

What Happens when Companies (don't) Do What they Said they would? Stock Market Reactions to Strategic Integrity

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Literature on the 'power of words' has emphasized the importance of a firm's corporate communication as a source of legitimacy and reputation in the eyes of its stakeholders. We argue that it is not just the content or style of a firm's communication about its strategy, but also the alignment between this communication and its subsequent strategic actions that help build legitimacy among stakeholders and creating firm performance. We introduce the organization-level construct of 'strategic integrity' to capture the notion of alignment between a firm's strategy communication and its subsequent strategic actions. We investigate the importance of strategic integrity using the case of the German pharmaceuticals firm Bayer AG in the context of its portfolio restructuring. The results of an event study of 80 acquisitions/divestments indicate that stock markets react positively to strategic integrity.

Keywords: strategic integrity; legitimacy; strategy communication; acquisitions/divestments; event study

Introduction

The emerging school of 'rhetorical institutionalism' suggests that communication plays a central role in the process through which economic actors establish and maintain legitimacy (Green and Li, 2011; Harmon *et al.*, 2015; Hoefler and Green, 2016). Building on the insight by institutional theorists that communication shapes legitimacy formation (Suddaby and Greenwood, 2005; Golant and Sillince, 2007; Suddaby, 2010), researchers have identified rhetorical strategies including framing (Gray *et al.*, 2015), narratives (Andersen and Rask, 2014) and tropes (Etzion and Ferraro, 2010) as means to establish perceived legitimacy (Bitektine and Haack, 2015).

At the same time, the literature on rhetorical institutionalism has paid scant attention to the argument that mere rhetoric is rarely enough in order for economic

actors to sustain their reputation and the legitimacy attributed to them, unless it is backed by concrete action. Simons, (1999, 2002a, b) has introduced the notion of behavioral integrity, defined as the extent to which an individual's communication regarding her intentions are matched by her subsequent actions and behaviors. Recent meta-analytical work has attested to the positive effects of behavioral integrity on leader-follower relationships and managerial effectiveness (Simons *et al.*, 2015). However, empirical research on behavioral integrity has studied this concept exclusively on the level of individual human actors, whereas its importance in the case of organizations has largely escaped attention.

In this paper, we follow three avenues in order to help making a contribution for overcome these limitations. First, we develop the notion of 'strategic integrity' as a novel construct to describe the pattern of alignment between a firm's communicated strategy and its subsequent strategic actions. The notion of strategic integrity thus provides a middle ground between approaches that emphasize communication ('words') over actions ('deeds'), and those that see the order of priority

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the other way around. Strategic integrity, as defined here, does not relate to the question of whether firms' intentions or actions are 'good' from an ethical or a competitive point of view. Instead, it focuses on whether its actions are in line with its stated intentions, such that the latter can be taken as a reliable guide for the former.

Second, we explicate the notion of strategic integrity in the context of a firm's portfolio restructuring actions. Acquisitions and divestitures involve highly tangible and visible resource commitments through which firms implement their strategic objectives on the corporate level (Noda and Bower, 1996). We offer theory suggesting that strategic integrity in the context of corporate restructuring will lead shareholders – a stakeholder group that has an acute interest in the firm's corporate strategy – to attribute a reputation for trustworthiness and reliability to the firm, thus raising their evaluation of the firm concerned.

Third, we present the case of Bayer, a German chemicals and pharmaceuticals company, in order to explore shareholders' reactions to strategic integrity empirically. We propose a measure of strategic integrity involving secondary data and conduct an event study to assess Bayer's strategic integrity. Between 1999 and 2006, Bayer conducted a large-scale restructuring of its business portfolio in the context of its move away from its traditional chemicals business towards a greater focus on its healthcare and agriculture divisions (Bayer, 2016). Our event study analysis of 80 corporate transactions shows that those resource allocation decisions characterized by strategic integrity carry positive abnormal returns, implying that the construct of strategic integrity is of empirical relevance.

In the following, we review the literature on the importance of strategy communication for organizational legitimacy from the perspective of institutional theory and provide a critique of this perspective. We then develop the construct of strategic integrity, and explicate it in the specific context of Bayer's communication and corporate restructuring activities. We develop a measure for strategic integrity and test its implications for capital market valuation. We conclude by discussing of our contribution and the limitations of our work, and provide directions for future research on strategic integrity.

Literature review

Institutional perspectives on legitimacy and corporate communication

Institutional theory proposes that firms operate within a social framework of norms, values and beliefs about appropriate and acceptable economic behavior (DiMaggio and Powell, 1983; Scott, 1987; Deephouse and Suchman, 2008). Specifically, firms require legitimacy, defined as

'the generalized perception or assumption that the actions of an entity are desirable, or appropriate within some constructed system of norms, values, beliefs and definitions' (Suchman, 1995: 574). A firm cannot claim legitimacy; it is socially constructed (Kostova and Zaheer, 1999) and ascribed to the organization by its stakeholders (Massey, 2001). Legitimacy enables an organization to maintain the willingness of its stakeholders to provide it with essential resources (Palazzo and Scherer, 2006). Empirical research has found legitimacy to enhance stakeholder support (Zuckerman, 2000; Choi and Shepherd, 2005) and firm performance (e.g., Choi and Wang, 2009).

The strategic approach to legitimacy highlights the capacity of an organization to influence the propensity of its key stakeholders to ascribe legitimacy to it, through passive compliance or active manipulation (Deephouse and Suchman, 2008). Since legitimacy can have many sources with different expectations and evaluation standards (Lamin and Zaheer, 2012), stakeholder heterogeneity tends to complicate gaining legitimacy (Prottas, 2013).

In recent years, a growing body of literature from the 'rhetorical institutionalism' perspective has addressed the relevance of communication and rhetoric – the skilled use of language for persuasion (Covaleski *et al.*, 2003) – in the legitimization process (Suddaby and Greenwood, 2005; Harmon *et al.*, 2015). A related stream of literature emphasizes the role of discourse and of particular discursive strategies for building legitimacy (Phillips *et al.*, 2004; Vaara *et al.*, 2006; Vaara and Monin, 2010; Lefsrud and Meyer, 2012; Joutsenvirta and Vaara, 2015). Empirical research has found framing (Fiss and Zajac, 2006; Lefsrud and Meyer, 2012; Gray *et al.*, 2015), narratives (Golant and Sillince, 2007; Andersen and Rask, 2014), and tropes to influence legitimacy formation (Etzion and Ferraro, 2010). Cornelissen *et al.* (2015) have called for putting communication at the heart of institutional theory.

The literature on rhetorical institutionalism ties in with the argument that corporate communication plays a key role in managing and influencing stakeholders (Cornelissen *et al.*, 2006; Neill, 2015). By communicating with their stakeholders, firms act as sense givers (Gioia and Chittipeddi, 1991), helping them to build reputation, trust, credibility, and ultimately legitimacy among stakeholders (Pfeffer and Pfeffer, 1981; Suchman, 1995; Stephens *et al.*, 2005; Erickson *et al.*, 2011). For example, Zajac and Westphal (2004) found that communication about an action enhanced the creation of legitimacy for that action.

As organizations define specific legitimization strategies for their various stakeholder groups, they need to adjust their communication approaches accordingly (Massey, 2001). A significant body of literature exists

on corporate communication and reputation building among external stakeholders, such as customers (Foreman and Argenti, 2005) and investors (Dolphin, 2004), as well as internal stakeholders (Welch and Jackson, 2007). In particular the literature on corporate social responsibility has discussed stakeholder communication at length (Hooghiemstra, 2000; Bansal and Clelland, 2004; Wagner *et al.*, 2009). This literature builds on earlier research on strategy communication which has assessed how corporate communication creates positive strategic images, credibility, and reputation among important stakeholders such as investors, competitors and employees (Diffenbach and Higgins, 1987; Higgins and Diffenbach, 1989a, b; Higgins and Bannister, 1992; Mahon and Wartick, 2003).

In sum, the literature reviewed so far emphasizes both the form and the content of corporate communication for the purposes of gaining legitimacy, and for influencing specific stakeholder groups to become more favorably disposed towards the firm. However, this literature has paid scant attention to the question of what firms actually do, and on whether their actions are consistent with their stated intentions. According to Rindova and Fombrun (1999), this consistency between intentions and subsequent actions is central to firms' efforts to maintain legitimacy. Following this idea, we propose that stakeholder evaluations of a firm will be influenced by the extent to which it follows through with its intentions previously announced, and implements its propagated strategies. We first discuss the notion of behavioral integrity which captures this idea on the individual level, before transposing it to the organizational level by introducing the notion of strategic integrity.

The importance of behavioral integrity

Behavioral integrity refers to the 'pattern of alignment between an actor's words and deeds' (Simons, 2002a, b: 19). Thus defined, behavioral integrity does not reflect whether the actor takes the 'right' actions (e.g., their moral content), or whether the observer approves of them, but rather whether the patterns of the actor's actions and behaviors are consistent with her claims. Although Simons (2002a, b) explicitly conceptualized behavioral integrity as a construct of relevance for multiple levels of analysis, extant applications and empirical investigations of the behavioral integrity construct have focused exclusively on individual rather than on collective actors such as organizations. Subsequent research has been particularly interested in understanding behavioral integrity in leader-follower-relationships (Simons *et al.*, 2011, 2015). Typical examples of the effects of behavioral integrity include the creation of trust (Simons *et al.*, 2007; Palanski *et al.*, 2011; Palanski and Yammarino, 2011; Kannan-Narasimhan and Lawrence, 2012), follower

wellbeing (Johnson and O'Leary-Kelly, 2003; Protas, 2008, 2013; Andrews *et al.*, 2015), and health (Leroy *et al.*, 2012). The behavioral integrity of leaders has been shown to decrease levels of follower absenteeism (Johnson and O'Leary-Kelly, 2003) and turnover (Simons *et al.*, 2007), and to enhance performance (Johnson and O'Leary-Kelly, 2003; Palanski *et al.*, 2011; Leroy *et al.*, 2012). It has also been found to favorably affect employees' judgments about their managers (Dineen *et al.*, 2006; Kannan-Narasimhan and Lawrence, 2012; Palanski *et al.*, 2015).

In sum, there is substantial evidence to suggest that the alignment between an individual's stated intentions and her subsequent actions enhances the evaluation of that individual by her followers, increasing her perceived trustworthiness as a reliable exchange partner. We thus argue that stakeholders who provide firms with essential resources expect consistency between a firm's stated intentions or plans and its actions, and react positively to the presence of strategic integrity and negatively to the lack thereof. In the following, we develop this idea more systematically by presenting a formal definition of strategic integrity, elaborating on its nature, and delineating it from related concepts.

Strategic integrity

Construct definition

We define strategic integrity as *the extent to which an organization's strategic actions are aligned with its prior strategy communication*. This definition involves three core components namely, the *object* of the evaluation (the firm), the *attribute* of the evaluation (the alignment between strategy communication and subsequent strategic actions), and the identity of the evaluators or *raters* (the stakeholder groups concerned) (Rossiter, 2002). A visualization of this conceptualization of strategic integrity is provided in Figure 1.

Strategic integrity focuses on the collective of agents representing a firm with respect to strategy formulation, communication and implementation. The strategy literature regards these activities as core responsibilities of a firm's top management (Hambrick and Mason, 1984), and of the staff charged with supporting them (Zerfass *et al.*, 2014). The latter group is typically based in the corporate development and/or corporate communications departments (Dolphin and Reed, 2009); in some firms, strategy development is also integrated with the finance and/or investor relations departments (Dolphin, 2004). Together, they serve as the firm's spokespersons (Elsbach, 2003).

Stakeholders expect information on central aspects of a firm's strategy, comprising externally oriented, specific,

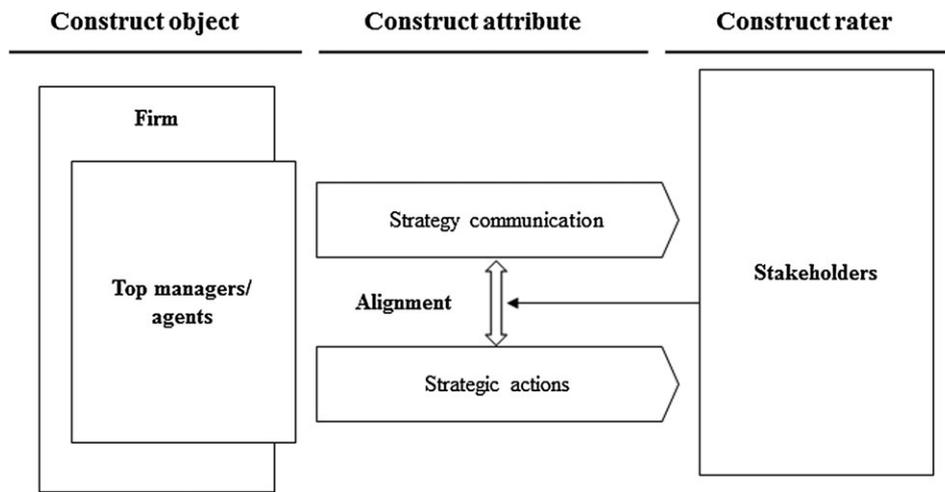


Figure 1 Illustration of the strategic integrity construct

and observable competitive moves initiated by a firm to enhance its relative competitive position (Chen, 1996). In diversified firms, corporate strategy decisions (e.g., with respect to major capital investments and divestments, mergers and acquisitions (M&A), joint ventures and alliances) which shape the firm's overall business portfolio are taken by the corporate center, whereas strategic decisions that affect the individual business units (e.g., on product design and pricing) tend to be taken at that level (Porter, 1989). Corporate strategy decisions on a firm's overall portfolio represent significant resource commitments that may have considerable effects on firm value (Bowman and Helfat, 2001).

Firms use a number of communication channels to announce intended strategic actions. These include annual reports, presentations to and meetings with analysts, press releases and press conferences, interviews, and increasingly corporate websites and different types of social media (Higgins and Diffenbach, 1989a; Arvidsson, 2012). Today, firms are expected to provide significant amounts of forward-looking information (Marston, 2008).

A firm's strategic actions are aligned with its strategy communication to the extent that they are consistent with the intended actions previously announced. We argue that evaluators ascribe strategic integrity to firms based on their comparison of prior communication and subsequent actions. This assessment is likely to focus on a limited set of parameters that describe what, in essence, a firm intends to do. For example, publicly quoted companies frequently communicate in which geographies they intend to be (more or less) active, and whether they seek to grow or shrink a particular line of business. In the presence of sufficient information, stakeholder groups should generally be able to assess whether a firm's actions are consistent with their stated intentions in terms of these basic parameters.

Construct delineation

The construct of strategic integrity differs from several others discussed in the literature. *Strategic credibility* refers to an evaluation of the content of a firm's strategy by its stakeholders (Higgins and Diffenbach, 1989b), to whether it 'make sense', given its context. Whereas strategic integrity assesses the alignment between strategy communication and strategic action, strategic credibility refers to the fit between a firm's strategy and its environment in the eyes of particular stakeholders i.e., whether the strategy is considered to be a 'good' one.

Strategic consistency refers to the continuity between different strategic actions over time. The more consistent strategic actions are with one another and with prior strategic investments, the more useful they tend to be in generating competitive advantage (Rindova and Fombrun, 1999). Strategic consistency thus entails an evaluative comparison of different strategic actions. Lamberg et al. (2009) in turn refer to strategic consistency as the alignment of a firm's actions with changes in the businesses environment and with its own history. Their use of the notion of strategic consistency is thus similar to the notion of strategic credibility discussed above.

Strategic coherence denotes the alignment of strategic actions across levels and functions (Nath and Sudharshan, 1994). Similar to the case of strategic consistency, strategic coherence refers to an evaluation of alignment of several firm strategic actions. Strategic coherence differs from strategic consistency in that it has a stronger internal focus, and it addresses the alignment of actions at a particular point in time.

To summarize, the notion of strategic integrity is a novel construct that bridges a firm's communication of strategy and its subsequent implementation. It is thus of particular importance in the context of major strategic initiatives. In the following, we use the example of corporate portfolio restructuring in order to explore

the importance of strategic integrity from the perspective of a specific key stakeholder group of a firm namely, its investors.

Strategic integrity in the context of corporate restructuring

Corporate restructuring denotes ‘a broad range of transactions, including selling lines of business or making significant acquisitions, changing capital structure through infusion of high levels of debt, and changing the internal organization of the firm’ (Bowman and Singh, 1993: 6). In corporate restructuring initiatives, firms reshape their business portfolios through mergers, acquisitions, divestitures and other types of corporate transactions in order to implement a strategy of diversification or de-diversification, of horizontal or vertical (dis-) integration, or of internationalization. Corporate restructuring thus fundamentally affects a firm’s scope and future performance (Markides, 1995).

Due to their material significance and visibility, corporate portfolio restructurings offer ideal situations for studying strategic integrity from the perspective of particular stakeholder groups. In most jurisdictions, firms listed on the stock market are required by law to publicly announce their intention to pursue transactions above a certain size threshold. Large-scale portfolio restructurings trigger significant communication before, during, and after the execution of the transactions involved. Finally, portfolio changes are distinct, easily identifiable and traceable strategy actions, thus allowing researchers to establish clear links between specific events and stakeholder reactions.

Due to their effects on capital market valuations, corporate restructuring activities are closely monitored by investors and other market participants. Companies thus communicate proactively with their investors in order to achieve and maintain favorable valuations. Research has shown that financial analysts and institutional investors are among the groups with whom companies communicate most frequently about their strategies (Higgins, 2002), and that strategy communication and event-specific communication may influence interpretations of actions by stakeholders (Wagner *et al.*, 2009).

As institutional stockholdings have increased over time, so has their influence on stock prices. Companies have reacted to this development with increasing investments in their investor relations functions (Rao and Sivakumar, 1999). With respect to interpreting company strategy and behavior, analysts have been recognized for their prominent role in shaping investor reactions to particular events (Kuperman, 2002; Fogarty and Rogers, 2005). Strategic integrity is particularly important in this relationship because analysts spend considerable time

analyzing the strategy communication of firms. They are thus in a strong position to recognize any (mis-)alignments between a firm’s strategy and its subsequent strategic actions (Ramnath *et al.*, 2008).

A number of empirical studies have analyzed the interaction between firms and financial market participants (Fogarty and Rogers, 2005; Westphal and Graebner, 2010). Masawi *et al.* (2013) found that communication influences financial markets. Clarity, intensity, and internal consistency of communicated strategy has been shown to enhance IPO performance (Gao *et al.*, 2008). Trautmann and Enkel (2014) have investigated success factors for communicating innovation to analysts. In sum, empirical studies have demonstrated the importance of communication with financial market participants.

We argue that strategic integrity will lead investors to attribute a reputation for trustworthiness and implementation orientation to the firm, thus raising their evaluation of the firm concerned. Investors dislike ‘surprises’ in the form of unexpected strategic moves that firms take out of line with their stated strategy. In contrast, consistency between stated intentions and subsequent actions demonstrates reliability, which is valued in the investor community (Higgins, 2002). Strategic integrity should therefore trigger increased demand for a firm’s stocks and consequently, higher capital market valuations.

Data and methods

To illustrate the importance of strategic integrity, we studied the alignment between strategy communication and strategic actions at Bayer, using an event study of the capital market consequences of Bayer’s portfolio restructuring between 1999 and 2006.

Case selection

Our longitudinal research design required us to follow a company with a well-documented strategy communication and a history of portfolio restructuring actions. Bayer provided a suitable setting for this approach. Bayer is a globally active, German life sciences company with annual sales of more than 46 billion euros and 115,000 employees world-wide (Bayer, 2016). Bayer stocks are included in the German DAX 30 and the EUROSTOX 50 indices. Bayer’s size and the high transaction intensity in its sector, results in a sufficient number of corporate transactions for analyzing the capital market implications of strategic integrity. Furthermore, as a publicly traded firm Bayer is required to announce events such as mergers and acquisitions that have a fundamental impact on its structure. Bayer has repeatedly won the German Investor Relations Award by the German

Investor Relations Association for its comprehensive investor relations activities.

We limited our analysis to the period from 1999 to 2006 for two reasons. First, it allowed us to exclude the turmoil created in the mergers and acquisitions markets by the financial crisis beginning in 2007. Second, the time frame represents a distinct phase in Bayer's corporate history. During these years, Bayer's overall corporate strategy was to move away from its traditional chemicals business and strengthen their healthcare and agriculture divisions with a focus on North America, and focus its polymer activities on Asia (Bayer, 2016). Bayer's corporate restructuring involved nearly 100 sizeable corporate transactions, including several 'mega-deals', which fundamentally changed the firm's structure. For example, in 2005 Bayer spun-off its former core business of chemicals and its polymers unit forming the new and independent company of Lanxess, accounting for more than 6.3 billion euros of sales and close to 20,000 employees. In 2006, it acquired pharmaceuticals company Schering for almost 17 billion euros (Bayer, 2016). As shown in Figure 2, Bayer's corporate portfolio changed significantly from 1999 to 2006. The case of Bayer allows us to observe strategic integrity of specific corporate restructuring events in the context of implementing a well-documented overall corporate restructuring strategy.

Data

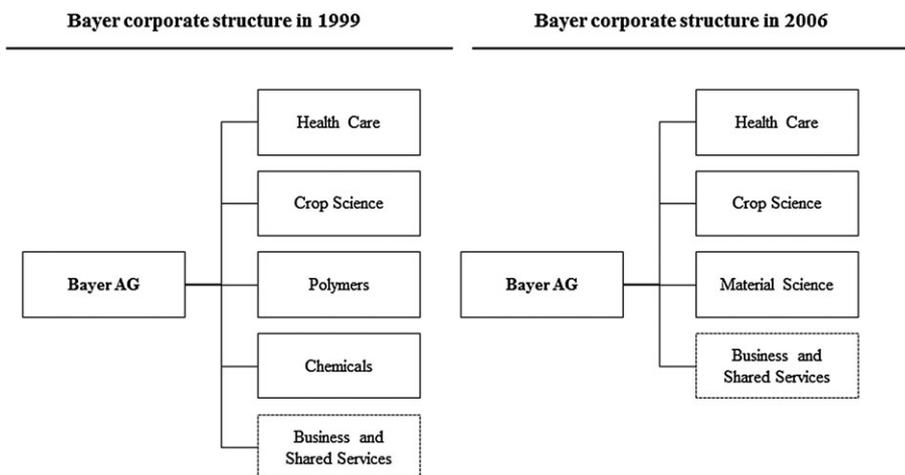
We used data from several sources in order to assess strategic integrity. First, in order to establish Bayer's strategy communication, we collected all written strategy documents published by Bayer in the eight years from 1999 to 2006 that were obtainable on the company's website, including annual and quarterly reports, *ad hoc*

messages, strategy presentations, and documents used in conference calls and investor conferences. In total, we analyzed 234 documents containing more than 5,000 pages of text. In contrast to oral statements about strategy, published documents are available to the entire investor community (as well as to other stakeholders), and may therefore be perceived as binding for moral or even legal reasons. We used these documents to identify intended strategic actions.

Second, in order to gather data on Bayer's strategic actions, we used Factiva and searched the press database LexisNexis for press reports and other types of media coverage of portfolio transactions by Bayer from 1999 to 2006. We found reports on 53 acquisitions and 45 divestments for a total of 98 strategic actions for the period under investigation. We dropped 18 events from the sample as information on them was insufficient. Our final sample contained 80 events, including 45 acquisitions and 35 divestments. The frequency of these actions varied over time, with an average of 2.5 portfolio restructuring actions per quarter (see Table 1). We used the Datastream database to collect stock market data for the respective period. These data capture investors' reactions to Bayer's strategic actions.

Assessing strategy communication and strategy integrity

In order to assess the alignment between Bayer's strategy communication and its subsequent strategic actions, all information was coded by two researchers working independently. The inter-rater agreement was above 90% in all but one coding category, and all indicators commonly used for assessing inter-coder reliability (Lombard *et al.*, 2002) were at acceptable levels in all categories. Disagreements were further reduced in discussions between the two coders after the exercise



Source: Bayer 1999, Bayer 2006.

Figure 2 Development of Bayer's corporate structure

Table 1 Acquisition and Divestment Frequency

| Year | Acquisitions | Divestments | Total |
|-------|--------------|-------------|-------|
| 1999 | 8 | 3 | 11 |
| 2000 | 10 | 7 | 17 |
| 2001 | 9 | 4 | 13 |
| 2002 | 2 | 7 | 9 |
| 2003 | 1 | 3 | 4 |
| 2004 | 3 | 3 | 6 |
| 2005 | 3 | 3 | 6 |
| 2006 | 9 | 5 | 14 |
| Total | 45 | 35 | 80 |

Note: Events are drawn from Bayer's annual reports.

was completed, resulting in an overall agreement of more than 95%.

In order to establish Bayer's strategy communication, all text fragments containing statements about the company's intentions regarding its portfolio restructuring were coded along five dimensions: (1) type of action (acquisition or divestment); (2) type of statement (action planned or not planned); (3) division affected (Bayer had four divisions in 1999 which it reorganized into three, with a spin-off of the Chemicals part in 2004/2005; see Figure 2); (4) geography affected; and (5) product group affected. If a statement indicated that an acquisition was planned and a divestment was not planned (or vice versa), two codes were created. If a statement was broad and unspecific (i.e., it would not mention a division, nor a geography or product focus), no code was created, in line with the value that analysts put on specificity in strategy communication (Higgins, 2002). A total of 332 individual codes were created, capturing Bayer's communication of its intended strategy.

A significant portion (47%) of the communication on intended portfolio restructuring actions happened early during each year, as indicated by a large proportion of codes in the first quarter, partly due to the fact that Bayer's annual reporting season took place in that quarter. The majority of statements were formulated in a positive fashion that is, the company communicated what they intended to do, rather than what they intended not to do. However, most of the positive statements also implied that the opposite action was not planned.

We then compared the 80 strategic actions (or 'events') with the codes describing Bayer's strategy communication prior to the events concerned. Specifically, we used the strategy communication from the same quarter and up to two quarters before the strategic action took place, corresponding to a time frame of up to nine months. The reason for using a quarterly timeframe was that a lot of the communication items were published without an exact date, but information was available on which quarter they were published in. We also ran our analyses with a timeframe of six and twelve months, with no material change to the results.

The strategic actions were assessed against the strategy communication codes for the same type of action and division, and the same product group and geography if specified. By following this procedure, each event was compared to up to ten prior strategy communication codes. We then assigned to each action a score of being 'aligned', 'ambiguous', or 'misaligned' with previous strategy communication. For 48 events, there were between one and ten codes all either consistently indicating alignment or misalignment. These events were coded as 'aligned' and 'misaligned' respectively. There were 13 actions that were aligned with some strategy communication codes, but misaligned with others, to which we assigned the overall rating of being 'aligned' or 'misaligned' on the basis of the majority of statements. One event had one code each supporting alignment and misalignment, which we rated as 'ambiguous'. Furthermore, for 18 events there was no strategy communication corresponding to the respective event within the timeframe of up to two quarters before the event. These events were rated as 'ambiguous'.

Analytical methods

In order to analyze the effect of strategic integrity on stock performance we used an event study methodology, which is based on the market-adjusted model for the company and then calculating abnormal returns around the event date. Abnormal returns are calculated by subtracting the expected return from the actual return, thus representing returns earned by the firm over and above the 'normal' return (McWilliams and Siegel, 1997). Event studies are commonly used to assess the effects of strategy communication and other important announcements (Johnston, 2007; Duso *et al.*, 2010; Bergh and Gibbons, 2011). We chose the market-adjusted model (over the market model) given the fact that Bayer performed multiple actions over the period we examined. Thus, the estimation of the market parameters of Bayer will inevitably include many previous events in the estimation period, making beta coefficient estimations susceptible to bias (see also Fuller *et al.* (2002) for similar arguments). Brown and Warner (1980, 1985) have shown that for short-run event studies the market model does not significantly improve estimation, and the market-adjusted model is preferable (see also Campbell *et al.*, 1997). Nevertheless, we examined the robustness of our results (untabulated) by analyzing the market model as well as the Fama and French (1993) 3-factor model, in addition to the market-adjusted model.

We used the DAX30 rate of return as the index to estimate the normal return on the Bayer stock within the event window. We defined various windows in order to capture the effect of strategic integrity on stock performance, namely the announcement window (day

0), the (-1, 0) window, and the longer (-10, +10) window. These event windows have been used in prior literature (for example, Travlos, 1987; Datta et al., 1992).

Abnormal returns (ARs) were calculated as follows:

$$AR_t = r_t - r_{m,t},$$

where r is the return on Bayer at time t and $r_{m,t}$ is the return on the DAX30 (XETRA) at time t of the event (acquisition and divestment announcements drawn from Factiva).

The return on day t is calculated thus:

$$(P_t - P_{t-1}) / (P_{t-1}),$$

and the CAR is the cumulative abnormal return between the specified days (0), (-1, 0), and (-10, +10). We used simple returns to calculate performance, which is preferable in studies using short-term windows (Campbell

et al., 1997). Nevertheless, in untabulated results we also ran our main results using continuously compounding returns, with no material change in our results. We then assessed whether the abnormal returns of strategic actions rated as 'aligned', 'ambiguous' and 'misaligned' with prior strategy communication were significantly different from one another, using bootstrap simulations.

Results

Table 2 provides an overview of the average cumulative abnormal stock returns. More than 50 per cent of the events (45 out of 80) were rated as 'aligned' with previous strategy communication, whereas 16 events were 'misaligned', and 19 'ambiguous'. Acquisitions were 'aligned' more often with prior strategy communication

Table 2 Number of events and cumulative abnormal returns by alignment level

| Event | Alignment level | | | | | | |
|--------------------------|-------------------|------------------|-------------------------------|----------------|--------------|-----------------------|----------|
| | Misaligned (1) | Ambiguous (2) | Misaligned & Ambiguous (3) | Aligned (4) | Total (5) | Difference (4)-(1) | |
| Panel A: At announcement | | | | | | | |
| Acquisitions | mean | -0.21% | -0.28% | -0.26% | 0.70% | 0.46% | |
| | median | -0.39% | -0.14% | -0.16% | 0.81% | 0.22% | |
| | n | 3 | 8 | 11 | 34 | 45 | |
| Divestments | mean | -0.75% | -0.14% | -0.47 | 1.42% | 0.12% | |
| | median | -0.49% | 0.18% | -0.05% | 1.38% | 0.18% | |
| | n | 13 | 11 | 24 | 11 | 35 | |
| Total | mean | -0.65% | -0.20% | -0.41% | 0.88% | 0.32% | 1.53%*** |
| | median | -0.44% | -0.12% | -0.16% | 0.91% | 0.20% | 1.35%*** |
| | n | 16 | 19 | 35 | 45 | 80 | |
| Panel B: (-1, 0) | | | | | | | |
| Acquisitions | mean | 0.88% | -0.19% | 0.10% | 0.06% | 0.07% | |
| | median | 0.05% | -1.02% | -0.43% | 0.07% | 0.05% | |
| | n | 3 | 8 | 11 | 34 | 45 | |
| Divestments | mean | -1.05% | -0.54% | -0.82% | 1.31% | -0.15% | |
| | median | -1.07% | -0.01% | -0.80% | 1.37% | -0.01% | |
| | n | 13 | 11 | 24 | 11 | 35 | |
| Total | mean | -0.69% | -0.39% | -0.53% | 0.37% | -0.02% | 1.06** |
| | median | -0.74% | -0.54% | -0.54% | 0.35% | 0.02% | 1.09*** |
| | n | 16 | 19 | 35 | 45 | 80 | |
| Panel C: (-10, +10) | | | | | | | |
| Acquisitions | mean | -4.46% | 1.48% | -0.14% | 2.00% | 1.48% | |
| | median | -3.16% | -0.71% | -3.09% | 0.29% | -0.03% | |
| | n | 3 | 8 | 11 | 34 | 45 | |
| Divestments | mean | 0.07% | -0.85% | -0.35% | 0.83% | 0.02% | |
| | median | 0.19% | 0.29% | 0.24% | 2.81% | 0.29% | |
| | n | 13 | 11 | 24 | 11 | 35 | |
| Total | mean | -0.78% | 0.13% | -0.28% | 1.71% | 0.84% | 2.49%** |
| | median | -0.18% | 0.29% | 0.17% | 0.35% | 0.21% | 0.53%* |
| | n | 16 | 19 | 35 | 45 | 80 | |

Notes: This table reports Bayer's cumulative abnormal returns (CARs) for 45 acquisitions and 35 divestitures between 1999 and 2006, using the market-adjusted model. Panel A reports the abnormal return at the announcement of the event (day 0), Panel B reports the (-1, 0) CAR, and Panel C reports the (-10, +10) CAR. The last column report a two-sample t -test for the means and a Mann-Whitney test for the medians just for the Total sample.

* ,

** ,

*** denote significance at the 10%, 5%, and 1% level, respectively.

Table 3 Descriptive statistics for bootstrap simulations

| | <i>Misaligned</i> (1) | <i>Ambiguous</i> (2) | <i>Misaligned & Ambiguous</i> (3) | <i>Aligned</i> (4) | <i>Aligned vs Misaligned</i> | <i>Aligned vs Ambiguous</i> | <i>Aligned vs Misaligned & Ambiguous</i> |
|--------------------------|--------------------------|-------------------------|---|-----------------------|----------------------------------|---------------------------------|--|
| Panel A: At announcement | | | | | | | |
| sample mean | -0.65% | -0.20% | -0.41% | 0.88% | | | |
| simulated mean | 0.00% | 0.01% | 0.01% | 0.01% | 1.52%*** | 1.07%*** | 1.28%*** |
| 99% CI | (-0.01%, 0.02%) | (-0.00%, 0.03%) | (-0.00%, 0.02%) | (-0.00%, 0.02%) | | | |
| Panel B: (-1, 0) | | | | | | | |
| sample mean | -0.69% | -0.39% | -0.53% | 0.37% | | | |
| simulated mean | 0.08% | 0.14% | 0.11% | 0.10% | 1.04%* | 0.80% | 0.91%** |
| 99% CI | (0.03%, 0.13%) | (0.09%, 0.18%) | (0.08%, 0.14%) | (0.08%, 0.13%) | | | |
| Panel C: (-10, +10) | | | | | | | |
| sample mean | -0.78% | 0.13% | -0.28% | 1.71% | | | |
| simulated mean | 0.12% | 0.17% | 0.16% | 0.15% | 2.46%** | 1.60% | 2.01%* |
| 99% CI | (0.06%, 0.18%) | (0.12%, 0.23%) | (0.12%, 0.20%) | (0.11%, 0.18%) | | | |

Notes: This table reports various statistics from bootstrap simulations based on the time series of Bayer's abnormal returns. In column (1), we randomly selected 16 dates between 1999 and 2006 and calculate the CARs for various windows. For column (2) we randomly selected 19, in column (3) 35, and in column (4), 45. The choice of sample is based on the total number of the events reported for each alignment level as reported in Table 2. We repeated the process 5,000 times and report the following statistics from the simulated distributions; *simulated mean* is the average CAR, and *99% CI* is the 99% confidence interval of the mean. *Sample mean* reports the CARs as obtained from Table 2. The last three columns of the table report two-sample *t*-tests of the two corresponding groups, taking into account the *simulated mean* of the bootstrap distribution. Panel A, B, and C report the statistics for the announcement (day 0), (-1, 0), and (-10, +10) event windows.

(34 out of 45, corresponding to 76%) than divestments (11 out of 35 i.e., 31%).

Panel A of Table 2 presents the results for the announcement day. The average (median) abnormal stock return for all events as seen in column (5) was +0.32% (0.20%), reflecting a positive evaluation by the capital market of Bayer's portfolio restructuring activities during the 1999–2006 period. The average abnormal returns were higher for acquisitions (+0.46%) than for divestments (+0.12%), but the returns were more similar when using median values (0.22% vs 0.18%, respectively). These findings are consistent with extant research showing positive abnormal stock returns for acquisitions in general (Seth, 1990), and mixed results for divestments (Brauer, 2006).

By comparing these results to columns (1) to (4), we observe that this positive result is driven by the 'aligned' events. 'Aligned' events (column (4)) have a positive average stock reaction (+0.88%) and are greater in magnitude as compared to 'misaligned' (-0.65%), 'ambiguous' (-0.20%), and combined 'misaligned & ambiguous' (-0.41%) events. Results are very comparable when looking at the median values, too.

The last column in Table 2 reports the differences between 'aligned' and 'misaligned' events. We report

these statistics just for the *Total* sample given that acquisitions and divestments on their own do not have enough observations to produce meaningful results. The difference in means is based on a *t*-test and the difference in medians on a Mann–Whitney test. 'Aligned' events significantly outperformed 'misaligned' events by 1.53% on average (1.34% in medians). These results provide an initial indication that 'aligned' events were perceived more favorably by the market as compared to 'misaligned' events.

Panel B and Panel C present the same analysis, but for wider event windows. In Panel B, we examined the validity of our results using a 2-day (-1, 0) window and in Panel C a 21-day (-10, +10) window. The results from both of these panels confirm the results outlined in Panel A, namely that 'aligned' events elicited a strong positive reaction from investors. In addition, the difference between 'aligned' and 'misaligned' events was statistically significant for both means and medians.

Table 3 shows the results from a bootstrap simulation used to further assess the significance of the results from Table 2. We focused on the total abnormal returns (combined acquisitions and divestitures sample) for all alignment levels. For each alignment level, we randomly selected *y* dates (*y* denotes the total number of events for

that alignment level; for example $y = 45$ for the ‘aligned’ subsample) between 1999 and 2006 and calculated the cumulative abnormal returns (CARs) for the desired event window. We performed 5,000 iterations and repeated this process for all alignment levels and event windows. All panels report the *sample mean* (the average of the corresponding alignment level), which is directly contrasted with the *simulated mean* (the average CAR of the simulated bootstrap distribution as described above). *99%CI* is the 99th confidence interval of the mean of the distribution.

In column (1) of Table 3, the *simulated mean* is 0.00% with a confidence interval of (−0.01%, +0.02%), whereas the actual *sample mean* is −0.65%. Therefore, we have 99% confidence that the true mean of the population lies between −0.01% and 0.02%. Therefore, the corresponding mean value in Table 2 (−0.65%) shows that ‘misaligned’ events were perceived quite negatively by the market. Similarly, if we look at column (3) (‘aligned’ events), the 99% confidence interval is (−0.00%, +0.02%), but the *sample mean* is 0.88%. Therefore, we conclude that ‘aligned’ events were indeed perceived more favorably by investors, whereas the rest of the events were perceived negatively.

We used the *simulated mean* statistics in order to test the significance of the results shown in Table 2. Instead of contrasting the average values of each group (as we did in Table 2), we adjusted each *sample mean* by subtracting the *simulated mean*. The final three columns of Table 3 report these new differences between these groups. ‘Aligned’ events significantly outperformed all other events by a margin of between 1.07% (vs ‘ambiguous’) and 1.52% (vs ‘misaligned’). In Panels B and C we used wider event windows, finding similar results.

In order to shed further light on the importance of strategic integrity, we were interested in Bayer’s communication strategy with respect to the announcement of particular strategic actions. We collected all press statements on actual portfolio restructuring actions Bayer published in the seven years from 2000 to 2006 from the company website. The period is one year shorter than that of the collected strategy communication and strategic actions, as Bayer did not publish press statements before the year 2000 on their website. Consequently, we excluded actions from the year 1999 for further investigations. Within the 2000–2006 period, our data set contains 68 portfolio restructuring events. Bayer provided detailed press statements on 36 of these 68 events, corresponding to a coverage rate of 53%. The documents containing the event-specific communication have a length of up to five pages, with the average statement being two to three pages in length. We coded each action with a dummy variable ‘coverage’, indicating whether an additional detailed press statement

accompanied the action or not. In a second step, we analyzed each press statement and created a dummy variable ‘linked to strategy’, indicating whether this press statement linked an action with the overall corporate strategy or not. In the sample of 36 events that were covered with individual press statements, 25 were linked to the overall corporate strategy and the remaining 11 were not.

Table 4 shows that approximately more than half (36) of the 68 strategic actions analyzed here were covered by event-specific communication. In about two thirds (25) of those 36 cases, the strategic action was explicitly linked to Bayer’s overall strategy as communicated previously. The breakdown of the 68 cases by alignment level yielded three interesting insights.

First, when an action was ‘aligned’ with its overall strategy, Bayer took advantage of the opportunity to point this out. Seventeen of the 19 ‘aligned’ actions that were covered by event-specific communication thus contained explicit references to Bayer’s strategy that had been communicated previously. The analysis thus suggests that Bayer saw reputational value in demonstrating that it followed the strategy it had devised and communicated.

Second, the majority (12) of the 18 ‘ambiguous’ actions was covered by event-specific communication, but in seven of these twelve communications, the company did not relate the action back to the strategy communicated previously. Thus, Bayer sought to explain ‘ambiguous’ strategic actions, in order to create persuasive rationales for them that would satisfy investor expectations. However, there were also five ‘ambiguous’ events that were reconciled as being in line with corporate strategy; these were divestments in the Agriculture, Polymers, Chemicals, and Healthcare divisions. For example, in 2004 Bayer sold its blood plasma operations to two US financial investment firms, Cerberus and Ampersand. In the official press statement, Bayer’s CEO explained that the divestment was part of the strategic reorganization within the Healthcare division, focusing on consumer care, patented human and veterinary medicine and diagnosis systems. In Polymers, Bayer divested Walothén, a manufacturer of polypropylene films based in Northern Germany. In the corresponding press statement, Bayer said that this action was in line with its overall strategy of streamlining its portfolio of non-core activities. A similar rationale was provided for the divestment of its household insecticide business in the Agriculture division. Overall, the evidence suggests that the company took pains to explain ‘ambiguous’ strategic actions to investors, either by portraying them as being in line with its corporate strategy, or by providing another rationale for them.

Third, about two thirds (9) of 14 strategic actions that were rated as ‘misaligned’ in our analysis, were not covered by event-specific communication. In other words,

Table 4 Overview of coverage of strategic actions with event-specific communication

| | <i>Alignment level</i> | | | | |
|---|-------------------------|-------------------------|-----------------------------------|-------------------------|-------------------------|
| | <i>Misaligned</i> | <i>Ambiguous</i> | <i>Misaligned & Ambiguous</i> | <i>Aligned</i> | <i>Total</i> |
| | (1) | (2) | (3) | (4) | (5) |
| Event covered by specific communication of which: | 35.7% (<i>n</i> = 5) | 66.7% (<i>n</i> = 12) | 53.1% (<i>n</i> = 17) | 52.8% (<i>n</i> = 19) | 52.9% (<i>n</i> = 36) |
| Strategic action explicitly linked previously communicated strategy | 21.4% (<i>n</i> = 3) | 27.8% (<i>n</i> = 5) | 25.0% (<i>n</i> = 8) | 47.2% (<i>n</i> = 17) | 36.8% (<i>n</i> = 25) |
| Strategic action not linked to previously communicated strategy | 14.3% (<i>n</i> = 2) | 38.9% (<i>n</i> = 7) | 28.1% (<i>n</i> = 9) | 5.6% (<i>n</i> = 2) | 16.2% (<i>n</i> = 11) |
| Event not covered by specific communication | 64.3% (<i>n</i> = 9) | 33.3% (<i>n</i> = 6) | 46.9% (<i>n</i> = 15) | 47.2% (<i>n</i> = 17) | 47.1% (<i>n</i> = 32) |
| Total | 100.0% (<i>n</i> = 14) | 100.0% (<i>n</i> = 18) | 100.0% (<i>n</i> = 32) | 100.0% (<i>n</i> = 36) | 100.0% (<i>n</i> = 68) |

Note: This table reports Bayer's communication strategy with respect to the announcement of particular strategic actions.

when an action was clearly misaligned with what the company had previously announced, Bayer tended to let the 'facts speak for themselves', rather than to construe explanations for such mismatch. There were some exceptions to this general rule, however. Specifically, Bayer offered event-specific communication on two divestments of generics businesses in Bayer's Healthcare division in 2002 that we had rated as 'misaligned' with Bayer's overall strategy of growing this division. The explanations that Bayer provided revolved around their aim to focus less on generic and more on patented pharmaceuticals. In its statements, the company thus argued that they saw these divestments as being in line with their overall strategic goal.

Robustness checks

For event studies with large companies (which often have multiple events taking place in a given time period), confounding events can seriously affect the estimation of abnormal returns (McWilliams and Siegel, 1997), thus requiring the choice of a short window for estimating abnormal returns. Even though in our main analysis (see Panel A in Tables 2 and 3) we used day 0 (announcement day) as the event window, we performed two additional tests in order to alleviate any concerns regarding the effect of confounding events. First, we examined whether Bayer had issued earnings statements around the acquisition and divestment dates which could be biasing the results reported in the previous section. We found that around a 21-day (2-day) window surrounding our events Bayer had issued a quarterly earnings statement in 19 (3) cases. Our results in the previous section remained similar in sign and significance when we excluded these observations from our sample. Second, we identified events that were overlapping during the reported event periods. For example, four events were announced a day after another event and eighteen events overlapped during our longer window. None of the events were announced at the same time. When we excluded these overlapping

observations our results were similar, although in some cases they lacked statistical significance due to the reduction in sample sizes.

Furthermore, we used different models to estimate the abnormal return of the events. First, we used the market model, where alpha and beta were calculated using an estimation window of (−120, −30) days, obtaining results consistent with our base case reported in Table 2. We also ran the event study for different estimation windows of (−90, −30) and (−60, −30) days, which did not change the results materially. Second, we used the Fama and French (1993) 3-factor model, to account for the size and market-to-book factors, without a material change in the results. Finally, we re-ran our base results in Table 2, using continuously compounded returns (i.e., $\log(P_t/P_{t-1})$) instead of simple returns. Our log results were consistent with our base results.

Discussion and conclusions

Summary and theoretical implications

In this paper, we introduced the construct of strategic integrity, denoting the pattern of alignment between a firm's communicated strategy and its subsequent strategic actions. We explicated this construct in the context of a firm's communicated and actual portfolio restructuring actions. Using data on German life sciences company Bayer, we find that the investor community notices and appreciates alignment between strategy communication and strategic actions, as indicated by the positive abnormal stock market returns of announcements of strategic actions that were aligned with prior strategy communication. In contrast, the announcement of misaligned and ambiguous strategic actions carried negative abnormal returns. Furthermore, our analysis suggests that Bayer pursued communication strategies in order to relate their portfolio restructuring actions back to its overall strategy, and to emphasize that its actions

were aligned with that strategy, or otherwise explain any inconsistencies. Bayer thus appeared to value strategic integrity in anticipation of the stock returns that would accrue from it. Overall, these results provide promising evidence on the usefulness of strategic integrity as a construct of relevance for research and practice.

We believe that our approach bridges several strands of literature that are often disassociated from one another. First, we contribute to the debate on the use of language, rhetoric and the role of discourse, in establishing legitimacy (Sillince and Suddaby, 2008; Cornelissen *et al.*, 2015). We concur with the argument that communication is of central importance in this context; indeed, our empirical analysis has demonstrated that Bayer communicated its corporate strategy frequently and intensely to its stakeholders (the 234 documents we obtained from the company's website during the 1999–2006 period imply that, on average, Bayer posted more than one publication containing strategy-related material per fortnight). Moreover, Bayer provided significant amounts of communication to explain and justify its individual strategic actions. Corporate communication thus plays a key role in influencing stakeholders (Mahon and Wartick, 2003; Cornelissen *et al.*, 2006; Bochenek and Blili, 2013; Neill, 2015). At the same time, our analysis also suggests that explicating its strategy may only be a first step for a firm to gain the support of its stakeholders. Firms also require strategic integrity, which is earned by taking actions that are aligned with its strategy thus communicated. Our analysis shows that those strategic actions that were misaligned with Bayer's communicated strategy carried negative abnormal returns of -0.65% on average, significantly different from positive abnormal returns of $+0.88\%$ for aligned actions (see Table 2, Panel A). Furthermore, despite Bayer's communicative efforts to explain actions that were deemed ambiguous, these actions, too, carried significantly lower abnormal stock returns than aligned actions.

The importance of acting upon and in accordance with intentions known earlier is known from other literatures for example, from marketing (LaBarbera, 1982; Newell and Goldsmith, 2001). Furthermore, the game theoretic literature has emphasized the value of credible commitments in producing positive outcomes in games involving sequential interactions among players (e.g., Sobel, 1985). Credible commitments require the players' willingness to take actions in line with their stated intentions, even if those actions might not be their 'best actions' in a corresponding simultaneous-move game (Ross, 2014). We thus believe that communication alone is not sufficient for maintaining the willingness of stakeholders to provide support for a firm. It also requires *strategic integrity* in order to establish credibility and a reputation for reliability and trustworthiness. Such

integrity has been shown to be of importance on the individual level (Simons, 2002a, b); we demonstrate its relevance on the organizational level, too.

Furthermore, our paper contributes to the strategy literature, whose early focus on strategic planning and strategy formulation has increasingly been complemented by an emphasis on strategy implementation (Brauer and Schmidt, 2006). Some approaches even see strategy as the mere pattern of resource allocation decisions, rather than as a firm's stated intentions; see for example the debate between Mintzberg (1990, 1991) and Ansoff (1991) about the 'design school' of strategy. We concur with Mintzberg and Waters (1985) portrayal of 'realized' strategy as a blend of 'intended' and 'emergent' elements. Yet to the extent that a company decides to communicate its strategic intentions proactively, it also creates expectations that these intentions are fulfilled. In this sense, by explicating its strategy fully, a company may well create a rod for its own back. By reiterating its strategy frequently, the firm's top management binds itself, and ensures that its strategy gets implemented (Richter and Schmidt, 2005).

Finally, our specification of strategic integrity in the context of strategy communication to the investor community is of relevance to the under-researched but growing body of literature on the investor relations function (Petersen and Martin, 1996; Laskin, 2009). With increasingly stringent reporting requirements and corporate transparency expectations, we believe strategic integrity will become ever more important.

Implications for practitioners

Our findings have implications for both directors and managers below board level. Our analysis suggests that investors are 'listening' to their announcements and positively react to alignment between strategy communication and actions, yet 'punish' firms whose actions differ from their previously announced intentions. Executives should thus avoid hasty statements about which strategic actions a firm intends to take, in particular if they are uncertain about whether they are able to honor the implicit or explicit promises thus made. At the same time, our results also imply that corporate managers can make active use of corporate communication to shape the expectations of the investor community. Corporate directors, who serve as a link between outside shareholders and the company, can use our approach for measuring strategic integrity as a tool for reviewing board effectiveness and the implementation orientation of their firm (Schmidt and Brauer, 2006).

Limitations and avenues for future research

Our study is subject to limitations that should be addressed in future work. For example, our emphasis on strategic

integrity neglects the possibility that there may be situations when it might make sense for a firm to deviate from its initial communication, specifically in situations of high environmental dynamism. A strategy communicated earlier might not always seem like the best option at a later point in time (Higgins, 2002). Even if the initial stock market reaction to a ‘misaligned’ action may be negative, the action may create firm value in the longer run. Furthermore, a firm might not want to announce intended actions, or it may be intentionally vague in its communication in order to keep competitors in the dark. In sum, there is a need to define the situational boundary conditions to our theory on the effects of strategic integrity in greater detail.

In addition to these conceptual restrictions, the event study methodology is subject to a number of limitations. Event studies may be subject to biases e.g., relating to the choice of the time window (Duso *et al.*, 2010). Nevertheless, we chose three different event windows and the results are consistent across all windows. Though the number of events (80) in our final sample may appear relatively small, it is quite comparable to those of other studies (Clinebell and Clinebell, 1994; Meznar *et al.*, 1994; Johnston, 2007; Konchitchki and O’Leary, 2011). Furthermore, there is no econometric evidence that event studies with small samples have larger biases than studies with larger samples (Ahern, 2009). However, in order to improve the validity of our results, we constructed a bootstrap distribution of sample average returns and showed that the actual average returns were highly significant. Furthermore, our approach focuses on situations where actions were taken, while paying less attention to those parts of strategy statements that were not followed by actions. Initial empirical evidence suggests that such decoupling of intention and action may not necessarily be punished by financial markets (Zajac and Westphal, 2004), although further research would help to clarify the relationship.

Finally, our analyses are based on a longitudinal study of one single firm, raising questions regarding the generalizability of our results. Although Bayer is a global firm which was listed on the NYSE during the time period investigated, it remains an open question whether the results are representative of other firms. Also, the coverage with press statements may be lower for firms that put less effort into their investor relations function. These firms may not have a comprehensive strategy communication policy; hence analysts may react less strongly to ambiguous or misaligned actions from these companies. Nevertheless, we would expect the direction of the effect to remain unchanged.

We see many opportunities for further research on the alignment of companies’ communication and actions, in particular the following three. First, a firm’s strategic integrity needs to be assessed among other external

stakeholders, such as customers and suppliers, who are recipients of strategy communication as well. If even ‘distanced’ financial investors – who can shift their portfolio with relative ease – react positively to strategic integrity, then customers and suppliers – who may depend on companies more heavily – might value it even more highly. Future work should thus explore the effects of strategic integrity on measures such as customer satisfaction and word-of-mouth, supplier loyalty and the like.

Second, research on strategic integrity can be advanced by assessing differences in perceived integrity depending on who communicates an action. A personal statement made by a firm’s CEO may carry more weight among a particular stakeholder group than a publication from support staff in the firm’s investor relations department (Kuperman, 2003). Third, the choice of communication channel might affect the strategic integrity ascribed to a firm. Today, firms use a variety of communication channels that differ from conventional written documents published in writing or online. Companies and individual managers make regularly use of audio-visual media, tweets, blogs and other non-traditional media for strategy communication (Eyrich *et al.*, 2008). Unofficial or even unintentional communication of strategic intentions through these channels might affect integrity perceptions. In general, we believe investigations of the links between communication and strategy (Foreman and Argenti, 2005) have considerable potential in explaining the core question of strategy, why some firms perform better than others.

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