Quantifiyng Reputational Risk: An Event Study on Operational Loss Announcements

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Introduction

It is undisputed that reputation is important in banking owing to the fact that their business model is based on trust. People must have faith in whom they deposit their money. Recent studies show that the financial industry, particularly banks, are highly sensitive to the erosion of trust [3]. These findings combined with several financial turmoils in the past have pushed supervisory bodies on more regulations with the aim of restoring trust in the banking system as a whole. The Basel IV - the most recent regulatory paper - even emphasizes that methodologies must be developed to measure reputational risk as precisely as possible in terms of other risks (e.g. credit, liquidity, market or **operational risk**)[1]. However, we explore that the new standardized approach to capitalize operational risks does not include any reputational risks.

Literature Review

To get a better understanding of the investigated risk we create a reputational risk (RepRisk) framework and derive our own definition, which is an adapted version of the definition by the BCBS:

"Reputational risk is the risk arising from the negative perception of stakeholders, which can directly or through the consequential risks, affect the companies' stock price. The RepRisk that is assessed is unidimensional, with operational loss events serving as the underlying risks. Furthermore, it exists throughout the organization and is essentially a function of the adequacy of the bank's risk management processes to mitigate reputational risk. "

This definition serves as the foundation for understanding what is later referred to as reputational risk, and specifically, what is assessed through our measurement approach.

Further, we explore various existing measurement methods in the literature. The literature comprises numerous qualitative methods, while quantitative methods suggest that especially size proxies may not be a reliable measure [2]. However, (non-)financial events appear to be a more promising measure, and media tone scanning could help as a risk management tool. We suggest that the event study methodology is the most effective approach to measure reputational risk. This method allows for a granular analysis of a specific underlying risk (e.g. operational loss announcements), rather than a general assessment of reputation, which might fail to capture the differences in the underlying risks as demanded by the BCBS.

Methodology

In this paper we use an event-study approach - previously applied by [4 6, 8] - to estimate reputational losses suffered by financial services firms resulting from an operational loss settlement. To this end, we analyze a unique sample of 1267 operational loss cases based on the SAS® OpRisk Global Data [7] exceeding 10 mn\$ that occurred between 2010 and 2022, covering 199 listed financial companies. The measured abnormal returns are corrected for the operational loss on the event date to obtain a pure reputational effect calculated as follows:

$$AR_{i,0}(Rep) = AR_{i,t} - \frac{loss_{i,0}}{mktcap_i} \qquad (1)$$

where $loss_{i,t}$ is the operational loss amount of

company i and day $t = 0$ being the settlement date. $mktcap_i$ is the market capitalization of company i.

To ensure we capture different adaption lengths on the stock price but limit other external shocks we use event windows (τ_1, τ_2) of maximum (-5,10) days. Looking at the cumulative AR (CAR) on the event day only, three symmetric windows, three asymmetric windows, and two pre-event windows.

Empirical Analysis

We assess our results on the full sample and three different subcategories: regions, underlying operational event type and business lines.

Overall, our research indicates the existence of reputational risk in the financial services market, which is not unexpected, given the industry's reliance on trust. We also present new evidence indicating that RepRisk is more severe outside of *North America* and *Europe*, particularly in *Asia*, where we find the highest levels of reputational risk. We argue, that this stems from inadequate risk management of reputational risk or less resilient trust towards financial services in these markets.

Looking at the underlying risk, our study suggests that among the various event types analyzed, the *Execution, delivery and process management* event type was associated with the highest reputational loss, followed by *Business disruption and system failures*, *External Fraud*, and *Employment practices and workplace safety*. Notably, our analysis does not reveal any significant reputational loss from *Internal Fraud* and *Clients, products and business practices* event types.

We also examine which business lines are the most vulnerable to reputational risk. Our analysis reveals that *Commercial Banking, Asset Management, Corporate Finance*, and *Trading and Sales* activities are the business lines that generate the most significant reputational losses. Our study emphasizes the crucial significance of reputational risk management in the financial services industry across regions, underlying event types, and business lines.

Our findings can help guide risk management practices by providing insights on where to allocate resources and implementing stress testing scenarios. In addition, we provide the foundation for future research on the relationship between measured RepRisks and banks' characteristics or capitalization factors.

Conclusion

Given the banking sector's dependence on trust and reputation, the heightened recognition of reputational risk by risk managers, and the growing pressure from supervisory bodies to include reputational risk in stress testing, we contend that reputational risk is of significant importance. Therefore, we advocate for the development of a reliable measure of reputational risk and potentially capitalizing it.

The paper aims to provide academia and practitioners with a method (e.g. an event study approach) to quantify reputational risk and a measure to model their reputational risk potential in different regions, on different underlying operational risk factors and business lines.

This thesis contributes to the scares research of reputational risk in three ways. First, by generating general new insights into the research field of reputational risk by using the SAS® OpRisk Global Data that has -as far as the author is aware- never been used before for reputational risk measurement. Secondly, enabling an analysis of data after the financial crisis in 2007. And third, grants comprehension of reputational risk in new regions, operational event types, and business lines. In addition, the paper contributes to the literature on reputational risk management, given today's intangible yet non-negligible reputational risk.

"It takes 20 years to build a reputation and five minutes to ruin it. If you think about that, you'll do things differently. " - Warren Buffet

Acknowledgements

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