CEO reference points and strategic risk taking: Market reaction to M&A announcements

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Abstract

If gains or losses are evaluated relative to reference points, as per prospect theory, with associated risk aversion/seeking in the domain of gains/losses influencing corporate decision making, then managers’ strategic decisions could be impacted by their firm’s past or relative financial performances acting as reference points. We investigate reference point effects in the context of M&A decisions, examining whether investors price in acquisition news on the market. We employ four reference point measures, namely past and peer sales, along with past and peer ROA. We that reference point effects play a role in how investors assess acquisition announcements. Contrary to initial simplistic hypotheses, the connections constitute a rather complex pattern depending on different degrees of distance from the reference points, on different measures to capture the position relative to reference points, the public status of the target, and other conditions. While we cannot conclude in favour of a simplistic, general, and linear relationship, the null hypothesis of no existing link can be confidently rejected.

Extended Abstract

If gains or losses are evaluated relative to reference points, as per prospect theory, with associated risk aversion/seeking in the domain of gains/losses influencing corporate decision making, then managers’ strategic decisions could be impacted by their firm’s past or relative financial performances acting as reference points. We investigate reference point effects in the context of M&A decisions, examining whether investors price in acquisition news on the market.

Motivation

A firm’s performance, relative to its own past or the performance of its peers acting as salient reference points, can be expected to lead to managerial perception of being in the domain of gains or losses. Following prospect theory, managers in the domain of gains might be expected to play it safe, while those in the domain of losses might be expected to risk more in an attempt to make up for their loss. While doing so, the loss-domain managers are predicted to gamble with projects which offer lower expected returns than the projects their gain-domain colleagues undertake, if such projects include the chance of a large positive pay-out which would offset the previous losses (cf. the "break-even effects" of Thaler and Johnson 1990). We suggest M&As would be such projects (cf. Grinyer, Mayes and Mckiernan 1990). While this gamble might come
good for a minority of loss-domain managers; on average, it should lead to a lower return of such projects undertaken in the domain of losses compared to those initiated in the domain of gains. Hence we examine the market reaction to M&A announcements. In doing so we assume, while managers may behave irrationally, that markets are efficient and so correctly price in acquisition news.

It is not straightforward to apply prospect theory, especially outside the laboratory. Barberis’ (2013) advice to handle this challenge is to use several plausible reference point operationalisations. Two important evaluation areas for companies are the size of their operations, as well as the degree to which they generate income from them. For the former, sales figures are frequently used, e.g., in the economic press to compare a firm’s growth over time, or the size of competitors. They should therefore form a salient reference point for managers. Sales, however, are ultimately only good to the extent to which they eventually lead to net income. For net income the most relevant aspect is the return on one’s investment, i.e. how much does one have to invest in assets to derive a certain net income from them. Managers must keep this figure, the ROA, in mind to satisfy their financial backers. For both ROA as well as sales we would then expect the primarily hypothesized case of higher risk seeking and subsequently lower share price reactions for lower reference point situations:

**Hypotheses**

We investigate the following overarching null hypothesis: The share price return to an acquisition announcement is unrelated to the acquirer’s position relative to reference points.

The alternative hypothesis, based on prospect theory preferences is: The lower an acquirer’s position relative to reference points, the lower the share price return to an acquisition announcement.

It is conceivable, however, that performance below the reference point highlights looming dangers and triggers risk avoidance instead of risk seeking behaviour by the manager (e.g., Staw, Sandelands and Dutton 1981 p.503; as well as Sitkin and Pablo 1992 p.27). Hence, an opposite alternative hypothesis: The lower an acquirer’s position relative to reference points, the higher the share price return to an acquisition announcement.

To operationalise hypotheses, we adopt past sales and peer sales, along with past ROA and peer ROA, as reference points, giving the following testable two-sided hypotheses:

Hypothesis 1a: The lower an acquirer’s position relative to ROA reference points, the lower/higher the share price return to an acquisition announcement.

Hypothesis 1b: The lower an acquirer’s position relative to sales reference points, the lower/higher the share price return to an acquisition announcement.

It is common to compare a firm’s situation with its past (e.g., Baker, Pan and Wurgler 2012) and its peers (e.g., Fiegenbaum and Thomas 1988). However, the peer comparison is fraught with problems. While managers’ performance is clearly compared to their industry competitors by observers, there is no obvious choice of reference point. Using the respective performance indicator’s market leader would situate everybody else in the loss-domain. Following the common use of median industry performance (Gooding, Goel and Wiseman 1996; Holmes et al. 2011), on the other hand, would mean assuming high performers consider a turn to mediocrity a possibility; or, even worse, in the language of the behavioural theory of the firm, aspire to a
lower performance. This seems unlikely (Bromiley 1991). We therefore expect the firm’s own past to constitute the more significant reference point.

Hypothesis 2: The difference in share price return dependent on an acquirer’s position relative to reference points is greater for a firm’s own past-based than for its peers-determined reference points.

The sample is split into listed and unlisted targets since their announcement returns are shown to diverge (Faccio, McConnell and Stolin 2006; Draper and Paudyal 2006), which appears to be due to quality differences in available information (Ekkayokkaya, Holmes and Paudyal 2009b). In so far as the inferior information availability and quality of unlisted targets represents a more risky acquisition, it should lead to a clearer split between risk-avoidant and risk-seeking managers. Hence, we would expect a more significant difference in market price reactions.

Hypothesis 3: The difference in share price return dependent on an acquirer’s position relative to reference point is greater for unlisted than for listed targets.

Method

We employ standard event study methods to examine the market reaction to M&A announcements. Abnormal returns around the event announcement can be used to indicate whether the market evaluates the announced acquisition as value increasing or decreasing, and can thereby help reveal corresponding patterns in managerial decision making. We compute abnormal daily returns as the difference between a firm’s daily return and the market return, derived from the American CRSP value-weighted index to study the US market. Daily returns are accumulated over an eleven-day event window centred at the announcement date (-5 to +5) as buy-and-hold abnormal returns (BHAR), following (Barber and Lyon 1997).

Data

We construct our US M&A sample based on Thomson One Banker M&A starting in 1981, because earlier data is sparse, incomplete and potentially unreliable, and ending in 2013. Following data cleaning we have a final sample of 4713 M&As.

Results

For unlisted targets, both past and peer ROA measures are significant; at the 10%-level when included alone and at the 5%-level when included together. For listed targets, the picture is less obvious. Only past sales is significant at the 10%-level, and only when peer sales is also included. Overall, however, we reject the null hypothesis of no effect of acquirer’s position relative to reference points on share price return to an acquisition announcement.

The direction of results in support of the alternative hypotheses appear mixed. For unlisted targets, Peer ROA is positive and significant at the 5%-level, while Past ROA is negative and significant at the 5%-level. For listed targets, Past Sales is positive and significant at the 10%-level. We hypothesized how managers’ risk perception is impacted by their firms’ positions relative to reference points and manifests itself in different acquisition behaviour. Simplistically, the lower the firm position relative to reference points, the more risk-taking the managerial mindset, the more gambling takes place during the acquisition process and the more value-harming the final outcome is perceived to be. It appears as if a more nuanced view is necessary to account for the contrarian Past ROA result in the unlisted target case.
Hypothesis 2 states that past-based measures form more salient reference points than ones based upon a median peer. This should manifest itself in more significant past-based measures. There is moderate support for this hypothesis. Both Past ROA and Peer ROA are significant, as is Past Sales at the 10%-level, while Peer Sales is not.

Finally, hypothesis 3 suggests that due to the limited available information unlisted targets are more suitable to differentiate managers by risk-propensity. This should lead to more significant coefficients of the measures of an acquirer’s position relative to reference points in the case of unlisted targets than in the case of listed targets. We find strong evidence in support of this hypothesis.

For robustness, BHAR and cumulative abnormal returns (CAR) are compared and yield near-identical results. With eleven days we choose a medium short window length. Shorter and longer windows of 3 and 21 days centred on the announcement date (t: -1 to +1, and -10 to +10, respectively) are also tested for robustness. Spline regressions are also modelled, though our sample size is restricting here, even though we already used the entirety of available data fulfilling cleaning criteria.

Conclusions

We examine whether an acquirer’s position relative to reference points affects the pricing in of an acquisition announcement. We assume this to be the case through affected managerial risk-propensity. It was found that reference point effects play a role in how investors assess acquisition announcements. Contrary to initial simplistic hypotheses, the connections constitute a rather complex pattern depending on different degrees of distance from the reference points, on different measures to capture the position relative to reference points, the public status of the target, and other conditions. While we cannot conclude in favour of a simplistic, general, and linear relationship, the null hypothesis of no existing link can be confidently rejected.