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# THE HIDDEN COST OF REPUTATION RISK

## AN APPROACH TO QUANTIFYING REPUTATION RISK LOSSES

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In the age of social media, reputation risk has gained new prominence across industries. However, despite the increasing importance of the risk, the vast majority of firms do not have a well-thought-out strategic approach to reputation risk management. Instead, reputation risk is typically approached as a crisis management issue, focusing primarily on the aftermath of an event. Good risk management strives to identify potential risks before materialization in order to either avoid or minimize the exposure of a firm to these risks. The problem faced by risk managers is that reputation risk, unlike other risks such as credit, market, and operational risk, does not inflict direct losses to firms but rather materializes indirectly through future revenue losses and/or higher costs. Quantifying and managing reputation risk has become more difficult.

Our proposed measurement technique quantifies reputation risk and provides better insight into events carrying the highest reputation risk to firms. The approach estimates the reputation risk impact as the difference between the actual market capitalization loss from an event, and the expectation had the event not occurred (based on historical betas relative to the market). Applying the methodology to operational risk events in the financial services industry, we observed the following key results:

- More than half the events tested had a reputation risk impact.
- When an event had a reputation risk impact, the total losses were on average almost double the announced losses.
- The impact varied by risk event type, with fraud-related events having significant reputation risk losses (over 100% of the announced loss), while execution and process errors tended to have only minor reputational impacts.
- The initial reputation/brand of a firm was an important factor driving the loss, with the reputation risk losses more than doubling when an event happens to a firm with a strong brand.

The goal of reputation risk quantification is to support the overall reputation risk management framework of a company (see our previous publications: *Reputation Risk on the Rise* from December 2016, and *Reputation Risk: A Rising C-Suite Imperative* from May 2014). Quantification allows the firm to identify new sources of risk that may have been overlooked or deprioritized. Ultimately, best practice reputation risk management frameworks need to combine both quantitative and qualitative components, including clear governance and responsibilities, loss data collection, risk and control assessments, quantitative assessments of potential exposures, and high-quality crisis management and public relations processes. With reputation risk ever more prominent, firms should revisit existing reputation risk frameworks and consider additional capabilities to manage the risk. The quantification of the risk should be one of the key building blocks of these revised reputation risk frameworks.

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# INTRODUCTION

Trust is the bedrock of any business relationship. As such, reputation risk has long been recognized as a key risk by business leaders and often tops the list of risks of most concern to senior executives. However, in the wake of the Great Recession and with the rise of social media, reputation risk has gained new importance in the corporate world. The Great Recession significantly eroded public trust in large corporations and financial institutions in particular, such that events, which in the past would not have been significant beyond the direct cost, can now turn into a reputational nightmare. Headlines routinely portray large firms in a negative light, causing reputational damage to the affected institutions and potentially seriously impacting financial performance. Social media has exacerbated the reputational impact of such events by allowing for the rapid spread of news stories and rumors alike. Within the financial services industry, the Great Recession led to a call for increased regulatory oversight. The Consumer Financial Protection Bureau is a prime example of an agency created to respond to the public outcry regarding the financial services industry. The increased regulatory scrutiny in an environment unfriendly to firms has further increased the number of events with the potential to inflict reputational damage.

Events which inflict reputational damage on a firm will ultimately result in losses that are far greater than the direct cost of the particular event. Yet, when managing risk, firms tend to focus almost exclusively on the direct costs of events, dealing with reputation risk primarily through crisis management after an event has occurred. The approach is due in part to the difficulty in defining the risk, insufficient data, and the lack of tools to quantify the risk. The inability to quantify the risk has made the task of understanding which investments have the greatest potential for reducing the reputational exposure of the firm more difficult for senior management and boards. Our approach focuses on providing a better understanding of the relative size of reputation risk losses across different risk events. Better quantification of reputation risk ensures that the risk management resources of a firm are appropriately allocated, while targeting the most important threats.

While recognizing the many difficulties involved in quantifying reputation risk, we believe that with careful analysis there are useful and effective ways to estimate the financial exposure of an organization to the risk. Through leveraging risk data from other risk types and public market data, we have been able to produce estimates of the reputation risk impact of a range of events on firms. Our proposed approach uses the stock price of listed firms, but the conclusions regarding the relative reputational impact of different types of events are applicable to both public and private firms.

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# WHAT IS REPUTATION RISK?

Reputation risk is generally defined as the risk to the institution from changes of perceptions by key stakeholders, including customers, investors, and regulators. The change of perception can stem from a wide range of events (for example significant financial underperformance, internal fraud, mistreatment of customers, or failure of internal processes), but is driven by the belief that the future ability of an organization to deliver on stated goals and performance targets will be worse than previously expected, given the new information that has come to light. For the purposes of our approach to quantification, we specifically consider the measureable, financial loss impact of reputation risk. We define reputation risk as the impact of an event to an institution above and beyond the direct loss associated with the event. According to such a view of reputation risk, the risk is a multiplier that amplifies the direct impact of an event through the loss of future revenue due to the reputational impact of the event. Despite the fact that reputation risk generally requires the materialization of a risk event, we argue that reputation risk needs to be evaluated independently from other risks, and generally requires dedicated resources within institutions and specific attention from boards and regulators. All events do not have the same potential for reputation risk losses. Institutions can better manage the true risk exposure by understanding which types of events carry the largest reputation risk and factoring in the hidden cost.

Exhibit 1: Drivers of reputation risk

| RELATED RISK CATEGORY | EXAMPLES OF REPUTATION RISK DRIVERS |
|---|---|
| **Operational risk** | • Mis-selling or poor product design<br>• Inadequate protection of customer rights or data<br>• Treatment of employees<br>• Fraudulent or unethical practices |
| **Credit risk** | • Inappropriate credit decisions<br>• Earnings not meeting expectations |
| **Market risk** | • Questionable investments/transactions<br>• Earnings not meeting expectations |
| **Other risk** | • Unfortunate statements by staff<br>• Inadequate corporate governance |

Source: Oliver Wyman research and analysis.

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# PROPOSED APPROACH FOR REPUTATION RISK QUANTIFICATION

Early approaches to quantify reputation risk date back to the early 2000s. However, challenges around data availability and the definition of the risk resulted in these approaches not gaining much traction with firms.

We proposed an approach to estimate the quantitative impact of reputation risk loss events, based on the change to the market capitalization of the institution. Such approaches, based on the event study methodology, were suggested more than 10 years ago (notably, Perry and de Fontnouvelle, 2006). With the increasing amounts of relevant data available, the methodology is even more powerful today. The approach has the advantage of mitigating many of the specific challenges faced by institutions when quantifying reputation risk. In particular, the approach provides a simple and coherent way of separating the reputation risk impact from other financial impacts (assessing announced losses vs. market capitalization performance). The approach further provides a way of assessing and incorporating an element of counterfactual testing (expected stock price based on historic beta vs. actual performance). While challenges exist with the approach, we believe these are manageable and do not outweigh the benefit of having a reputation risk quantification mechanism to improve reputation risk management.

When an event with the potential for reputation risk losses to a firm has been identified, the approach consists of comparing the stock performance to how the stock would have been expected to perform based on what happened to the wider industry/market. In case the loss of market capitalization relative to expectations is greater than the size of the loss announced (as part of the event), the difference could be attributed to the reputation risk impact.

The quantification process consists of four steps:

1. **Identify events with the potential for risk losses.**

   These events need to meet certain characteristics:

   - Relate to publicly listed firms with stock market data.
   - Have a relevant index to compare the performance of the stock.
   - The public event date is known, with no indication that news of the event was leaked before the announcement.
   - The financial loss announced must be large enough relative to the market capitalization to have a noticeable impact.

2. **Estimate the stock performance in case the event had not occurred.**

   For the time period prior to the event, we estimate the return using the beta of the stock relative to the market based on historical returns. We assume that the firm continues to track the market following the days after the event.

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3. **Compare the expected stock performance to the actual stock performance.**

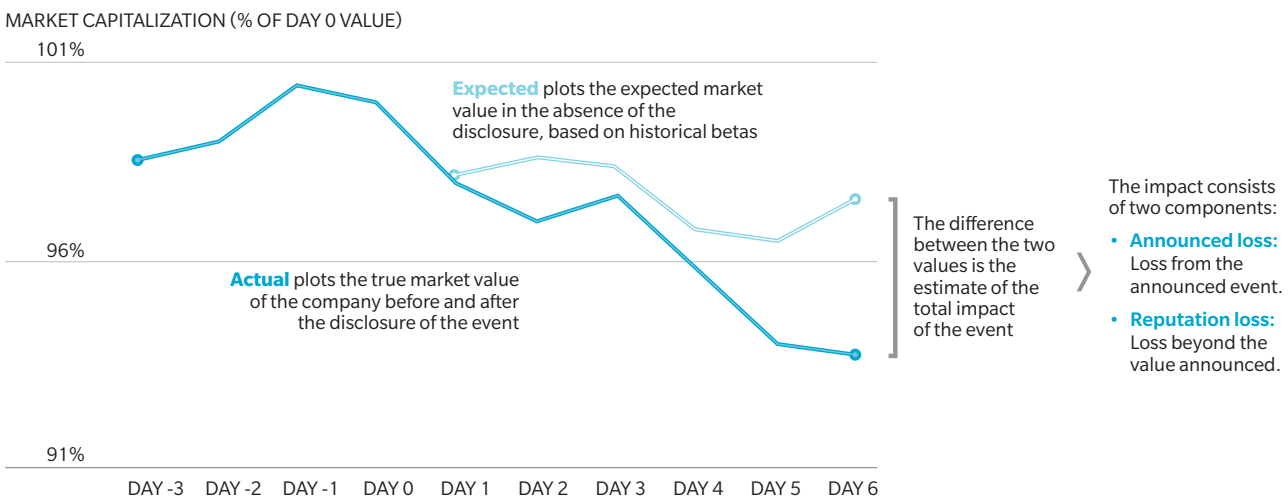
   We calculate the difference between the actual stock performance and the expected performance based on the beta for the days following the announcement. Our analysis examines the impact over the following 10 trading days. Note that setting an appropriate time window for the analysis is important, as a short window risks missing the full impact of the event, but a long window means that new factors can start to impact the stock price and market capitalization.

4. **Determine reputation risk impact.**

   We compare the adjusted market capitalization loss to the actual financial loss announced. If the loss of market capitalization relative to expectations is greater than the size of the loss announced (as part of the event), the difference could be attributed to the reputation risk impact. The quantification will include as reputation risk impact the market belief that the firm initially underestimates the total direct cost of a particular event. However, when testing the events selected for our study, we concluded that less than a handful of events actually had later restatements of the direct loss.

Exhibit 2: Illustration of the quantification approach

MARKET VALUE CHANGE VS. EXPECTED MARKET VALUE CHANGE WITHOUT REPUTATIONAL RISK EVENT




Source: Oliver Wyman research and analysis.

Though we believe the proposed approach provides a significant improvement over prior approaches in the measurement of reputation risk, several shortcomings remain. Many are inherent in the theoretical approaches leveraged, or are a function of imperfect data. First, though widely used, the Capital Asset Pricing Model (CAPM) approach to determining betas is imperfect. Any measurement error of CAPM betas will lead to some mis-estimation of the resulting reputation risk impact. The framework is, however, very flexible and can accommodate other beta estimation approaches, including the Fama-French three-factor model. Secondly, since the approach requires a market reaction that is significant relative to the market capitalization of the firm, the approach does not easily allow for the evaluation of smaller loss events. Generally, we believe these events should be unlikely to have

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reputational impacts and the exclusion should not impact the overall results. Thirdly, there is always risk of noise in the data. We made an effort to filter out cases where leaks were seen, and with the large number of events the impact should balance out between positive and negative biases. Finally, markets may overreact to announced events based on a belief that firms initially underestimate the size of the ultimate losses. However, for the data set used, only a handful of events had any revisions to the losses at a later time, suggesting limited public impact.

# RESULTS OF REPUTATION RISK ANALYSIS

Given the many different possible types of events with a reputational impact, a comprehensive quantification approach looks to combine a range of risk types (such as operational risk, market risk, credit risk and, insurance risk), both internal and external to a firm. To conduct a proof-of-concept on the proposed approach, we have:

- Developed a reputation risk database: The database consists of 200+ operational risk events from financial services firms. These events have been selected from a starting point of 1000+ different operational risk events over the last 20 years, and have been vetted to ensure all the noted requirements are met in terms of characteristics and market data availability.
- Built a reputation risk quantification tool: The tool estimates the reputation risk impact of a particular event identified in the dataset, as well as allows for econometric analysis of the full dataset and various subsets of events.

Based on the approach outlined above, we performed an initial analysis of the overall sample of 200+ risk events. The analysis suggests three key findings:

1. Reputation risk losses are significant.
2. More than 55% of the events tested had a reputation risk impact.
3. When an event had a reputation risk impact, the losses were significant and large, leading to the total loss over double the loss amount announced.

The analysis suggests that reputation risk impacts are common when large financial losses are announced, and shows that when an event has a reputation risk impact, the total losses to the market capitalization of the firm are significantly larger than the loss amount announced. These results point to the importance of managing reputation risk, both to ensure the trigger events do not occur, and that should these events occur, any subsequent impacts are minimized.

Leveraging the results to improve reputation risk management requires digging deeper into differences between various types of events, the root causes of these events, and the institution-specific situation when the event occurs. As a start, we examined the reputation risk impact of different types of operational risk events and the impact on institutions of varying perceived reputations. The analysis conducted is an example of how firms can use the quantification approach to help rank order and prioritize the specific types of risks with the largest reputational impact.

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## IMPORTANT DIFFERENCES ACROSS LOSS EVENT CHARACTERISTICS SEEN

We can see important differences in the likelihood and severity of reputation risk impacts through examining specific operational risk event types. Reputation risk management can be improved by better understanding the relative size of losses from different event types and how these results apply to a particular institution. The results suggest that:

- Fraud cases lead to significant reputational impacts on the impacted institution, with the additional reputational loss predicted to be ~140% of the announced loss. These results include internal fraud and external fraud, with both types having significant reputational impacts on the institution affected.
- While Clients, Products and Business Practices (CPBP) events are by far the most common event type (~75% of all studied cases), the reputation risk losses were modest (~5% of announced loss). These results are likely due to the fact that many of the largest CPBP events are lawsuits and major regulatory actions, with some partial information often known ahead of time, making the observation of a true market reaction more difficult. We examined specific sub-categories of risk types and found that events with regulatory components or fines tend to have larger reputational impacts (~25% of announced loss), and those related to retail customers have even more reputational impacts (~80% of announced loss).
- Execution, Delivery and Process Management (EDPM) events exhibited relatively small reputation loss impacts (~10% of announced loss). These results are likely because most of these events result from a breakdown in procedures and processes rather than from intentional acts by the firm or staff.

## IMPACT OF THE CURRENT REPUTATION OF INSTITUTIONS ON THE SIZE OF FUTURE LOSS

We examined the current reputation of an institution to see the differences in the likelihood and severity of reputation risk impacts based on the perceived brand. Namely, we estimated whether the reputational impact of a particular event was different depending on whether the firm was perceived to have a strong/valuable brand or an average brand. To conduct the analysis, we considered a range of different rankings for brands of large financial services institutions, as well as quantitative estimates of brand value[1].

The results suggested that the reputational impact is around twice as large for an institution with a strong/valuable brand as for an average institution (~100–120% greater impact from having a higher-ranked or higher-valued brand). The analysis implied that the market is more willing to dismiss events from institutions which are perceived to already have an average reputation, while events from institutions which are perceived to have strong/valuable reputations lead to re-evaluations of future performance. These results highlight the fact that the management of reputation risk is not a one-time effort, but a continuous exercise, even when (and potentially especially so if) the institution already relies on a strong reputation.

1 Sources include Forbes, Interbrand, Brandirectory, and Millward Brown.

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# LIMITATIONS OF REPUTATION RISK QUANTIFICATION

Despite the potential of the proposed reputation risk quantification approach, there are some important limitations to consider, many of which can be sufficiently managed to make the exercise worthwhile.

Exhibit 3: Limitations and mitigations of reputation risk quantification

| LIMITATION | COMMENTS AND POTENTIAL WAYS TO MITIGATE PROBLEMS |
|---|---|
| **Breadth of impacted risk types** | Range of event types makes any one current data source too narrow. Therefore, we should look to leverage multiple databases across risk types (operational risk loss databases, media mentions, earnings announcements). |
| **Difficulty of isolating the reputation risk impact** | Using stock market data for listed institutions provides a good proxy for the impact beyond the loss announced, while correcting for other relevant market events. |
| **Availability of relevant counterfactuals** | For listed institutions, market indices and firm betas can generally be used to approximate an expected performance. However, many firms may not have a particularly appropriate index to which to compare performance (such as type of institution, geographic footprint, range of business lines), but we should aim for the most appropriate index. |
| **Complications from events unfolding over long periods of time** | Certain types of events (such as lawsuits) may be announced when initially beginning, but then may not settle and lead to a loss until many years later. These settlement lags make the estimation difficult given the market would have already priced in the loss by the time the settlement is announced. A tailored, staggered approach would be needed for these types of events. |
| **Lack of market data from unlisted institutions** | The lack of a public stock price and generally more limited disclosure requirements add to the challenge of estimating the changing view of the reputation of an unlisted institution by the market. A simplified approach based on alternative financial data would be required for these institutions. |

Source: Oliver Wyman research and analysis.

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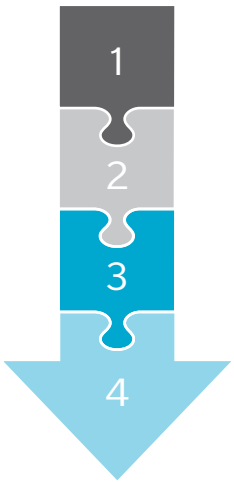
# IMPLICATIONS FOR INSTITUTIONS

Developing improved reputation risk quantification can improve the overall risk management of an institution. There are four key steps for institutions to continue to develop these capabilities:

Exhibit 4: Steps to develop reputation risk quantification capabilities




**Definition of reputation risk:** Agree on the full range of reputation risk sub-categories and approach to quantify impact (such as market capitalization and actual losses).

**Analysis of available data:** Evaluate possible sources of data across reputation risk categories and develop solutions to collect data.

**Quantification of reputation risk:** Determine specific elements of the quantification approach (such as specification of periods and categories) and run the quantification model and statistical analysis.

**Link to reputation risk management framework:** Leverage to improve risk identification, incorporate into key strategic decision making processes (such as product approval and acquisitions), develop more effective controls and mitigating actions, and improve crisis management response.

Source: Oliver Wyman research and analysis.

The ultimate purpose and goal of the quantification of reputation risk must be to support the overall reputation risk management within institutions (see our previous publications: *Reputation Risk on the Rise* from December 2016, and *Reputation Risk: A Rising C-Suite Imperative* from May 2014). The work entails both identifying new sources of risk that may have been overlooked or deprioritized when not accounting for the reputational impact of these risks, as well as ensuring that the full impact of existing risks includes consideration of the size of reputational damage to the institution as these risks materialize.

Best practice reputation risk management frameworks need to combine quantitative and qualitative approaches. The quantitative elements include loss data collection (both internal and external), estimation of reputation risk losses, and ultimately the impact on financial performance and capital requirements of a particular institution. These elements need to be complemented by a host of more qualitative approaches, such as scenario analysis and regular expert risk and control self-assessments, as well as supported by clear governance, responsibilities, high-quality crisis management, and communication and public relations processes. With reputation risk on the rise, firms should revisit their existing reputation risk frameworks and build out more capabilities to improve risk management. The quantification of the risk, as discussed in the paper, should be one of the key building blocks of the revised reputation risk frameworks.

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