.07*  | 0.89*** |    |    |    |    |    |    |    |    |
| 3. G-Index     | -0.01  | 0.49*** | 0.59*** |    |    |    |    |    |    |    |
| 4. O-Index     | 0.01   | 0.14*** | 0.13*** | 0.28*** |    |    |    |    |    |    |
| 5. GC-G Index  | 0.01   | 0.70*** | 0.70*** | 0.93*** | 0.73*** |    |    |    |    |    |
| 6. Tobin's q   | -0.04  | -0.06  | 0.08*  | 0.15*** | 0.01  | 0.15*** |    |    |    |    |
| 7. Market value| -0.13*** | 0.02  | 0.16*** | 0.24*** | 0.01  | 0.28*** | 0.00 |    |    |    |
| 8. Leverage    | -0.07  | 0.05   | 0.08*  | 0.07*  | 0.05  | 0.11*** | 0.40*** | -0.07 |    |    |
| 9. Cross-listing| -0.01  | -0.07  | 0.06   | 0.21*** | 0.00  | 0.24*** | 0.18*** | 0.48*** | 0.05 |    |
| 10. Stock price runup | 0.00  | 0.02   | 0.01   | -0.03  | 0.03  | -0.05  | -0.05  | -0.07  | -0.04  | -0.06 |
| 11. Relative deal size | 0.09*** | 0.04  | -0.02  | -0.14*** | 0.05  | -0.16*** | -0.11*** | -0.13*** | 0.05  | -0.12*** |
| 12. Diversification | -0.02  | 0.03   | 0.12*** | 0.15*** | 0.02  | 0.17*** | 0.12*** | 0.03  | 0.09**  | 0.13*** |
| 13. Cross-border | 0.02   | -0.07  | 0.23*** | 0.31*** | -0.14*** | 0.20*** | 0.04  | 0.06  | -0.05  | 0.11** |
| 14. Stock consideration | -0.05  | -0.08*  | -0.07*  | -0.03  | -0.04  | -0.12*** | -0.03  | -0.05  | -0.02  | -0.02 |
| 15. Hybrid consideration | 0.07   | 0.02   | 0.14*** | 0.17*** | -0.04  | 0.16*** | -0.07  | 0.01  | 0.07*   | 0.01 |
| 16. Public target | -0.07*  | 0.15*** | -0.07  | -0.22*** | 0.20*** | -0.04  | 0.14*** | 0.08*  | 0.04  | 0.16*** |
| 17. Subsidiary target | 0.09**  | -0.07  | 0.05   | 0.11*** | -0.07  | 0.02  | 0.01  | 0.06  | 0.06  | -0.03 |
| 18. Withdrawn bid | -0.08*  | -0.09*  | -0.09** | -0.01  | -0.02  | -0.05  | -0.03  | -0.01  | 0.13*** | -0.02 |
| 19. % of shares acquired | 0.02   | -0.17*** | 0.06   | 0.23*** | -0.22*** | 0.06  | -0.12*** | -0.12*** | -0.08*  | -0.13*** |

This table provides pairwise correlation coefficients. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.
all models. The estimates are mostly consistent with related studies (Dissanaike et al. (2019), Dissanaike et al. (2020), Harford et al. (2012), Masulis et al. (2007)). In particular, we find that (i) the acquirer's pre-deal market value is positively related to CAARs, (ii) leverage has a positive effect on CAARs, (iii) cross-listings are positively correlated with acquirer returns, (iv) the coefficient on relative deal size is positive, (v) diversification deals are negatively related to acquirer returns, (vi) hybrid considerations have a significantly positive effect on CAARs, (vii) public targets are associated with a negative effect on acquirer returns, and (viii) the percentage of acquired shares is negatively correlated with acquirer returns.

One concern is that these results could be driven by omitted variables at the industry level. To address this, we test the robustness of our baseline model in column (1) of Table 6 (i.e., the C-Index increases announcement returns) to the inclusion of industry fixed effects based on two-digit SIC codes. The results are summarized in Table 7.

Columns (1), (2), (3), and (4) show regression models with year, industry, year and industry, and industry × year fixed effects, respectively. The C-Index estimates are close to the same throughout the first three models, thus suggesting that industry fixed effects do not materially affect the ATP-value relation in the German framework. In the fourth model, the C-Index coefficient also remains significantly positive.

One disadvantage of the models that include industry fixed effects, however, is that, given our sample size, they strongly reduce the degrees of freedom at the expense of overall model significance. For example, the second model has an overall p-value of only 6.2%. Therefore, for the following analyses, it seems appropriate to omit industry fixed effects. As we note in the robustness section, all of our results are qualitatively robust to the inclusion of industry fixed effects.

Next, to better understand the industry dynamics of the ATP-value relation, we regress announcement returns on the C-Index interacted with industry dummies (for each industry with ≥ 35 observations). Table 8 shows the results. Columns (1)–(7) contain industry dummies interacted individually, and column (8) shows a simultaneous model.

Consistent with our findings from the industry fixed effects models in Table 7, the interaction terms between the C-Index and industry dummies in Table 8 indicate that industry forces generally do not determine the ATP-value relation in Germany. Only the high-technology dummy is statistically significant both in the individual model in column (4) and the simultaneous model in column (8). As we note in the robustness section, all of our results are robust to the inclusion of a high-technology dummy.

Taken together, it is interesting to note that industry effects are largely irrelevant for the ATP-value relation in the German context. The analyses in Tables 7 and 8 support our choice to omit industry fixed effects and ATP-industry interactions in the reported regression models (for the benefit of overall model significance).

4.2. Disaggregating the C-Index: What ATPs matter?

Another limitation of previous studies is that they only report estimates for composite indices, i.e., they do not shed light on the drivers of the relationship between entrenchment and acquirer returns. To address this gap, we regress CAARs on each individual ATP of the C-Index. Poison pills are not in the repertoire of our sample of German acquirers, so they do not appear in the models.

Table 9 shows the results from disaggregating the C-Index. Column (1) indicates that classified or staggered boards, which we combine to increase statistical power, are statistically insignificant. Column (2) shows that regressing CAARs on the golden parachute provision yields insignificant results as well. Columns (3) and (4) report the results for the supermajority provisions regarding voting on charter amendments and significant transactions, respectively. The parameter estimates on both ATPs are significantly positive. Finally, we regress CAARs on all individual ATPs simultaneously, and the results in column (5) indicate that the two supermajority provisions remain similar both in magnitude and statistical significance. While restrictions on shareholder voting may inhibit the disciplining of overconfident or self-interested managers, they may also have positive wealth effects because dispersed shareholders are often uninformed and transient (Becht et al. (2016), Iliev et al. (2015)). Therefore, our findings are more supportive of the latter view. In the specific German context, supermajority provisions could be interpreted as protection from aggressive hedge funds that have been shown to destroy firm value in the long run (Bessler et al. (2015)).

We recognize that the positive coefficients do not necessarily mean that supermajority provisions cause value creation in acquisitions. Hsieh and Wang (2008) show that acquisition financing in the U.S. is often structured so as to bypass shareholder voting. Shareholder voting is mandatory for new issuances of 20% and above, but not for M&A transactions per se. Therefore, managers can bypass shareholder voting by using sufficient amounts of debt and/or cash. Becht et al. (2016, p.3037) interpret this evidence to mean that “positive deal value causes shareholder voting rather than the reverse.” For this reverse causality argument to hold true, we would expect to observe substantial variation in the use of a supermajority provision when management changes. That is, we expect shareholders to approve supermajority provisions only when they are certain that incumbent management engages only in high-value transactions. As discussed further in the robustness section below, we find almost no variation in the use of the supermajority provision or in any other ATP type across time. While this does not necessarily imply that supermajority provisions cause the value creation by German acquirers, it at least casts doubt on the reverse causality argument.

5. Sources of value creation by entrenched managers

In this section, we explore how managers of ATP firms create value in acquisitions. In particular, we examine target selection as a
potential channel for the observed ATP-value relation by testing Hypotheses 2a, 2b, and 2c. Our general notion is that managers send out a positive signal to shareholders when they reduce their entrenchment levels through acquisitions.

5.1. Monitoring by large shareholders

Acquirers may generate value when they create or import large shareholders because the ensuing higher monitoring level sends a positive signal. Therefore, Hypothesis 2a relates to internal governance and comes in two forms. On the one hand, offering cash-only consideration to privatetargets to avoid importing a blockholder signals potential entrenchment preservation. On the other hand, in public targets with existing blockholders, acquisitions increase monitoring when they are effected with equity. The results in Table 10 confirm Hypothesis 2a in different regression specifications.

In column (1) of Table 10, the dependent variable is a dummy that equals 1 if a privatetarget is paid with cash, and 0 otherwise. The C-Index coefficient is significantly negative, suggesting that the probability of avoiding importing blockholders by paying a privatetarget with cash decreases by 1.34% per adopted ATP. Acquirer announcement returns are higher in firms with stronger ATPs because they acquire privatetargets less frequently with cash-only payments. Similarly, for different blockholder levels in columns (2), (3), and (4), the probability of importing a blockholder from a public target significantly increases per adopted ATP. For example, an acquirer with three ATPs is more than 10% more likely to import a blockholder of >50% than an acquirer without any ATP. Therefore, our result that high-ATP firms create more value in acquisitions can also be explained by a higher frequency of stock-financed acquisitions of public targets with existing blockholders.

5.2. Cross-listed targets

As suggested by Hypothesis 2b, firms can also improve external governance in acquisitions. One way to do this is to select targets that are listed on more than one stock exchange, thereby decreasing managerial discretion due to the augmented scope of rules and regulations with which the firm must comply. To test this hypothesis, the dependent variable in column (5) of Table 10 is a dummy that equals 1 if the target firm is listed at more than one stock exchange, and 0 otherwise. Managers from firms with stronger ATPs are more likely to acquire cross-listed targets. The coefficient on the C-Index is highly significant, suggesting that the likelihood of acquiring a cross-listed target increases by 1.66% per adopted ATP.10

Note that this effect is not driven by any likelihood that managers from high-ATP firms acquire public targets that happen to be cross-listed. Regressing a dummy variable for targets being public as the dependent variable yields an insignificant coefficient for the C-Index. This contrasts with Harford et al. (2012), who find that the private/public status of target firms matters for entrenched managers in the U.S. context.

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10 Electronic copy available at: https://ssrn.com/abstract=3315730
5.3. Avoiding low-growth targets

A final test related to target selection is based on the notion that value creation in acquisitions may be attributed to the avoidance of low-growth targets. Hypothesis 2c holds that firms with stronger ATPs have a lower probability of engaging in low-growth target acquisitions, limiting overinvestment in declining industries. We use Erickson and White’s (2000) measure of Tobin’s q to classify high- and low-growth firms. A low-q target is defined as having below-median Tobin’s q. The regression results in column (6) of Table 10 show a significantly negative C-Index coefficient. As predicted, the probability of acquiring a low-q target decreases by 6.09% per adopted ATP.
6. Short-termism

Next, we examine why firms with stronger ATPs outperform. As explained earlier, Chemmanur and Jiao's (2012) model suggests that ATPs provide a potential solution to the problem that the takeover threat can exceed “healthy” levels and induce myopic or short-termist behavior. Therefore, we first test the impact of various sources of short-termist pressure on the relation between ATPs and acquirer announcement returns. Second, we examine HTV-firms, value-creating innovations, and long-term investment efficiency.

Table 7
Various fixed effects models.

|              | (1)     | (2)     | (3)     | (4)     |
|--------------|---------|---------|---------|---------|
| C-Index      | 0.0056*** | 0.0056** | 0.0057** | 0.0041*  |
|              | (0.0013) | (0.0027) | (0.0027) | (0.0023) |
| Controls     | Yes     | Yes     | Yes     | Yes     |
| Year fixed effects | Yes     | No      | Yes     | No      |
| Industry fixed effects | No      | Yes     | Yes     | No      |
| Industry × year fixed effects | No      | No      | No      | Yes     |
| # obs.       | 519     | 519     | 519     | 519     |
| R²           | 0.077   | 0.111   | 0.134   | 0.306   |
| Adjusted R²  | 0.050   | 0.030   | 0.045   | 0.019   |
| p-value      | 0.000   | 0.062   | 0.019   | 0.058   |

This table tests the robustness of our main result to various fixed effects specifications. The first column corresponds to column (1) of Table 6 (the baseline model), the second column includes industry fixed effects only, the third column includes industry and year fixed effects, and the fourth column includes industry × year fixed effects. The sample consists of 519 M&A transactions with a publicly listed acquirer in Germany between 2009 and 2014. The dependent variable is the acquirer's eleven-day market-adjusted cumulative announcement abnormal return (CAAR). The C-Index is defined in Table 1. Variable definitions for the controls are given in Table 3. All models are based on OLS regressions. Heteroskedasticity-adjusted standard errors are in parentheses. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

Table 8
Industry analysis.

|              | (1)     | (2)     | (3)     | (4)     | (5)     | (6)     | (7)     | (8)     |
|--------------|---------|---------|---------|---------|---------|---------|---------|---------|
| C-Index      | 0.0044  | 0.0051** | 0.0043** | 0.0054** | 0.0029*  | 0.0037*  | 0.0046** | 0.0217*** |
|              | (0.0022) | (0.0022) | (0.0022) | (0.0021) | (0.0016) | (0.0022) | (0.0023) | (0.0081) |
| × Consumer products & services | −0.0002 | 0.0106   | (0.0062) | (0.0203) | 0.0165   | (0.0199) | 0.0078   | (0.0148) |
| × Financials | −0.0061 | 0.0174***| (0.0057) | (0.0088) | 0.0071*  | (0.0041) | −0.0016  | (0.0134) |
| × Healthcare | 0.0065   | 0.0171*  | (0.0058) | (0.0134) | −0.0248  | (0.0096) | −0.0035  | (0.0163) |
| × High-technologies | 0.0090 | (0.0177) | (0.0161) | (0.0117) | 0.0290*** | (0.00104) | (0.0083) | (0.0184) |
| × Industrials | 0.0028   | 0.0290*** | (0.0083) | (0.0117) | 0.0100   | (0.0083) | 0.0335*  | (0.0121) |
| × Materials  | 0.0054   | 0.0171*  | (0.0058) | (0.0134) | 0.0166   | (0.0096) | 0.0216   | (0.0163) |
| × Telecommunications | −0.0002 | 0.0055   | (0.0177) | (0.0161) | −0.0180** | (0.00104) | (0.0083) | (0.0184) |
| Industry     | 0.0000   | 0.0055   | (0.0177) | (0.0161) | 0.0028   | (0.0077) | 0.0097   | (0.0184) |
| Controls     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     |
| # obs.       | 519     | 519     | 519     | 519     | 519     | 519     | 519     | 519     |
| R²           | 0.077   | 0.078   | 0.077   | 0.080   | 0.078   | 0.079   | 0.077   | 0.108   |
| Adjusted R²  | 0.047   | 0.049   | 0.049   | 0.051   | 0.050   | 0.049   | 0.049   | 0.055   |
| p-value      | 0.002   | 0.001   | 0.002   | 0.000   | 0.001   | 0.001   | 0.001   | 0.001   |

This table provides a cross-sectional industry analysis of the relation between ATPs and value creation in corporate acquisitions. The sample consists of 519 M&A transactions with a publicly listed acquirer in Germany between 2009 and 2014. The dependent variable is the acquirer's eleven-day market-adjusted cumulative announcement abnormal return (CAAR). The C-Index is defined in Table 1. Variable definitions for the controls are provided in Table 3. All models are based on OLS regressions. Heteroskedasticity-adjusted standard errors are in parentheses, and are clustered by target nation and the acquirer's two-digit SIC industry. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively. All models control for year fixed effects.

6. Short-termism

Next, we examine why firms with stronger ATPs outperform. As explained earlier, Chemmanur and Jiao's (2012) model suggests that ATPs provide a potential solution to the problem that the takeover threat can exceed “healthy” levels and induce myopic or short-termist behavior. Therefore, we first test the impact of various sources of short-termist pressure on the relation between ATPs and acquirer announcement returns. Second, we examine HTV-firms, value-creating innovations, and long-term investment efficiency.

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6.1. ATPs, takeover threat, and other sources of short-termist pressure

Directly following from Chemmanur and Jiao’s (2012) model, Hypothesis 3a suggests that the positive valuation impact of ATPs is stronger when the threat of takeover is higher. The threat of takeover is measured by the volume of takeovers in the acquirer’s market five years prior to the transaction.\footnote{Our results are robust when we define the takeover threat as the volume of takeovers in the acquirer’s market three years prior to the transaction.} Table 11 shows the regression results. The C-Index coefficients are similar to those in the baseline model above. In addition, the estimate of our takeover threat proxy is significantly negative, ranging from 5.87% to 9.53%. This finding indicates that acquirers in highly active takeover markets create up to 10% less value for their shareholders and confirms that

\begin{table}
\centering
\caption{Importance of different ATPs.} 
\begin{tabular}{lcccc}
\hline
Dependent variable: Eleven-day CAARs & (1) & (2) & (3) & (4) \\
\hline
ATPs: & & & & \\
Staggered or classified board & −0.0027 & −0.0031 & & \\
(0.0036) & (0.0068) & & \\
Golden parachute & 0.0045 & 0.016 & & \\
(0.0055) & (0.0101) & & \\
Supermajority re charter amendments & 0.0272*** & 0.0290*** & & \\
(0.0024) & (0.0025) & & \\
Supermajority re transaction votes & 0.0183* & 0.0078* & & \\
(0.0101) & (0.0043) & & \\
\hline
Acquirer characteristics: & & & & \\
Tobin’s q & 0.0000 & 0.0000 & 0.0000 & 0.0001 & 0.0001 \\
(0.0001) & (0.0001) & (0.0001) & (0.0001) & (0.0001) & (0.0001) \\
Market value & 0.0000*** & 0.0000*** & 0.0000*** & 0.0000*** & 0.0000*** \\
(0.0000) & (0.0000) & (0.0000) & (0.0000) & (0.0000) \\
Leverage & −0.0436*** & −0.0450*** & −0.0526*** & −0.0457*** & −0.0542*** \\
(0.0088) & (0.0073) & (0.0037) & (0.0091) & (0.0040) \\
Cross-listing & 0.0131* & 0.0140** & 0.0130** & 0.0120** & \\
(0.0071) & (0.0060) & (0.0060) & (0.0068) & (0.0058) \\
Stock price runup & −0.0174 & −0.0194 & −0.0269 & −0.0203 & −0.0272 \\
(0.0509) & (0.0515) & (0.0563) & (0.0523) & (0.0562) \\
\hline
Deal characteristics: & & & & \\
Relative deal size & 0.1369* & 0.1399* & 0.1338* & 0.1324* & 0.1385** \\
(0.0723) & (0.0771) & (0.0778) & (0.0752) & (0.0699) \\
Diversification & −0.0042 & −0.0044 & −0.0063*** & −0.0055* & −0.0071*** \\
(0.0027) & (0.0033) & (0.0012) & (0.0033) & (0.0024) \\
Cross-border & 0.0053 & 0.0045 & 0.0018 & 0.0045 & 0.0018 \\
(0.0056) & (0.0053) & (0.0052) & (0.0051) & (0.0047) \\
Stock consideration & −0.0166 & −0.0157 & −0.0117 & −0.0172 & −0.0123 \\
(0.0444) & (0.0435) & (0.0419) & (0.0442) & (0.0443) \\
Hybrid consideration & 0.0211* & 0.0210* & 0.0165 & 0.0211* & 0.0174* \\
(0.0108) & (0.0112) & (0.0106) & (0.0109) & (0.0106) \\
Public target & −0.0125*** & −0.0126*** & −0.0117*** & −0.0113*** & −0.0108*** \\
(0.0025) & (0.0013) & (0.0023) & (0.0017) & (0.0006) \\
Subsidiary target & 0.0121 & 0.0122 & 0.0117 & 0.0122 & 0.0115 \\
(0.0087) & (0.0087) & (0.0085) & (0.0087) & (0.0086) \\
Withdrawn bid & −0.0529 & −0.0514 & −0.0432 & −0.0514 & −0.0426 \\
(0.0394) & (0.0402) & (0.0419) & (0.0394) & (0.0433) \\
% of shares acquired & −0.0002*** & −0.0002*** & −0.0002*** & −0.0002*** & −0.0002*** \\
(0.0000) & (0.0000) & (0.0000) & (0.0000) & (0.0000) \\
(Intercept) & 0.0353*** & 0.0343*** & 0.0262*** & 0.0368*** & 0.0291*** \\
(0.0055) & (0.0064) & (0.0089) & (0.0065) & (0.0106) \\
# obs. & 519 & 519 & 519 & 519 & 519 \\
R² & 0.069 & 0.071 & 0.091 & 0.069 & 0.094 \\
Adjusted R² & 0.041 & 0.043 & 0.064 & 0.041 & 0.062 \\
p-value & 0.002 & 0.000 & 0.001 & 0.001 & 0.000 \\
\hline
\end{tabular}
\end{table}

This table examines which ATPs matter most for value creation in corporate acquisitions. The sample consists of 519 M&A transactions with a publicly listed acquirer in Germany between 2009 and 2014. The dependent variable is the acquirer’s eleven-day market-adjusted cumulative announcement abnormal return (CCAR). Variable definitions for the ATPs are provided in Table 1, which are operationalized in the models as dummy variables. Variable definitions for the controls are given in Table 3. All models are based on OLS regressions. Heteroskedasticity-adjusted standard errors are in parentheses, and are clustered by target nation and the acquirer’s two-digit SIC industry. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively. All models control for year fixed effects.

The C-Index coefficients are similar to those in the baseline model above. In addition, the estimate of our takeover threat proxy is significantly negative, ranging from 5.87% to 9.53%. This finding indicates that acquirers in highly active takeover markets create up to 10% less value for their shareholders and confirms that

\footnote{Our results are robust when we define the takeover threat as the volume of takeovers in the acquirer’s market three years prior to the transaction.}
Table 10
Sources of value creation by entrenched managers.

| Dependent variable: | (1) Private × Cash | (2) Public × Stock × Blockholder (>10%) | (3) Public × Stock × Blockholder (>25%) | (4) Public × Stock × Blockholder (>50%) | (5) Cross-listed target | (6) Low-q target |
|---------------------|-------------------|---------------------------------------|---------------------------------------|---------------------------------------|------------------------|----------------|
| C-Index             | −0.0134***        | 0.0196**                             | 0.0092*                                | 0.0357***                             | 0.0166***              | −0.0609**      |
|                     | (0.0034)          | (0.0099)                              | (0.0055)                               | (0.0119)                              | (0.0019)               | (0.0282)       |
| Acquirer characteristics: |                   |                                       |                                       |                                       |                       |                |
| Tobin's q           | 0.0000*           | 0.0000*                               | 0.0000*                                | 0.0000*                               | 0.0000                |                |
|                     | (0.0000)          | (0.0000)                              | (0.0000)                               | (0.0000)                              | (0.0000)               |                |
| Market value        | 0.0000            | 0.0000                                | 0.0000                                 | 0.0000                                 | 0.0000                |                |
|                     | (0.0000)          | (0.0000)                              | (0.0000)                               | (0.0000)                              | (0.0000)               |                |
| Leverage            | 0.0000*           | 0.0000***                            | 0.0000*                                | 0.0000*                               | 0.0089                | 0.0000***      |
|                     | (0.0000)          | (0.0000)                              | (0.0000)                               | (0.0000)                              | (0.0756)               | (0.0000)       |
| Cross-listing       | −0.0509           | 0.0100                                | 0.0236                                 | 0.0059                                 | 0.0674                | −0.0706***     |
|                     | (0.0339)          | (0.0245)                              | (0.0155)                               | (0.0194)                              | (0.0515)               | (0.0262)       |
| Stock price runup   | 0.2430*           | −0.1488**                             | −0.1326*                               | −0.0388                                | 0.0574                | 0.2843         |
|                     | (0.1260)          | (0.0709)                              | (0.0773)                               | (0.0828)                              | (0.0368)               | (0.2189)       |
| Deal characteristics: |                   |                                       |                                       |                                       |                       |                |
| Relative deal size  | 0.4385***         | 0.2379***                            | 0.2151***                              | 0.3497***                             | 0.0755                | −1.0078***     |
|                     | (0.1182)          | (0.0856)                              | (0.0751)                               | (0.0606)                              | (0.1419)               | (0.2337)       |
| Diversification     | −0.0404**         | −0.0258                               | −0.0112                                | −0.0304                                | −0.0383**              | 0.1190***      |
|                     | (0.0177)          | (0.0197)                              | (0.0146)                               | (0.0269)                              | (0.0186)               | (0.0274)       |
| Cross-border        | 0.0000            | 0.0000                                | 0.0000                                 | 0.0000                                 | −0.0270*               | 0.0000***      |
|                     | (0.0000)          | (0.0000)                              | (0.0000)                               | (0.0000)                              | (0.0152)               | (0.0000)       |
| Stock consideration | 0.1108            | 0.0792                                | 0.0792                                 | 0.0800                                 | 0.0000                |                |
| Hybrid consideration| −0.0007           | 0.0000                                | 0.0000                                 | 0.0000                                 | 0.0000                |                |
| Public target       | 0.2485***         | −0.1985***                            |                                       |                                       | (0.0657)               | (0.0660)       |
| Subsidiary target   | −0.0040           | 0.0000                                | 0.0000                                 | 0.0000                                 | 0.0000                |                |
|                     | (0.0077)          | (0.0000)                              | (0.0000)                               | (0.0000)                              | (0.0000)               |                |
| % of shares acquired| 0.0000***         | 0.0000*                               | 0.0000**                               | 0.0000                                 | −0.1421*               | 0.0000***      |
|                     | (0.0000)          | (0.0000)                              | (0.0000)                               | (0.0000)                              | (0.0820)               | (0.0000)       |
| (Intercept)         | 0.1692***         | 0.1892***                            | 0.0928***                              | 0.2049***                             | 0.0625                | 1.1922***      |
|                     | (0.0561)          | (0.0233)                              | (0.0352)                               | (0.0592)                              | (0.0589)               | (0.0867)       |
| # obs.              | 519               | 519                                   | 519                                    | 519                                    | 519                    | 519            |
| Adjusted R²         | 0.225             | 0.126                                 | 0.063                                  | 0.210                                  | 0.349                  | 0.233          |
| p-value             | 0.000             | 0.000                                 | 0.007                                  | 0.000                                  | 0.000                  | 0.000          |

This table examines the role of target selection for value creation in acquisitions by ATP firms. The sample consists of 519 M&A transactions with a publicly listed acquirer in Germany between 2009 and 2014. The dependent variables are shown at the top of each column. In column (1), the dependent variable is a dummy that equals 1 if a private target is paid with cash, and 0 otherwise. In columns (2)–(4), the dependent variables are dummy variables that equal 1 if a public target is paid with stock, and the target involves a blockholder. Blockholdings are defined as dummy variables that equal 1 if there is an institutional investors in the target company above the thresholds 10%, 25%, and 50%, respectively, and 0 otherwise. In column (5), a cross-listed target is defined as a dummy variable that equals 1 if the target firm is listed at more than one stock exchange, and 0 otherwise. In column (6), a low-q target is defined as a target with a below-median Tobin’s q, calculated following Erickson and Whited (2000). The C-Index is defined in Table 1. Variable definitions for the controls are given in Table 3. All models are based on the linear probability model. Heteroskedasticity-adjusted standard errors are in parentheses, and are clustered by target nation and the acquirer’s two-digit SIC industry. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively. All models control for year fixed effects.

CAARs are lower in markets with a high takeover threat. Therefore, in contrast to the widely accepted view, takeover threats are not necessarily an effective corporate governance mechanism to discipline managers and boost firm value. Our results suggest that an active market for corporate control might even be detrimental to shareholder value in at least some institutional environments.

Most importantly, in columns (2) and (4), the estimates of the interaction term between the C-Index and the takeover threat proxy are significantly positive. This is consistent with our hypothesis that managers of high-ATP firms create value in acquisitions thanks to reduced managerial myopia. When the threat of takeover is high, firms that are more subject to market pressure destroy long-term value in acquisitions. This result is robust to including other corporate governance mechanisms, and it is particularly unaffected when we control for product market competition (see Giroud and Mueller, 2011 for an interpretation) and ownership levels (see Tirole (2001) for an interpretation).12

12 Product market competition is defined as the sum of the squares of $s_{i,t,j}$, where $s_{i,t,j}$ is the market share based on sales of firm $i$ in year $t$ in industry $j$. Ownership is the percentage of shares held by investors who individually hold 5% or more.
Note that the approach of identifying short-termist pressure using within-industry M&A intensity has shortcomings. First, our proxy for the takeover threat may not accurately measure a managers’ perceived threat of takeover, and there may be alternative measures. Second, and more importantly, short-termist pressure may not come only from the takeover threat. It may have other origins, such as the presence of short-term investors.\footnote{We thank a reviewer for pointing this out.}

To make sure that the inferences we draw from the results reported in Table 11 are robust, we examine a battery of alternative measures for short-termist pressure. Specifically, we look at (i) a proxy based on the within-industry M&A frequency over the past five
years (analogously to the volume-based proxy used above); (ii) a proxy based on product market competition computed as the inverse of the Herfindahl-Hirschman Index (HHI), with the rationale that more competitive industries leave a smaller margin for error and cause managers to act myopically and forego long-term projects (Giroud and Mueller (2011)); (iii) a proxy based on the relative frequency of hostile takeovers within an industry over the past five years of the focal acquisition; (iv) a proxy based on the relative frequency of vertical and conglomerate acquisitions over the past five years of the focal acquisition, i.e., the ratio of vertical and conglomerate to total acquisitions in a given industry over the last five years; (v) a proxy based on the presence of short-term investors in a firm in the year before the acquisition14; and (vi) a proxy based on the churn rate of investors in the acquiring firm, i.e., a portfolio turnover measure computed as the weighted average of the churn rates of all a firm’s institutional investors in the year before the acquisition (Gaspar et al. (2005)).

We regress acquirer announcement returns on the C-Index, the proxy for short-termist pressure (STP), and the interaction term between the two. The results are shown in Table 12. In summary, they further support the hypothesis that short-termist pressure reduces value creation in acquisitions, which ATPs can mitigate. The C-Index is significantly positive throughout the models. Of the six proxies for short-termist pressure, four are significantly negatively related to CAARs, while two coefficients are negative but insignificant. Most important, the interaction terms indicate that ATPs help to reduce short-termist pressure: the signs of the corresponding coefficients are positive for all six proxy variables, with four being statistically significant at least at the 5% level.

Overall, the results in Tables 11 and 12 corroborate Hypothesis 3a, i.e., the positive impact of ATPs on acquirer returns is stronger

14 This variable measures the percentage of a firm’s market capitalization that is held by short-term institutional investors. We classify as short-term those investors with an average churn rate in the top tercile of all institutional investors. The churn rate is the percentage of portfolio holdings bought or sold over a yearly period. This approach follows Gaspar et al. (2005). The construction of these variables for our non-U.S. investors follows Döring et al. (2019) and relies on data obtained from the FactSet database.
This table examines how managers of firms with ATPs defy short-termism. The sample consists of 519 M&A transactions with a publicly listed acquirer in Germany between 2009 and 2014. Largely following Humphery-Jenner (2014), columns (1) and (2) shows regressions of eleven-day CAARs on an ATP dummy, which takes a value of one if the acquirer's C-Index is above median, and zero otherwise. The C-Index is defined in Table 1. In column (1), HTV-acquirers are assigned a dummy variable that equals 1 if they have SIC codes 3841, 3845, 3827, 3841, 3842, 3843, 3845, 3851, or 2834 formedical and pharmaceutical HTV-firms, and 0 otherwise. In column (2), HTV-acquirers are assigned a dummy variable that equals 1 if they have three-digit SIC codes 502, 503, 504, 506, or 507 for certain wholesale trade-durable goods HTV-firms, and 0 otherwise. In column (3), the dependent variable is the interaction between a deal having a positive CAAR and the acquirer increasing R&D expenditures in the post-acquisition year relativeto the pre-acquisition year. Column (4) uses the R&D expenditure variable without interaction. Column (5) uses net investment as the dependent variable, defined as the annual change in net fixed assets scaled by total assets measured in the pre-acquisition year. The annual percentage increase in sales growth in the pre-acquisition year is ourproxy for a firm's investment opportunities. Variable definitions for the controls are given in Table 3. All models are based on OLS regressions. Heteroskedasticity-adjusted standard errors are in parentheses, and areclustered by target nation and the acquirer's two-digit SIC industry. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively. All models control for year fixed effects.

| Dependent variables: | Hard-to-value (HTV) theory | Value-creating innovation | Investment behavior |
|----------------------|-----------------------------|---------------------------|--------------------|
|                      | Eleven-day CAARs | (CAR > 0) × (ΔR&D > 0) | (ΔR&D > 0) | Net investments |
| ATP dummy            | 0.0117** (0.0057) | 0.0366 (0.0211) | 0.2706** (0.1238) | 0.3970** (0.1721) | −0.0028** (0.0013) |
| Hard-to-value (HTV) acquirers: | | | | |
| Medical and pharmaceutical | −0.0099 (0.0130) | | | |
| Business equipment | | −0.0478* (0.0276) | | |
| ATP dummy × HTV acquirer | 0.0539*** (0.0179) | 0.0166* (0.0099) | | |
| Sales growth | | | | |
| ATP dummy × Sales growth | | | | |
| Sales growth | | | | |
| Acquirer characteristics: | | | |
| Tobin's q | 0.0000 (0.0001) | 0.0000 (0.0016) | −0.0001 (0.0008) | 0.0000 (0.0008) | |
| Market value | 0.0000*** (0.0000) | 0.0000*** (0.0000) | 0.0000* (0.0000) | −0.0000*** (0.0000) | |
| Leverage | −0.0482*** (0.0000) | −0.0425*** (0.0000) | −0.1428 (0.0000) | 0.6770 (0.0000) | −0.0033 (0.0000) |
| Cross-listing | 0.0144** (0.0071) | 0.0092* (0.0054) | 0.0279 (0.0168) | 0.1968 (0.0168) | |
| Stock price runup | −0.0135 (0.0517) | −0.0122 (0.0396) | 0.7015** (0.0332) | 0.4588 (0.0296) | |
| Deal characteristics: | | | |
| Relative deal size | 0.1319* (0.0782) | 0.1429* (0.0795) | −0.1022 (0.5627) | 1.2456 (1.0316) | |
| Diversification | −0.0038 (0.0032) | −0.0059 (0.0048) | 0.0896 (0.1194) | 0.3442* (0.1927) | |
| Cross-border | 0.0039 (0.0055) | 0.0045 (0.0049) | 0.1422** (0.0651) | 0.2150 (0.1897) | |
| Stock consideration | −0.0125 (0.0416) | −0.0093 (0.0218) | 0.0739 (0.3130) | 0.0663 (0.4624) | |
| Hybrid consideration | 0.0206* (0.0112) | 0.0113 (0.0055) | −0.2782 (0.1937) | −0.0172 (0.0746) | |
| Public target | −0.0128*** (0.0040) | −0.0079*** (0.0022) | −0.3343 (0.2136) | −0.6196 (0.4241) | |
| Subsidiary target | 0.0123 (0.0089) | 0.0078 (0.0051) | −0.1369 (0.1234) | −0.0741 (0.0760) | |
| Withdrawn bid | −0.0457 (0.0495) | −0.0188 (0.0216) | 0.6247*** (0.3064) | 0.8862*** (0.1767) | |
| % of shares acquired | −0.0002*** (0.0000) | −0.0001*** (0.0000) | 0.0000 (0.0000) | −0.0002 (0.0001) | |
| (Intercept) | 0.0325*** (0.0063) | 0.0203 (0.0131) | 0.2735 (0.2616) | −0.2430 (0.6491) | 0.0193 (0.0414) |
| # obs. | 519 | 519 | 519 | 519 | 519 |
| Adjusted R² | 0.155 | 0.130 | 0.353 | 0.375 |
| p-value | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
### Table 14
Robustness checks.

|                      | (1)          | (2)          | (3)          | (4)          | (5)          |
|----------------------|--------------|--------------|--------------|--------------|--------------|
| **Dependent variable:** Eleven-day CAARs |              |              |              |              |              |
| C-Index              | 0.0047***    | 0.0052***    | 0.0064***    | 0.0054***    | 0.0098***    |
|                      | (0.0017)     | (0.0019)     | (0.0023)     | (0.0015)     | (0.0023)     |
| Blockholdings:       |              |              |              |              |              |
| Blockholder >10%     | 0.0000       |              |              |              |              |
|                      | (0.0000)     |              |              |              |              |
| Blockholder >25%     |              | −0.0039      |              |              |              |
|                      |              | (0.0080)     |              |              |              |
| Blockholder >50%     |              |              | −0.0090      |              |              |
|                      |              |              | (0.0065)     |              |              |
| Board size           |              |              |              |              |              |
|                      |              |              |              |              |              |
| Operating income growth | 0.0110      | 0.0107       | 0.0106       | 0.0089       | 0.0097       |
|                      | (0.0315)     | (0.0316)     | (0.0332)     | (0.0330)     | (0.0321)     |
| Product market competition | 0.0000     |              |              |              |              |
|                      |              |              |              |              |              |
| Acquirer characteristics: |              |              |              |              |              |
| Tobin's q            | 0.0000       | 0.0000       | 0.0001       | 0.0000       | 0.0001       |
|                      | (0.0000)     | (0.0001)     | (0.0001)     | (0.0001)     | (0.0001)     |
| Market value         | 0.0000***    | 0.0000***    | 0.0000***    | 0.0000***    | 0.0000***    |
|                      | (0.0000)     | (0.0000)     | (0.0000)     | (0.0000)     | (0.0000)     |
| Leverage             | 0.0000**     | −0.0468**    | −0.0485**    | −0.0532***   | −0.0632***   |
|                      | (0.0000)     | (0.0231)     | (0.0242)     | (0.0097)     | (0.0112)     |
| Cross-listing        | 0.0000*      | 0.0156**     | 0.0159**     | 0.0136***    | 0.0152*      |
|                      | (0.0000)     | (0.0079)     | (0.0071)     | (0.0054)     | (0.0078)     |
| Stock price runup    | −0.0204      | −0.0214      | −0.0157      | −0.0223      | −0.0210      |
|                      | (0.0682)     | (0.0667)     | (0.0672)     | (0.0514)     | (0.0649)     |
| Deal characteristics: |              |              |              |              |              |
| Relative deal size   | 0.1193       | 0.1231       | 0.1363       | 0.1241*      | 0.0956       |
|                      | (0.0817)     | (0.0848)     | (0.0866)     | (0.0738)     | (0.0859)     |
| Diversification      | −0.0066      | −0.0056      | −0.0059      | −0.0057*     | −0.0048      |
|                      | (0.0055)     | (0.0053)     | (0.0055)     | (0.0030)     | (0.0043)     |
| Cross-border         | 0.0042       | 0.0054       | 0.0057       | 0.0052       | 0.0054       |
|                      | (0.0071)     | (0.0077)     | (0.0079)     | (0.0052)     | (0.0048)     |
| Stock consideration  | −0.0102      | −0.0114      | −0.0084      | −0.0078      | 0.0115       |
|                      | (0.0441)     | (0.0444)     | (0.0454)     | (0.0406)     | (0.0501)     |
| Hybrid consideration | 0.0000**     | 0.0200**     | 0.0205**     | 0.0192*      | 0.0182*      |
|                      | (0.0000)     | (0.0083)     | (0.0086)     | (0.0108)     | (0.0095)     |
| Public target        | 0.0000*      | −0.0149*     | −0.0146*     | −0.0157***   | −0.0136*     |
|                      | (0.0000)     | (0.0081)     | (0.0084)     | (0.0059)     | (0.0072)     |
| Subsidiary target    | 0.0000       | 0.0122       | 0.0121       | 0.0129       | 0.0145       |
|                      | (0.0000)     | (0.0104)     | (0.0103)     | (0.0087)     | (0.0099)     |
| Withdrawn bid        | 0.0000       | −0.0450      | −0.0480      | −0.0463      | −0.0644      |
|                      | (0.0000)     | (0.0722)     | (0.0738)     | (0.0388)     | (0.0473)     |
| % of shares acquired | 0.0000**     | −0.0002**    | 0.0000       | −0.0002***   | −0.0001***   |
|                      | (0.0000)     | (0.0001)     | (0.0000)     | (0.0000)     | (0.0000)     |
| (Intercept)          | 0.0377**     | 0.0294**     | 0.0309*      | 0.0260***    | 0.0248**     |
|                      | (0.0161)     | (0.0132)     | (0.0161)     | (0.0065)     | (0.0118)     |
| # obs.               | 519          | 519          | 519          | 519          | 519          |
| $R^2$                | 0.080        | 0.078        | 0.079        | 0.079        | 0.079        |
| Adjusted $R^2$       | 0.051        | 0.048        | 0.050        | 0.050        | 0.045        |
| p-value              | 0.000        | 0.001        | 0.000        | 0.000        | 0.003        |

This table presents robustness checks. The sample consists of 519 M&A transactions with a publicly listed acquirer in Germany between 2009 and 2014. The dependent variable is the acquirer's eleven-day, market-adjusted cumulative announcement abnormal return. The C-Index is defined in Table 1. Variable definitions are provided in Table 1. Blockholdings are defined as dummy variables that equal 1 if there is an institutional investor in the acquiring company above the thresholds 10%, 25%, and 50%, respectively, and 0 otherwise. Board size is the number of board members. Operating income growth is the three-year growth in operating income and serves as our measure for managerial quality. Variable definitions for the controls are given in Table 3. All models are based on OLS regressions. Heteroskedasticity-adjusted standard errors are in parentheses, and are clustered by target nation and the acquirer's two-digit SIC industry. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively. All models control for year fixed effects.
during times when and in markets where short-termist pressure is higher. Having established that ATPs are valuable in the presence of short-termism, our remaining tests in this section examine how managers of high-ATP firms defy myopia.

### 6.2. Hard-to-value (HTV) theory

Not all firms are exposed to the threat of takeover to the same extent, and there is heterogeneity in the sense that some firms are more likely to be targets in a myopic market. One class of firms that is significantly threatened by market myopia is HTV-firms, which suffer from valuation discounts due to opacity (Humphery-Jenner (2014)). Hypothesis 3b predicts that the positive impact of ATPs on acquirer returns will be stronger in HTV-firms.

In column (1) of Table 13, we follow Humphery-Jenner (2014) and test whether acquirers that operate in the pharmaceutical and medical sectors benefit more from ATPs. We regress CAARs on an ATP dummy, a hard-to-value industry dummy, and an interaction term between these two dummy variables. The ATP dummy equals 1 if the acquirer’s C-Index is above the median, and 0 otherwise. The estimates suggest that medical and pharmaceutical firms can benefit from ATPs. With strong ATPs in place, CAARs increase on average by 5.39% compared to firms with no or weak ATPs (based on the interaction term). This effect is statistically significant at the 1% level.

Another sector that fits the notion of HTV-firms is the business equipment sector. We also test whether our hypothesis holds in that sector. The regression results are in column (2). Although less pronounced than the evidence for medical and pharmaceutical firms, the interaction effect between the C-Index and the business equipment dummy is still significantly positive (coefficient of 1.66% at the 10% significance level). Overall, our findings suggest that ATPs send credible signals to the market about the alignment of managerial incentives and long-term value creation in firms with valuation difficulties.

### 6.3. Value-creating innovation

Myopic managers underinvest in innovative projects because the value of these investment projects is difficult to assess in the short run (Stein (1988), Chemmanur and Jiao (2012)). Hypothesis 3c is a direct test of this idea and suggests that ATPs should be positively related to the level of investment in innovative projects, i.e., acquirers with more ATPs are more likely to generate value-increasing innovation. We analyze two aspects of innovation investing, testing (i) whether managers in high-ATP firms increase innovation in acquisitions in a value-creating way, and (ii) whether they increase innovation around acquisitions at all.

In the first test, we follow Humphery-Jenner (2014) and construct an interaction dummy as the dependent variable, which consists of two parts: whether acquirers increase innovation following acquisitions, i.e., whether R&D expenditures increase in the year following the acquisition year compared to the pre-acquisition year ($D(ΔR&D > 0)$), and whether the acquisition creates value ($D(CAR > 0)$). The second test simply regresses $D(ΔR&D > 0)$ on the control variables.

The results are shown in columns (3) and (4) of Table 13 and suggest that, as expected, ATPs increases innovation. The coefficient on the ATP dummy implies that firms with strong ATPs are 27% more likely to increase innovation in value-creating acquisitions compared to firms with no or weak ATPs, and they are even 40% more likely to increase innovative projects overall. Taken together, these results are consistent with our hypothesis that ATPs reduce short-termism and promote investing in innovative, value-creating projects.

### 6.4. Sensitivity to investment opportunities

Managers of firms with stronger ATPs may defy myopia because they are able to allocate capital more efficiently than firms without ATPs. Hypothesis 3d asserts that acquirers with stronger ATPs are more responsive in their net investment to changes in investment opportunities. Following Asker et al. (2015), we estimate a classic investment model and use the annual percentage increase in sales growth in the pre-acquisition year to proxy for investment opportunities. We take net investment as the dependent variable and define it as the annual change in a firm's net fixed assets scaled by total assets.

The results are shown in column (5) of Table 13. The ATP dummy estimate is significantly negative, suggesting that high-ATP firms invest less overall. In addition, the coefficient of the interaction term between investment opportunities and the ATP dummy is significantly positive. These results confirm the notion that, in our German sample, high-ATP firms defy short-termism by enhancing capital allocation efficiency, i.e., increasing the responsiveness of investment to investment opportunities.

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15 In column (1), HTV acquirers are assigned a dummy variable that equals 1 if they have SIC codes 3841, 3845, 3827, 3841, 3842, 3843, 3845, 3851, or 2834 for medical and pharmaceutical HTV firms.

16 We thank a reviewer for pointing this out. In column (2), HTV acquirers are assigned a dummy variable that equals 1 if they have three-digit SIC codes 502, 503, 504, 506, or 507 for certain wholesale trade-durable goods HTV companies. There are many other (sub-)sectors that could be tested, but the scope of tests in our setting is limited by our sample size.
7. Robustness checks

7.1. Controlling for other governance mechanisms

Our results are robust to a number of robustness checks related to the quality of internal corporate governance. First, they are robust to controlling for different ownership levels. Tirole (2001) argues that large shareholders have the ability and incentive to monitor managers and discipline them if necessary. However, as Asker et al. (2001, pp. 344–345) note, it is “an empirical question of whether these [blockholder monitoring] mechanisms are sufficiently effective on average.” For example, Cremers and Nair (2005) find that the market for corporate control’s disciplining effect is only effective when shareholder monitoring is sufficiently strong. Conversely, Masulis et al. (2007) document that concentrated ownership does not affect their CAAR estimates.

Therefore, in columns (1), (2), and (3) of Table 14, we control for the existence of shareholders who own more than 10%, a blocking minority (25%), and a simple majority (50%), respectively. The coefficients on the C-Index are statistically significant and similar in magnitude throughout the three models. All ownership coefficients are insignificant, which is in line with Masulis et al.’s (2007) evidence. These findings suggest that, at least in the case of acquisition decisions, Tirole’s (2001) prediction may not always hold true.

Next, we control for board size, defined as the number of directors on a board. Board size may be important for the efficiency of internal governance instruments in German firms. The board of directors’ primary responsibilities involve (i) monitoring, advising, evaluating, and possibly replacing executives, (ii) designing executive compensation, and (iii) approving significant transactions such as major acquisitions (Masulis et al. 2007). Yermack (1996) documents that board size is negatively correlated with firm value due to increasing complexity.\footnote{See also Beiner et al. (2004) for a discussion of board size as a corporate governance mechanism. In addition to board size, Masulis et al. (2007) control for CEO/chairman duality and board independence. They find that only CEO/chairman duality has a significantly negative effect on CAARs, although the coefficient on their corporate governance indices is unaffected. We focus only on board size here because the German legal system rules out CEO/chairman duality and board dependence.}

In the prevailing two-tier board system in Germany, the supervisory board exerts an important corporate governance mechanism by controlling the management board (Goergen et al. 2008; Aktas et al. 2016). However, the supervisors’ ability to control may decrease with increasing board size. The regression results shown in column (4) of Table 14 provide no evidence that board size matters in acquisition decisions. The C-Index remains statistically significant and comparable in magnitude to other parameter estimates documented above. Our results are again consistent with Masulis et al.’s (2007) findings.

We also control for product market competition. Shleifer and Vishny (1997) argue that product market competition may be the most effective mechanism to reduce managerial inefficiencies. Giroud and Mueller (2011) show that weakly governed firms in non-competitive industries underperform, inter alia, by making bad acquisitions. Firms in more competitive industries have lower agency costs because the margin for error is thin and competitors will quickly exploit any inefficiency. This can put a firm’s survival, and thus the management’s job security, at risk. Giroud and Mueller’s (2011) evidence is based on the U.S. corporate governance system. However, it is not ex ante clear whether the results hold in the same way in more stakeholder-oriented systems such as Germany, where the relative importance of the set of available corporate governance mechanisms is different (Goergen et al. 2008).

Following Masulis et al. (2007), we attempt to capture industry competition by using the Herfindahl-Hirschman-Index (HHI). HHI is calculated as the sum of the squares of market share $s_{i,j}$, based on firm $i$’s sales in year $t$ in industry $j$. We report all regression results with the actual HHI score for each acquirer in Table 14, but the results are robust when we use mean- and median-based dummy variable classifications for high versus low competition. In both cases, the estimated coefficients on product market competition are insignificant, although the positive sign is consistent with Masulis et al. (2007). These results indicate that, at least on the dimension of acquirer returns, the competitive structure of an industry does not exert a significant corporate governance effect everywhere.

7.2. More thoughts on endogeneity

Empirical corporate governance studies often receive criticism stemming from endogeneity concerns.\footnote{For an example, see the debate in Core et al. (2006) over Gompers et al.’s (2003) seminal findings.} It is therefore a challenge to substantiate the claim that ATPs cause managers to make better acquisitions. One form of the endogeneity issue is spurious correlation, i.e., the identified effect may actually be driven by an omitted variable. There may be unobserved acquirer traits that affect the extent to which ATPs are adopted as well as acquisition decisions.

Following Morck et al. (1990) and Masulis et al. (2007), we control for management quality in order to address this concern. If our results are driven by an omitted variable bias of this type, they should not be robust to controlling for overall management quality. As in Masulis et al. (2007), management quality is defined as the acquirer’s operating income growth over the past two years. We do not find a significant influence of operating income growth on CAARs, but report robust coefficient estimates on the C-Index in column (5) of Table 14. This result suggests that ATPs impact the returns in acquisitions of German firms in almost the same way as they do in the U.S., except for the sign.\footnote{Related to operating income growth, we also examine whether ATPs affect various measures of actual and adjusted operating performance as the dependent variable in a six-year event window around the M&A transaction (Harford (1999), Powell and Stark (2005)). The results (not}
The other form of endogeneity is reverse causality. It assumes that managers adopt ATPs in order to render possible behavior that would otherwise be disciplined in the market for corporate control. For example, Masulis et al. (2007, p.1874) examine whether “managers planning to pursue empire building or make unprofitable acquisitions could first adopt ATPs to preclude being disciplined by the market for corporate control.” In our specific case, the argument’s analog is that managerial agents planning to become better acquirers choose to adopt ATPs in the first place to reduce short-termist market pressures.

To further examine this possibility, we study the time-variant structure of ATPs among our sample acquirers. However, compared to U.S. firms (Bebchuk et al. (2009)), ATPs are less actively managed in Germany. In untabulated results, we find almost no variation in the use of ATPs. This observation holds even when CEOs are replaced, suggesting that no reverse causation is at play.

7.3. An augmented regression test for endogeneity

In the robustness checks above, concerns about spurious correlation may not be fully addressed by controlling for management quality. Therefore, as a more formal test of endogeneity, we use Davidson and MacKinnon’s (1993) augmented regression version of the Durbin-Wu-Hausman test. The test is related to the control function approach in that it models endogeneity in the error term. In our specific context, we are concerned with potential endogeneity of the C-Index. For example, the C-Index may be positively correlated with CAARs for other, unobserved reasons.

To rule this out, we first model the C-Index as a function of the exogenous right-hand side regressors of our baseline model, as specified in Eq. (1), to obtain the residuals. In the second stage, we regress the CAARs on the C-Index, the residuals from the first stage, and the exogenous control variables. That is, we add the first-stage residuals to our baseline model in Eq. (1) and, in keeping with Masulis et al. (2007), we estimate three models that omit the following control variables that are potentially driven by endogeneity themselves: (i) acquirer’s leverage and the cross-border dummy, (ii) acquirer’s leverage, the cross-border dummy, and the diversification dummy, and (iii) all control variables except for the C-Index and the residuals variable.

According to this augmented regression test, endogeneity is not a problem in our models if the coefficient on the residual in the second stage is insignificant. In untabulated results for the three models, we find insignificant coefficients for the residual variable, with p-values of 61.86%, 48.4%, and 58.0%, respectively. Therefore, the augmented regression test provides formal statistical evidence, suggesting that the ATP-value relation is not driven by endogeneity in our setting.

7.4. Sensitivity tests

Finally, we consider an established set of ad hoc sensitivity tests that have evolved in the ATP literature (see, e.g., Masulis et al. (2007)). Specifically, our empirical results are robust to the following modifications, which are not tabulated for the sake of brevity: (i) we use a dummy variable approach, where the dependent variable is defined as CAAR = 1 if the eleven-day CAAR for a specific firm is positive; (ii) similarly, we define a dummy variable for the C-Index that equals 1 if it is above the median for a specific bidder; (iii) we check whether the C-Index coefficient is consistent in both magnitude and sign when we deploy event windows other than the (−5; +5) window as the dependent variable, testing the (−1; +1), (−2; +2), and (−10; +10) event windows; (iv) we also modify the stock price runup variable so that it captures market-adjusted and a non-market-adjusted information leakage; (v) we use other measures for firm size (market capitalization, total assets, total sales, number of employees); (vi) we exclude withdrawn bids from the sample; (vii) we run all tests by regressing CAARs on only those controls that are not potentially endogenously determined (excluding Tobin’s q and the stock price runup (Masulis et al. (2007), Droebetz and Momtaz (2019)), leverage, target organizational status, and method of payment (Faccio et al. (2006), Faccio and Masulis (2005)); (viii) we control for serial acquirers; (ix) we include industry and industry × year fixed effects; and (x) we control for a high-technology dummy. Overall, our results are robust to tests of spurious correlation, reverse causality, and numerous others.

8. Concluding remarks

This paper has unveiled and sought to explain the long-run value-creating effects of antitakeover provisions (ATPs) associated with acquisition decisions in a German context. Examining acquisition decisions of firms with ATPs in Germany, a country that arguably relies less on external control mechanisms, we find that “entrenched” managers are significantly better acquirers. Our results contrast with evidence for the U.S., where external control mechanisms are more relevant (Masulis et al. (2007), Harford et al. (2012)). Further analyses show that ATP firms create value in acquisitions by making governance-improving deals thanks to reduced short-termism. Overall, our results are consistent with a growing literature documenting value-creating effects of ATPs for firms in

(footnote continued)
reported are inconsistent and largely insignificant. There are at least three potential explanations for the insignificance of the ATP-operating performance relation. First, in our context, ATPs improve managerial decision making by reducing short-termism, which may result in depressed operating performance if managers invest in value-increasing long-term projects that are very capital intensive in the short run. This argument is at the core of myopia theories (Stein (1989), Chemmanur and Jiao (2012)). Second, the ATP-operating performance relation may depend on the measurement period of the dependent variable. We cannot rule out that there is a significantly positive effect for longer measurement periods. Third, the findings in Powell and Stark (2005) show that post-takeover operating performance effects are rather small (0.13%–1.78%), suggesting that there may not be enough variation to statistically detect a significant difference between high- and low-ATP firms in our sample.

20 See Davidson and MacKinnon (1993), chapter 7.9.
various contexts (Chemmanur et al. (2011), Johnson et al. (2015), Cen et al. (2016), Chemmanur and Tian (2018)). We therefore highlight the need for a more nuanced view of the ATP-value relation, such as that presented in the theoretical framework of Chemmanur and Jiao (2012), which also captures the institutional context (Karpoff and Wittry (2018)).

Several issues have been left unresolved and could be promising avenues for future work. Many countries have enacted ATP policies based on the U.S. evidence, despite dramatically different institutional contexts. Therefore, more evidence from other countries could yield important policy implications and a more systematic view of the arguments presented here. In addition to corporate acquisitions, other corporate decisions are of equal interest. Generally, this literature would benefit from a better understanding of the exact institutional circumstances that cause ATPs to either create or destroy value.

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