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# Operational and reputational risk in the European banking industry: The market reaction to operational risk events☆

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ABSTRACT

In this paper I study the stock market reaction to the announcement of operational losses in European financial companies. Accounting for the effect of the nominal loss amount allows for an examination of the reputational damage caused by operational loss events. The analysis is based on a sample of 136 operational losses stemming from a database of the Association of German Public Sector Banks (Bundesverband öffentlicher Banken, VÖB). All operational loss events affect European financial institutions with settlements reported by the press between January 2000 and December 2009. In line with previous literature, I find a significant negative stock price reaction to the first press announcement of operational losses. Results show that the stock market also reacts negatively to the settlement announcement as losses are confirmed and the loss amount is known. Even after accounting for the nominal loss amount, cumulative abnormal returns are negative following the date of the initial news article and the settlement date indicating damages to the reputation of the firm suffering the operational loss. Multivariate regression results suggest that reputational damages are rather influenced by firm characteristics than characteristics of the operational loss event: companies with a high ratio of liabilities to total assets suffer more severe damages to reputation from operational losses than companies with more equity.

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## 1. Introduction

While operational risk has been receiving significant attention by regulators for more than a decade, incidents such as the exceptional loss at Société Générale of almost five billion Euro in 2008 caused by the trader Jérôme Kerviel once more spurred the interest paid to operational risk by regulators, supervisors, bank executives, and the public. Other prominent examples of operational risk events include the failure of Barings bank in 1995, the 850 million Euro loss due to unauthorized trading at AIB in 2002, the unimaginable Ponzi scheme of Bernard Madoff discovered in 2008 and, most recently, the loss of UBS caused by rogue trading exceeding 1.5 billion Euro in September 2011. Even though these events led to an increased awareness of operational risk and its importance, operational losses keep surfacing and the times of financial crises reveal new deficits of the operational risk management practices in place. The reliance on information technology and automation as well as the increasing complexity of new products in financial services firms are changing their exposure to operational risk. Automation, for example, can help to reduce the likelihood of minor errors in manual processing, but it increases the

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risk of system-wide failures. In light of these recent developments, it is not surprising that a considerable amount of research is focusing on operational risk and the advancement of risk management tools for banks.

Most operational losses are characterized by an individual coincidence of circumstances involving some kind of failure or problem. Thus, they attract the attention of the media and the public even though financial losses are sometimes relatively small. This increased attention on operational risk events is why they can be especially harmful to firm reputation, in particular if the loss is not caused by an external event (de Fontnouvelle and Perry, 2005). Sometimes the negative consequences in the aftermath of an operational risk event, such as the loss of customers or executive employees, might be more severe than the direct effect from the loss itself. However, while the Basel II accord obliges institutions to quantify operational risk and to account for it when calculating minimum capital requirements they are not required to hold capital for reputational risk.

The multifaceted nature of operational losses makes it difficult to define operational risk and in some cases it is hard to draw the line between operational risk and other types of risk (see Moosa, 2007 for a controversial discussion on the definition of operational risk). However, the following definition of operational risk by the Basel Committee on Banking Supervision has evolved into a consensus definition in literature:

> Operational risk is the risk of losses resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, but excludes strategic risk and reputational risk (Basel Committee, 2006, p. 144).

Even though this definition excludes reputational risk, it is widely acknowledged that operational losses also effect the reputation of financial institutions, thus posing a risk exceeding the effect of the direct financial loss itself. Interestingly, the 2006 version of the Basel II accord excludes reputational risk from the definition of operational risk but does not provide a definition of reputational risk. While in a previous Basel Committee publication reputational risk has only been described rather vaguely as "the risk of significant negative public opinion that results in a critical loss of funding or customers" (Basel Committee, 1998, p. 7), the Basel Committee on Banking Supervision includes a full section on reputational risk in its proposed enhancements to the Basel II framework presenting a definition of reputational risk:

> Reputational risk can be defined as the risk arising from negative perception on the part of customers, counterparties, shareholders, investors, debt-holders, market analysts, other relevant parties or regulators that can adversely affect a bank's ability to maintain existing, or establish new, business relationships and continued access to sources of funding (Basel Committee, 2009a, p. 19).

Furthermore, the Committee states that "reputational risk is multidimensional and reflects the perception of other market participants" (Basel Committee, 2009a, p. 19). An alternative definition and a survey of the scarce empirical literature on reputational risk in banking are provided by Walter (2007).

This study aims at providing insights about the magnitude of reputational damage resulting from operational loss events affecting European financial institutions by analyzing the stock market reaction to the announcement of operational losses. Accounting for the nominal loss amount itself, I try to separate the direct effect of the operational loss from the indirect effects on reputation. Previous empirical studies have put their focus on US financial institutions in consequence of the origin of the data used. So far only Gillet et al. (2010) provide event study results for the European banking industry. However, with a small (sub-)sample of 49 operational loss events from European banks empirical evidence for European financial institutions remains relatively scarce. This study presents new data from a Germany-based data provider allowing for a particular focus on the European financial industry. Results suggest that quantifying operational risk (e.g., in order to determine capital requirements) using data based on nominal loss amounts underestimates the full consequences of operational risk events because possible damages to reputation are neglected. Even without more regulatory requirements, additional risk management tools to avoid these events may be advisable considering the cost of reputational damage to shareholders.

This paper is similar to previous literature using event study methodology in that abnormal returns around the announcement date of information on operational losses are assessed. I follow the more detailed approach of Gillet et al. (2010) and identify different event dates for every operational loss, thus accounting for the gradual release of information in the case of a lawsuit, investigation or similar processes.

The remainder of this paper is organized as follows. Section 2 reviews prior literature related to this study and develops the research hypotheses. Section 3 describes the data used for the analysis and outlines the methodology applied. Results are presented and discussed in Sections 4 and 5. Section 6 concludes.

## 2. Prior literature and research hypotheses

Since the history of operational risk is still young when compared to the ones of credit and market risk, data availability on operational risk is limited. Consequently, empirical research on operational risk is still hindered by the lack of data. However, in a more general (i.e., not banking specific) context there are several studies dealing with aspects closely related to operational risk and reputation such as fraud.

Palmrose et al. (2004) analyze the effect of earnings restatement announcements on stock prices of firms in financial and non-financial industries. The authors consider 403 restatements announced between 1995 and 1999; they find a negative

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