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Abstract

The recent financial crisis has triggered an intense debate about the role of banks in society, presumably changing the criteria used in the evaluation of organizations. Against this backdrop, we investigate the changing role of banks' organizational features in shaping different dimensions of banks' organizational reputation. Using the media as an important evaluator, we measure the reputational dimension of visibility based on the frequency of newspaper articles and the reputational dimension of favorability based on the sentiment of newspaper articles. Drawing on social judgment research for developing our hypotheses, we expect that organizational features such as financial performance and familiarity become more important determinants of organizational reputation in times of crisis. Our results support this expectation, suggesting stronger effects of these organizational features on the visibility and favorability of banks during a crisis. These findings provide novel empirical evidence on how the importance of drivers of organizational reputation changes in times of crisis and highlight areas for managerial attention.

Keywords

Introduction

This study investigates how the importance of organizational features as antecedents of organizational reputation changes during times of crises. Prior research has established that the organizational feature of financial performance shapes organizational reputation (e.g., Deephouse & Carter, 2005). Further, it has suggested that the familiarity of the audience with the organization is an important determinant of organizational reputation (e.g., Fombrun & Shanley, 1990). However, research on changes in organizational reputation and its determinants over time is largely missing (e.g., Lange, Lee, & Dai, 2011). In particular, Dowling & Gardberg (2012) point out the importance to investigate how the criteria used to evaluate organizations might change. They speculate that "the global financial crisis has also changed the criteria many people use to evaluate companies, especially financial institutions" (Dowling & Gardberg, 2012, p. 52). Our study investigates the validity of this conjecture empirically, filling the gap in the literature on how the importance of antecedents of organizational reputation might change over time.

Organizational (or corporate) reputation can be defined as "a collective assessment of a company's attractiveness to a specific group of stakeholders relative to a reference group of companies with which the company competes for resources" (Fombrun, 2012, p. 100). In our empirical study, we measure the collective assessment of a company's attractiveness based on a firm's presentation in the media. This approach stems from the belief that the media is an important evaluator that reflects and influences public opinion about organizations (Aerts & Cormier, 2009; Carroll, 2011; Carroll & McCombs, 2003; Deephouse & Heugens, 2009). As we use the media for measuring organizational reputation, we do not focus on the reputation of an organization for a specific group of stakeholders but we intend to capture a wide range of different stakeholders' cognitions and perceptions (Pollock, Rindova, & Maggitti, 2008). Thereby, we aim to capture "the

overall evaluation of a firm presented in the media" called "media reputation" by Deephouse (2000, p. 1091). Media reputation constitutes a specific form of organizational reputation that reflects, similar to organizational reputation, "deliberate and analytical judgments about an organization's ability to meet constituents' expectations" (Zavyalova, Pfarrer, & Reger, 2017, p. 463).

Research on organizational reputation has recently emphasized the multidimensionality of this construct. Our focus on the collective assessments or perceptions of organizations as expressed by the media is suitable to capture accumulation and breadth of appeal as two important dimensions of organizational reputation (Rindova & Martins, 2012). Accumulation refers to the level of recognition and attention that is related to organizational prominence (Lange et al., 2011) and media visibility (Rindova, Petkova, & Kotha, 2007; Capriotti, 2009). Breadth of appeal characterizes the degree of attractiveness and is related to favorability (Lange et al., 2011). Following prior research using the media as an evaluator, we use the terminology of visibility and favorability and measure these dimensions of organizational reputation by the amount and the sentiment of media coverage (e.g., Rindova et al., 2007).

We develop our hypotheses on the basis of social judgment research (Bitektine, 2011). Research on social judgments emphasizes the role of the evaluator and its societal context in the formation of social judgments shaping the reputation of organizations. It highlights the role of perceived dimensions of organizations as object of evaluation and takes into account the analytical processing within a given external context of the evaluator. As a result, the judgment outcome reflects a comparison among organizations (Deephouse & Carter, 2005). Considering how evaluators, e.g., the media, derive their judgment is valuable for formulating expectations about

the role of organizational features for shaping organizational reputation and how this role might change in times of economic crisis.

Our empirical approach of using media as an evaluator allows us to measures two important dimensions of organizational reputation, namely visibility and favorability, for a large number of banking organizations over a long period of time including the financial crisis. To investigate the dimension of visibility, we start by analyzing how the financial crisis changed the frequency of newspaper articles on banking organizations overall. We expect that the uncertainty surrounding the financial crisis and the severity of the economic shock triggered the need for social judgments, increasing the frequency of newspaper articles as our measure for the visibility of banking organizations. More importantly, we argue that the higher frequency of social judgments in an uncertain and complex economic environment contributes to the need for cognitive economy in rendering the judgment, fostering a change of content focus of evaluators to less complex information (Bitektine, 2011). Interestingly, this argument suggests that the share of non-financial judgments and judgments on familiar banks should increase in times of crisis as a consequence. Finally, the erosion of financial performance in the financial crisis might shift the focus of the evaluator towards organizations with particularly poor financial performance even more strongly than in times without crisis.

Furthermore, we examine how the financial crisis influenced the sentiment of newspaper articles as our measure of favorability. We assume that the financial crisis leads to a more negative sentiment towards banking organizations as an outcome of the collective negative judgment of the entire sector, even after controlling for their financial performance. Further, we expect that the effect is stronger for financial content due to the nature of the financial crisis. Notably, we predict that banks perceived as familiar can avoid this negative sentiment to some degree and thereby

protect themselves from the collective punishment, indicated by a positive interaction effect between the financial crisis and familiarity. For banks with poor financial performance during the financial crisis, we expect an intensifying level of criticism.

We use Germany as our research setting. This setting enables us to observe national and international banks with brand appearance and services that are homogenous within the German market. To construct our newspaper sample, we retrieve an extensive and unique sample of 92,219 articles of large nationwide and regional newspapers and magazines, covering an eight-year period (2005-2012), including both times with and without crisis. From each article, we elicit the name of the bank mentioned. For measuring the sentiment of newspaper articles, we use a comprehensive dictionary constructed specifically for analyzing financial articles in the German language (Remus, Quasthoff, & Heyer, 2010). The dictionary contains 3,473 words with values ranging from -1 (very negative) to +1 (very positive) indicating their sentiment. We derive a sentiment value for each newspaper article by aggregating the sentiment values of all those words in the article that are part of the dictionary – a transparent, objective and well-established approach in text analysis (Larcker & Zakolyukina, 2012).

Our results support most of our conjectures. Most importantly, we find that the organizational features of financial performance and familiarity become more important determinants of the organizational reputational dimensions of visibility and favorability in times of crisis.

Our study contributes to research on organizational reputation in several ways. First, our study contributes to prior research on organizational reputation, its development and drivers using media as an important evaluator (e.g., Deephouse, 2000; Deephouse & Carter, 2005; Lange et al., 2011; Pfarrer, Pollock, & Rindova, 2010; Rindova, Williamson, Antoaneta, & Sever, 2005). In

particular, our study contributes to prior research on the role of organizational features as antecedents of organizational reputation (e.g., Rindova et al., 2005). Research on the antecedents of corporate reputation is important as they determine a crucial resource for the long-term financial success of an organization (e.g., Lange et al., 2011). We extend this stream of research by considering the recent emphasis on changes of organizational reputation over time (e.g., Dowling, 2016). In particular, we investigate the development of reputation before and during a crisis, identifying the changing role of drivers and protectors of different dimensions of reputation (Coombs & Holladay, 2002; Dowling & Gardberg, 2012). The findings of our study suggest that the impact of organizational features becomes more important for shaping organizational reputation in times of crisis highlighting potential areas for managerial attention (Sohn & Lariscy, 2015).

Second, our investigation of both visibility and favorability follows calls for more research differentiating the dimensions of organizational reputation (e.g., Lange et al., 2011). We use a setting for which we predict a divergence of the level of organizational reputation affecting different dimensions, with banking organizations gaining more visibility but attracting less favorable judgments. At the same time, even within this setting, we identify drivers with a positive impact on both dimensions with more familiar banks gaining more visibility and being perceived as relatively more favorable in times of crisis. This analysis entails empirical support for defining management strategies based on enhancing familiarity in the aftermath of a financial crisis.

Third, our study provides empirical evidence for recent theoretical research on social judgments (e.g., Bitektine, 2011). In particular, our study sheds light on the outcome of judgments of organizational reputation in times with and without crisis, identifying and considering its content focus and the impact of organizational features. The analyses and results contribute to this

stream of research by advancing the understanding of interdependencies between the evaluator, its content focus and perception of organizational features, as well as a changing societal context (Bitektine, 2011; Sohn & Lariscy, 2015).

Social Judgments Formation and Organizational Reputation

Judgment Formation

We base our analysis of newspaper articles and banking organizations on social judgments of organizational reputation. In specific, we investigate an evaluator's opinion about organizational features and its impact on different dimensions of organizational reputation, differentiating between times with and without crisis. Social judgment research emphasizes the role of the evaluator and its societal context in the formation of social judgments shaping the legitimacy, reputation, and status of organizations (Bitektine, 2011). This view highlights the role of perceived dimensions of organizations as object of evaluation and takes into account the analytical processing of the evaluator within a given external context. As a result, the judgment outcome reflects a comparison among organizations (Deephouse & Carter, 2005). In the following sections, we discuss selected elements of this field of research applied to organizational reputation and their relation to our study.

Media as an Evaluator

Media is one of the most extensively explored evaluators (e.g., Bitektine, 2011; Carroll & Deephouse, 2014; Shoemaker & Reese, 2014). It can take the role of an institution that communicates and validates social judgments at a macro level (Bitektine & Haack, 2015). Mass media, due to the scale of information dissemination, actively influences the social perception of the society as an audience (Aerts & Cormier, 2009; Deephouse & Heugens, 2009; Shoemaker & Reese, 2014). In this process media selects, channels, and adjusts information and delivers a

prioritization of topics (Drake, Roulstone, & Thornock, 2012; Shoemaker & Reese, 2014). Media has different means to adjust the level of attention devoted to a specific topic, e.g., via news coverage, frequency, and length of news stories. In this sense, media works as an agenda-setter for the public by creating and enhancing the awareness for specific topics (Carroll & Deephouse, 2014; Carroll, 2011; Carroll & McCombs, 2003; Shoemaker & Reese, 2014).

Accordingly, prior research has used media publications as a tool for measuring organizational reputation. In one of the first studies, Deephouse (2000) develops media reputation as a variant of organizational reputation. The empirical analysis involves the coding of 1,277 articles as being favorable, unfavorable or neutral. The main finding is that media reputation is associated with higher firm performance. Pollock and Rindova (2003) evaluate the effects of the volume and the tone of media coverage on underpricing in the setting of initial public offerings. Greenwood, Li, Prakash, and Deephouse (2005) find the number of positive articles is positively associated with the profitability of professional service firms. As an example for a more recent study, Van den Bogaerd and Aerts (2015) find that a higher proportion of favorable articles is associated with a higher level of trade accounts payable, suggesting that reputation facilitates the use of trade credit.

Organizational Features as Perceived Dimensions

Features of an organization, including its processes, structures, outcomes, linkages with other social actors, define the grounds of its perception and thereby the basis of social judgments (Bitektine, 2011). Organizations engage in a variety of activities that shape their features ranging from financial strategic actions (e.g., focus on profit margins) to non-financial aspects (e.g., fostering close relationships with the proximate environment). Evaluators differ in their perception

and focus of organizational features, raising the question which dimensions are critical for shaping social judgments (Bitektine, 2011).

The perception of organizational features regularly determines the basis of evaluating organizational reputation (Bitektine, 2011; Deephouse & Carter, 2005). For commercial entities such as banks, financial performance constitutes a central area of interest for the evaluator determining organizational reputation. Another important driver of reputation is the level of familiarity of an organization. The level of familiarity is shaped by geographical proximity, shared language and culture, generally understandable business activities, and known characteristics (Gulati, 1995; Pollock & Rindova, 2003). It can also benefit from linkages to other social actors, fostering a common cognition (e.g., Gulati, 1995). For instance, having stable relations with the evaluator and the greater social environment, e.g. regarding social and ecological aspects, helps to create a familiar perception of an organization.

Analytical Processing and Content Focus

Bitektine (2011) distinguishes between different perceptions of organizational characteristics, content focus, and forms of analytical processing, yielding different types and outcomes of social judgments. Reputation judgments regularly rely on the evaluator's perceptions and past experiences with the organization as a basis for beliefs about future behavior (Bitektine, 2011). The level of organizational reputation as judgment outcome is a fundamentally economic concept with the objective to identify differences amongst organizations (Bitektine, 2011; Deephouse & Carter, 2005; Deephouse & Suchman, 2008).

In times of crisis, the information and societal context are likely to change, influencing the analytical processing and thereby the type of social judgments (Dowling & Gardberg, 2012). A crisis-induced higher uncertainty, a complex economic environment that is hard to grasp, as well

as a regular stream of new information foster circumstances that incentivize the evaluator to adjust its judgment process. In particular, this environment triggers the likelihood of applying the principle of cognitive economy, i.e., applying a lower level of cognitive effort in processing information (Bitektine, 2011). As a consequence, evaluators might shift in their content focus towards non-financial content that is easier to process in such a complex environment. Another effect might be that evaluators turn their attention towards more familiar organizations for which perceptions and past experiences are easier to recall.

Organizational Reputation as Outcome of Media's Social Judgment

Bitektine (2011, p. 152) defines social judgments "as an evaluator's decision or opinion about the social properties of an organization" that can confer legitimacy, reputation, and status on organizations. We apply social judgments to the concept of organizational reputation.

Recently, the literature has emphasized the value of considering different dimensions of organizational reputation (e.g., Lange et al., 2011). Dimensions of organizational reputation are prominence (generalized awareness or visibility), prominence for something (perceived predictability of outcomes in certain areas due to past perception of features), and generalized favorability (as outcome of a social judgment) (Lange et al., 2011). Rindova and Martins (2012) point out that visibility (accumulation of recognition and attention) and favorability (breadth of appeal) derive from collective perceptions as reflected by the media. It is important to note that the different dimensions are not necessarily correlated, implying that organizations can have varying positions within the outlined dimensions (Lange et al., 2011; Rindova, Pollock, & Hayward, 2006). For instance, a prominent organization is not necessarily viewed positively.

Media as an evaluator creates and disseminates a generalized perception that reflects and influences the opinion of its audience about social properties of organization, thereby shaping its

reputation (Carroll, 2011; Carroll & McCombs, 2003; Carroll & Deephouse, 2014; Cho, Guidry, Hageman, & Patten, 2012; Einwiller, Carroll, & Korn, 2010; Zavyalova et al., 2012). The frequency and sentiment of media reports reflects these perceptions and are used as measures of the different visibility and favorability dimensions of organizational reputation (e.g., Deephouse, 2000; Deephouse & Carter, 2005; Dowling & Gardberg, 2012; Einwiller et al., 2010; Pfarrer et al., 2010).

Organizational reputation itself is important as it influences the organization's ability to create value for its stakeholders relative to its competitors (Deephouse, 2000; Fombrun, 1996; Rindova et al., 2005). Previous empirical research investigated outcomes of reputation in several areas, for example price premiums, profits, protection in case of product recalls, attractiveness of investments, market reactions, employer attractiveness (for an overview of studies, see Lange et al., 2011).

Hypotheses

Organizational Visibility

We start with analyzing visibility as an important dimension of organizational reputation (Einwiller et al., 2010; Lange et al., 2011). A high visibility reveals information about the focus of rendering judgments and provides an indication about the amplification of perceived organizational features. For example, an increased visibility implies a focus of the evaluator on a certain topic, at the same time suggesting a restricted amount of time available for each individual judgment in an environment with constantly new as well as complex information available.

First, we assess the impact of the financial crisis on the visibility of organizations. A severe crisis threatens the economic survivability of an entire industry, rendering the evaluating

audience uncertain with regard to its sustainability (Devers, Dewett, Mishina, & Belsito, 2009; Durand & Vergne, 2014; Hudson, 2008; Roulet, 2015). Such conditions generate the basis and need to review the organizations within the concerned industry (Bitektine, 2011). The uncertainty of the situation per se, accompanied by an economic recession and increased sources of complex information, leads to spillovers of uncertainty within the evaluating audience. These spillovers further increase the demand for the evaluator to provide new and to revisit previously held judgments of organizational reputation (Bitektine, 2011; van den Bos, 2009). Based on this analysis, we posit the following hypothesis:

H1a. The visibility of banks increases during the financial crisis.

Next, we evaluate whether the increase in visibility of banks during the financial crisis varies across content focus. The content focus reflects the interests of the evaluator as well as provides insights into the focus areas of applied analytical processing for judging organizational reputation (Bitektine, 2011).

As discussed in the development of H1a, the demand for information, direction, and clarification increases in times of economic uncertainty. At first glance, the uncertainty arising from the financial crisis and our research setting within the financial industry may lead to the expectation that especially the focus on financial content increases. However, the external economic shock also enhances the complexity and uncertainty of economic information, especially with regards to financial content. Consequently, it becomes more challenging for the evaluator to render judgments based on financial content. Such complex circumstances foster the need for cognitive economy and cognitive shortcuts in rendering judgments (Bitektine,

2011). A resulting strategy to cope with the increased stimuli to provide judgments as well as the complex information environment is a focus on less complex content, i.e., non-financial content, to conduct an evaluation (Bitektine, 2011; Tversky & Kahneman, 1974). Therefore, we expect that the uncertainty surrounding the financial crisis makes it more challenging to focus on financial content and, simultaneously, more attractive and more reliable to focus on non-financial content. Therefore, we expect that the proportion of financial content will diminish during the financial crisis:

H1b. The increase in visibility of banks during the financial crisis is stronger for non-financial than financial content.

We now turn to the key question whether the influence of organizational features on visibility changes during the financial crisis. For financial performance, one would expect that visibility is higher for poorly performing organizations based on evidence that media as evaluator regularly pays more attention to negative news stories regardless of the presence of a crisis (McLuhan, 1994). Moreover, the shock-induced uncertainty enhances incentives for the media to increase the supply of information to explain the current situation (Bitektine, 2011). In search of a better understanding of the situation, we expect that organizations showing poor financial performance are an intuitive focal point of media attention during the financial crisis, further exacerbating the tendency of media to focus on poor financial performance. Considering the outlined analysis, we hypothesize that:

H1c. The increase in visibility of banks during the financial crisis is stronger for banks

with weaker financial performance.

Lastly in this set of hypotheses, we consider the impact of the familiarity of an organization on its visibility during the financial crisis. The more familiar an organization is perceived the more readily information is available, facilitating judgments and providing a common, persisting ground to form judgments shaping organizational reputation. Therefore, we argue that a higher visibility of a whole industry during the financial crisis comes also along with the need for cognitive economy, rendering it attractive to report on familiar organizations for which information is readily available. In addition, familiarity as a feature label persists and provides a good and reliable basis to compare organizations also during the turmoil of a financial crisis (Bitektine, 2011). Based on this analysis, we formulate the following hypothesis:

H1d. The increase in visibility of banks during the financial crisis is stronger for banks

that are more familiar.

Organizational Favorability

In our second set of hypotheses, we evaluate the impact of the financial crisis on the generalized favorability of organizations as another important dimension of organizational reputation (Lange et al., 2011). Our analysis uses the sentiment of newspaper articles to measure favorability, taking into account the effects of the content focus of newspaper articles as well as of organizational features (Deephouse, 2000; Lange et al., 2011).

First, we expect that a severe financial crisis affecting an entire industry and the associated uncertainty about the benefits of the organizations concerned pose a severe threat to their

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reputation (Deephouse & Carter, 2005; Devers et al., 2009; Durand & Vergne 2014; Hudson, 2008; Roulet, 2015). Therefore, we hypothesize that the economic crisis reduces favorability even after controlling for financial performance:

H2a. The favorability of banks diminishes during the financial crisis even after controlling for banks' financial performance.

Next, we consider whether the content focus of the evaluation determines organization favorability. In specific, we are interested whether the relation between financial content and favorability changes during the financial crisis. A focus on comparably more complex financial content (compared to non-financial content) to evaluate outcome features indicates a higher level of scrutiny in evaluating organizational benefits (Bitektine, 2011). Therefore, we expect a negative relation between the proportion of financial content and favorability even in times without crisis. In times of crisis, the deteriorating financial performance of banking organizations suggests that this negative relation might become even stronger due to the higher level of scrutiny on financial topics. Therefore, we hypothesize that:

H2b. The negative relation between financial content and favorability of banks is stronger during the financial crisis.

We turn to financial performance as an organizational feature that might influence favorability. Financial performance is an outcome feature for evaluating organizational benefits (Bitektine, 2011). Poor financial performance indicates that a corporation does not meet the

expectations of its audience, diminishing its favorability. This relationship might be weak in normal times as long as the financial performance is not sufficiently low to raise doubts about the viability of the organization (Deephouse & Carter, 2005; Devers et al., 2009; Hudson, 2008). However, the financial crisis and the prevailing economic uncertainty foster a situation of increased scrutiny of organizations showing a particularly poor financial performance (Bitektine, 2011; van den Bos, 2009). Therefore, we expect a strong link between poor financial performance and favorability during the financial crisis, leading to the following hypothesis:

> *H2c.* The negative relation between poor financial performance and favorability of banks is stronger during the financial crisis.

Finally, we assess the link between the familiarity of an organization and favorability. Considering the erosion of the feature of financial performance and accompanied uncertainty about perceived organizational features, we expect that familiarity gains in importance as a basis of social judgments that persists during the financial crisis. Accordingly, more familiar organizations might be less exposed to the scrutiny of the evaluator. This reasoning suggests a positive link between organizational familiarity and favorability. This link might be weak in normal times when evaluators rarely form social judgments on familiar organizations (Bitektine, 2011). However, the need to express social judgments (see H1a) and the more readily available information on familiar organizations (see H1d) might result in more judgments on familiar organizations, strengthening the link between familiarity and a positive tone of social judgments. Therefore, we hypothesize that:

H2d. The positive relation between the familiarity of banks and their favorability is stronger during the financial crisis.

Methods

Research Setting

We use the setting of the German banking industry. An advantage of this setting is the homogeneity of the appearance and nationwide product range of national and international banking organizations in Germany leading to a common cognition (Aldrich & Fiol, 1994). On an international level, this market structure compares to highly centralized (e.g., United Kingdom) or highly fragmented markets (e.g., United States). Moreover, the German banking industry is well developed and competitive due to the presence of all major European- and U.S.-banking institutions.

In our empirical analysis, we focus on the effects of the economic shock of the financial crisis. The financial crisis began with the banking crisis that led to a global recession and, subsequently, to a stigmatization of the entire banking sector (Devers et al., 2009; Roulet, 2015). In Europe, the crisis in the financial sector turned from the banking into the sovereign debt crisis (Lane, 2012). Both crises hit the German banking sector severely. We define the time period of the banking crisis from June 22, 2007, when it became public that one hedge fund of Bear Stearns dealing with mortgage-backed securities started having serious financial problems, until December 31, 2009, when interbank lending markets started to recover. The period of the sovereign debt crisis starts consecutively and ranges from January 1, 2010, when Greece started to have trouble repaying its sovereign bonds, until December 31, 2012, when the distribution of sovereign debt of European countries moved towards normal levels again (the end of our sample). Both periods

define the financial in-crisis period which we use as basis for our in-crisis analyses. We define the remaining period as pre-crisis (January 1, 2005 to June 21, 2007).

Sample Selection

Our sample includes 79 domestic and foreign banks operating in Germany.[1] Initially, we start with the 100 largest banks operating in Germany (based on total assets). From this sample, we eliminate 37 banks that do not have a single brand appearance on their own but only in cooperation with other banks. We eliminate another 25 banks with special functions (i.e., central banks and leasing banks of car manufacturers). We amend the sample with 18 banks from the list of global, systematically important banks as classified by the Financial Stability Board. Further, we identify the largest organizations from a list of banks registered with the Association of German Banks, adding eight privately owned and online banks to our sample. Finally, we add 15 banks that we identify as frequently mentioned in our sample of articles.

We use newspaper articles as our proxy for mass media. The German newspaper market is strong, with nationwide and regional newspapers covering all major groups within German society (Jandura & Brosius, 2011). Newspaper articles are information transmitters that set the agenda, create an observable media reality, prepare the information for its readership by focusing on specific content aspects, and shape the public perception (Carroll, 2011; Carroll & McCombs, 2003; Garcia, 2013; Cho et al., 2012). Newspapers are especially relevant news transmitters as the information conveyed reaches the mind of the evaluator effectively, even more effectively than in comparison to other media channels, e.g., TV or radio (DeFleur, Davenport, Cronin, &

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[1] Our sample includes 43 banks with headquarters in Germany and 36 banks with headquarters in a foreign country. We include all 79 banks in our sample as they all have a common brand appearance within Germany and as they all offer their services across Germany. Further, including both domestic and foreign banks provides us with more variation regarding the familiarity of banks. Nevertheless, we perform sensitivity tests in which we exclude all banks with headquarters in a foreign country. We continue to find inferentially unchanged results.

DeFleur, 1992; Garcia, 2013). Especially uncertain times accompanied by complex information (for newspaper articles in particular) foster the possibilities for media to actively define a media reality (even if all relevant information is public) as the public tends to appreciate the information content of media even more (Garcia, 2013; Shiller, 2008).

We gather articles from 20 widespread German newspapers and magazines with a circulation of more than 100,000 copies each, including both nationwide and strong regional newspapers intended to reach a mass audience.[2] The nationwide newspapers primarily capture topics directed at the entire country and provide major news stories. The regional newspapers capture the sentiment of regional areas with a distinct focus on regional topics. We include articles from both types of newspapers to obtain a comprehensive understanding of the underlying public opinion, being representative for an entire country as illustrated in Figure 1 (Jandura & Brosius, 2011).

Insert Figure 1 here

We use online databases and online archives to collect the articles. In case of limited availability, we complement data using the hard copy archives of local libraries. Our comprehensive search for all articles referring to the credit and banking system[3] yields a total number of 140,234 relevant articles for our sample period, ranging from January 1, 2005 to

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[2] The total circulation of the newspapers in our sample is about six million, representing a market share of approx. 20% in Germany (data from the German association of advertisement and media, http://www.ivw.eu/).

[3] Either by selecting the category "banking/credit system" or by searching for the words "bank", "banking", "credit", or "payment".

December 31, 2012. We exclude 48,105 articles not mentioning specific banking organizations but only dealing with the banking market in general, resulting in a final sample of 92,129 articles.[4]

Organizational Visibility

Research regularly uses newspaper articles as a proxy for public opinion or reputation (e.g., Dowling & Gardberg, 2012; Einwiller et al., 2010; Pfarrer et al., 2010). We use newspapers as an important evaluator in the formation of social judgments and, hence, also in the establishment of visibility as a dimension of organizational reputation (e.g., Bitektine, 2011; Bitektine & Haack, 2015; Lange et al., 2011). Newspapers are effective in establishing visibility and changing perceptions (Capriotti, 2009; Carroll, 2011; Carroll & McCombs, 2003; Garcia, 2013; Lange et al., 2011). Readers retrieve information and, from the newspaper's topic coverage, e.g., from the frequency the information occurs and the length of an article, obtain a feeling for the importance of a topic brought forward (Carroll, 2011; Carroll & McCombs, 2003; Garcia, 2013). We use the number of articles per week per bank to measure visibility.[5] Table 1 describes all variables used in our study.

Insert Table 1 here

Organizational Favorability

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[4] The final sample includes 61,430 articles mentioning a single banking organization and 30,699 articles mentioning multiple banking organizations. As the reputational judgment expressed in an article connects most clearly to a specific banking organization if the article refers to only one bank, we perform sensitivity analyses excluding all articles mentioning multiple banking organizations. All the findings for our hypothesis remain inferentially unchanged.

[5] In robustness tests, we use the log of the number of articles per weeks, the number of words per week, and the log of the number of words per week. Across all specifications, all the findings for our hypothesis on the frequency of social judgments remain inferentially unchanged.

We elicit favorability based on the sentiment of newspaper articles as another dimension of organizational reputation. We use a German dictionary specifically developed for deriving the sentiment in financial newspaper articles (Remus et al., 2010). The dictionary is extensive (3,473 positive and negative word stems). It is also very detailed and assigns each word a value ranging from -1 (very negative) to +1 (very positive). For each word of each article, we identify whether it is part of the dictionary. Then, we measure the sentiment for each article by adding up the values of the identified words. We divide the aggregated sentiment score by the total number of words in the article for ensuring comparability across articles and we multiply by 100 for scaling purposes. Finally, we derive our sentiment measure for each bank and week by aggregating the sentiment of all articles published for each bank within each week. Our approach of counting and weighting relevant words is "simple, parsimonious, and replicable" (Larcker & Zakolyukina, 2012, p. 499).

Content Focus

For each article, we determine its content focus, differentiating between the degree of financial and non-financial content. We conduct this differentiation by classifying the vocabulary used within an article and creating the ratio between financial words to all words. In order to classify a word as related to a financial term in an automatic and reliable manner, we use our self-built computer-based linguistic software architecture. We utilize the 1,491 words of the index register of Wöhe (2013), a highly circulated comprehensive German book on economics and business administration to construct an objective dictionary of financial terms. Using this dictionary, we calculate the ratio of financial words to total words and observe a mean ratio of 3.01% across all articles. The ratio is 3.37% when aggregating the articles per bank and per week.

Organization's Financial Performance

We use five measures of the financial performance of banking organizations during the sample period, mainly relying on data from BankScope. First, we use the return on assets (winsorized at a 5%-level to account for outliers). Second, we generate a financial loss dummy to capture organizational profitability. Third, we incorporate the yearly change of total assets to account for the size development. Finally, we account for financial state aid in Germany provided by the Federal Agency for Financial Market Stabilization, using the log value of total state aid received (including guarantees and capital) as our fourth measure and a dummy indicating the usage as our fifth measure. We use a principal component analysis (untabulated), revealing an eigenvalue of 2.48 for the first factor explaining 49.7% of the variation. The included variables all load in the expected direction with values above 0.4 (except for the change of assets with a value above 0.3). We aggregate these measures as our single measure of financial performance by weighting them according to their factor loading.

Organization's Familiarity

We measure the familiarity of organizations based on how evaluators assess their understandability and how emotionally attached they feel to them, e.g., via a set of known organizational features (Okhuysen, 2001). In particular, our measures of familiarity reflect the proximity of banks to their customers, their charity activities, and the level of general understandability of their business activities. Our first measure is a dummy variable that indicates whether the bank has its headquarters in Germany. An organization with a clear connection to the country of operation is more familiar to the national public (Friebel & Heinz, 2014; Wan & Hoskisson, 2003). Second, we use the number of branches and ATMs in Germany. Banks with a high number of branches and ATMs can ensure constantly high public awareness with generally understandable services (Brevoort & Wolken, 2009). Third, we derive the number of the bank's

employees in Germany, as this measure influences organizational ties with the social environment of each employee. Fourth, we measure charity by the expenditure on CSR activities as well as the occurrence of words clearly associated with charity[6] in articles (Coupland, 2006). Charity is a way of presenting a bank as being a supporting part of society (Capriotti, 2009; Muller & Kraussl, 2011; Perera & Chaminda, 2013).

We use several data sources to derive our measures. Our data sources are annual reports, the German central bank, the association of private banks, the association of savings and mutual banks, as well as our newspaper sample. We base all of our measures on the non-crisis period data from 2005 and 2006 to avoid endogenous issues potentially arising from the actions of banks taken in response to an erosion of its reputation during times of crisis or the ramp-up period of the banking crisis. A principal component analysis (untabulated) reveals that all of the described variables load positively on a first factor with an eigenvalue of 3.68 explaining 61.4% of the variation. The included variables all load in the same direction with values above 0.4 (except for the number of charity mentions and the country dummy with values above 0.3). We use this first factor as our measure for familiarity. Again, we aggregate these measures by weighting them according to their factor loading.

Descriptive Statistics and Correlation Matrix

Table 2, Panel A shows descriptive statistics at the level of the individual article, indicating that the average sentiment score of an article is -1.55 (SD = 6.80). The correlation matrix reveals that

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6   We measure the expenditure on charity as cash out, as described in the annual or CSR report. In addition to the expenditure, we account for the acknowledgement of charity involvement via a distinct measure of terms associated with charity in newspapers. Therefore, we count for the words *wohltätig* (charitable), *Spende* (donation), *Bedürftige* (people in need), *Spendenbereitschaft* (willingness to donate), and *Wohltätigkeit* (charity) to define a charity indicator. If a company is comparably more frequently associated with charity in newspapers, the organization likely has geographically more dispersed investments discerned by the public.

the sentiment score correlates negatively and significantly with a higher financial word ratio, a larger distribution of the newspaper, and a dummy indicating the financial crisis.

Table 2, Panel B shows descriptive statistics of our independent and dependent variables at the week-bank level. We observe an average of 7.30 (SD = 12.80) articles per bank per week. The average sentiment score of an article per week is -1.42 (SD = 4.45). We find that the number of articles and the sentiment score are not significantly correlated. The number of articles is negatively and significantly correlated with the ratio of financial words and financial performance, and it is positively and significantly correlated with familiarity, total assets, and the financial crisis. The sentiment score is negatively and significantly related with the ratio of financial words, total assets, and the financial crisis. Further, it is positively and significantly related with familiarity.

Insert Table 2 here

Empirical Model

Our sample consists of 12,620 observations at the bank-week level. We consider the panel structure of our dataset by including banks as random effects. In addition, all models include fixed effects for the bank's business model and for the specific calendar week. The main dependent variables are the number of articles per week for a specific bank for testing visibility (H1a, H1c, & H1d) and the average sentiment of all articles mentioning a specific bank in a specific week for testing favorability (H2a-H2d). The financial word ratio is the dependent variable for testing H1b.

Results for Organizational Visibility

Effects of the Financial Crisis

H1a predicts that visibility increases during the financial crisis. Consistent with the prediction, the descriptive statistics show that the average number of articles per bank and week are higher in times of crisis (mean = 7.85) than in times of non-crisis (mean = 6.02) (see Table 2, Panel C, and

Figure 2, Panel A). After controlling for organizational features, we find that the number of articles per week and bank increases by 1.124 during the financial crisis, a highly significant effect (t-value = 5.21, see Table 3, Model I). The control variables indicate that more articles cover banks that show a poor financial performance, are familiar, or have a large size as indicated by total assets. In additional tests (untabulated), we find that the increase in judgments is significant for both the banking and the sovereign debt crisis compared to the pre-crisis period.

In our next hypothesis, we are interested whether the financial crisis changes the composition of financial vs. non-financial content (H1b). We observe that the proportion of financial words decreases from 3.72% before the crisis to 3.21% during the crisis (see Table 2, Panel C). A regression analysis controlling for organizational features reveals a reduction in the financial word ratio by -0.405 percentage points, indicating a highly significant effect (t-value = -9.62, see Table 3, Model II). Again, robustness tests investigating the two crises separately continue to reveal significant effects.

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Insert Table 3 here

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Moderating Effects of Organizational Features during the Financial Crisis

We turn to potential drivers of visibility before and during the crisis. To test whether the observed increase in visibility during the financial crisis is stronger for banking organizations with weaker financial performance (H1c) or higher degrees of familiarity (H1d), we extend the empirical model used to test H1a and H1b. In particular, we add interaction effects between the organizational features (*financial performance, familiarity, total assets (log value)*) and a dummy variable for the

period of the financial crisis to separate the base effects pre-crisis and the incremental effects of the financial crisis.

We observe that financial performance is not a significant driver of the number of articles per bank and week pre-crisis (t-value = 0.72) but becomes a significant one during the financial crisis (t-value = -11.32, see Table 3, Model III). This finding indicates that the increase in visibility during the financial crisis is stronger for banking organizations with poor financial performance, supporting H1c.

For organizational familiarity, we observe an insignificant effect on the number of articles per week pre-crisis (t-value = 1.27), an effect that becomes significant during the financial crisis as indicated by a highly significant incremental effect (t-value = 23.99), supporting H1d. A robustness test using the log value of the number of articles, the total number of words per week or the log of the total number of words per week as dependent variables yields consistent results (untabulated).

In additional untabulated regression analyses, we find that the reported interaction effects of organizational features and a dummy for the financial crisis all remain significant when splitting up the financial crisis into the banking and sovereign debt crisis.

Results for Organizational Favorability

Effects of the Financial Crisis

As expected (H2a), we find that the financial crisis leads to a more negative sentiment in newspaper articles on banks, indicating a drop in favorability. The sentiment score decreases from an average of -0.38 during the pre-crisis period to an average of -1.86 during the financial crisis (see Table 2, Panel C, and Figure 2, Panel B). Even after controlling for organizational features including financial performance, the financial crisis leads to a drop in the sentiment score by -

0.991, a highly significant effect (t-value = -10.83, see Table 4, Model I). This effect is highly significant when including dummy variables for both the banking crisis (coefficient = -1.117; t-value = -10.75) and the sovereign debt crisis (coefficient = -0.889; t-value = -8.88) in an untabulated regression model (R^2-overall = 8.3%).

The next question is whether the drop in favorability in times of crisis is stronger for financial or for non-financial media content (H2b). We observe a negative and significant correlation between the proportion of financial words and the sentiment score (see Table 2, Panel B). To test H2b, we add to the regression model the ratio of financial words as a main effect and in interaction with the financial crisis dummy variable. We do not observe significant effects for these variables (see Table 4, Model II). The results suggest that the more negative sentiment in newspaper articles about banking organizations during the financial crisis does not differ for financial and non-financial media content.

Insert Table 4 here

Moderating Effects of Organizational Features during the Financial Crisis

With the remaining hypotheses, we want to understand the drivers of favorability during the financial crisis, investigating the effects of financial performance (H2c) and familiarity (H2d). We perform a regression analysis using the same model as previously used for testing H1c and H1d but now use the sentiment of newspaper articles as our dependent variable. The regression results show that only familiarity (t-value = 2.70) but not financial performance (t-value = 1.51) has a significant effect on the sentiment of newspaper articles in the times before the financial crisis (see Table 4, Model III). Consistent with H2c and H2d, we observe that both financial performance and familiarity matter more for the sentiment of newspaper articles during the financial crisis. The positive interaction effect of financial performance and financial crisis (t-value = 6.97) indicates

that organizations with poor financial performance are more severely criticized during the financial crisis than before the financial crisis. The positive interaction effect of familiarity and financial crisis (t-value = 4.16) shows that familiar organizations are more positively regarded by the media during the financial crisis than before the financial crisis. Taken together, the results suggest that familiarity can counteract the negative effects of poor financial performance during times of crisis and act as kind of a shield for favorability.

In additional tests, we investigate the role of financial performance and familiarity as drivers of the sentiment of newspaper articles in times of economic crisis separately for financial and non-financial media content by performing a median split on the financial word ratio (Table 4, Model IV and V). In both subsample analyses, we observe similar results as in the main analysis (Table 4, Model III). We find that financial performance and familiarity become more important for the sentiment of newspaper articles in times of crisis for non-financial media content. For financial media content, we find stronger effects for financial performance in times of crisis but no significant effect for familiarity.

Alternative Measures for Favorability

We conduct robustness tests to show that our results are not sensitive to how we measure our dependent variable. Therefore, we re-perform the analyses for testing H2a-H2d with the following modifications. First, we use the sentiment score of the headlines of the articles only. Second, we use a self-created word pattern dictionary instead of the word dictionary of Remus et al. (2010).

Using word patterns instead of single words addresses the problem of ambiguous word meanings, sarcasm, and irony.[7] The results of these tests support the robustness of our findings (untabulated).

Conclusion and Discussion

This study empirically analyzes the effects of the financial crisis on the organizational reputation of banks. The analysis focuses on visibility and favorability as two important dimensions of organizational reputation and considers the role of organizational features and content focus of the evaluator. Our results shows that banks' visibility increases during the financial crisis as measured by the number of newspaper articles per week. Interestingly, we observe that the increase is stronger for non-financial content indicating a shift of the evaluator's topic focus. In addition, we find that organizational features matter more for the visibility of banking organizations during the financial crisis. Further, we observe that banking organizations showing weak financial performance or higher levels of familiarity experience a disproportionally strong increase in visibility during times of crisis. Turning to favorability measured by the sentiment of newspaper articles, we validate that it becomes more negative during the financial crisis. Remarkably, the relationship between organizational attributes, i.e., financial performance as well as familiarity, and the sentiment of newspaper articles becomes stronger during the financial crisis. That means, for example, that banks are more harshly criticized for the same level of poor performance during the financial crisis than pre-crisis.

The main insight of our study is that the organizational features of financial performance and familiarity become more important for shaping the reputational dimensions of visibility and

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[7] Four research assistants analyzed more than 1,000 articles to identify such word patterns (two to four consecutive words). From this analysis, we created a list of 466 word patterns indicating a negative sentiment and 244 word patterns indicating a positive sentiment. Based on this word list, we created a new sentiment measure (standardized by the total number of words per article).

favorability in times of crisis. These findings relate to the important question whether the criteria used to evaluate organizations might change over time. Our study illustrates that the erosion of financial profitability and the uncertainty surrounding the financial crisis rendered the criteria of financial performance and familiarity more important in reputational judgments. It supports the idea that the "global financial crisis has […] changed the criteria many people use to evaluate companies, especially financial institutions" (Dowling & Gardberg, 2012, p. 52).

One contribution of our study is to provide an empirical test of multidimensional aspects of organizational reputation in times of crisis, taking into account important aspects of social judgment research applied to organizational reputation for explaining the behavior of the evaluator. We evaluate drivers of the changing focus of social judgments, the analytical processing and determinants underlying the rendering of social judgments, as well as the outcome of the social judgment process shaping different dimensions of organizational reputation (Bitektine, 2011; Lange et al., 2011; Rindova et al., 2005). We also consider the role of organizational features in the evaluation of organizational reputation, taking into account the effects of the financial crisis as well as the content focus of the evaluator. This research setting enables us to contribute to the question of how uncertainty affects certain aspects of social judgments, elaborating on determinants and outcomes (Bitektine, 2011).

Our evaluation of the visibility of banking organizations in times of crisis supports the conjecture that times of uncertainty trigger a higher demand for social judgments, fostering an increased visibility of organizations. Additionally, we provide novel evidence for the analytical processing underlying the judgment as well as the resulting content focus. Our findings of a stronger increase of non-financial content in newspaper articles and a more intense coverage of familiar banks during the financial crisis suggest that cognitive economy in conducting judgments

gets more common in times of uncertainty (Bitektine, 2011). Further, this insight provides empirical evidence for the evaluator's focus of attention, especially during crisis-induced changes of the societal context (Capriotti, 2009; Bitektine, 2011; Sohn & Lariscy, 2015).

The analysis of the change of favorability via the sentiment of newspaper articles contributes to the literature on organizational reputation (e.g., Carroll, 2011; Einwiller et al., 2010). Our observation that the level of familiarity with an organization becomes an even more important driver of the sentiment of newspaper articles during times of crisis implies that it can serve as an important intangible asset, helping organizations to maintain their level of reputation even during the crisis within the financial industry (Lange et al., 2011; Pfarrer et al., 2010; Rindova et al., 2005; Rindova et al., 2006; Sohn & Lariscy, 2015). This finding amends previous studies investigating drivers and protectors of reputation (Miner, Amburgey, & Stearns, 1990; Sohn & Lariscy, 2015) and strategies to (re-)gain a favorable reputation after a public crisis (Coombs & Holladay, 2002; Deephouse, 2000; Zavyalova et al., 2012).

Focusing on the effects in times without a crisis, our results suggest that the impact of organizational features on different dimensions of organizational reputation, namely visibility as well as favorability, is comparably weak. This finding implies that a strategy to satisfy the minimum requirements of a social environment might be reasonable in those times (Deephouse & Suchman, 2008). Such a strategic approach is in line with economic theory that organizations should try to meet, not to exceed, the social demands within their institutional environment.[8] However, the change of how evaluators form social judgments during the financial crisis supports

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[8] Self-description of Deutsche Bank in the Annual Report 2006 (Page 1) implying a primarily focus on financial performance (pre-crisis): "We are a leading global investment bank with a strong and profitable private clients franchise. Our businesses are mutually reinforcing. A leader in Germany and Europe, we are powerful and growing in North America, Asia and key emerging markets."

the view that during times of great uncertainty the "merely external fact of the order being obeyed is not sufficient" (Weber, 1978, p. 946), and requires additional measures to re-shape organizational features.[9] In particular, our study demonstrates that being an organization that is perceived as familiar can help to protect reputation even in times when financial performance suffers.

Our empirical study is subject to limitations. One limitation is that we focus on the media as an important evaluator. We do so based on the belief that media is an important evaluator that reflects and influences public opinions about organizations (e.g., Aerts & Cormier, 2009; Carroll, 2011; Carroll & McCombs, 2003; Deephouse & Heugens, 2009). However, our study does not directly measure reputation as perceived by regulatory agencies, political institutions and interest groups. The focus on the antecedents of organizational reputation and how their impact changes in times of crisis is another limitation of our study. One opportunity for future research to extend our contribution is to test consequences of changes in organizational reputation, e.g., the impact of the sentiment in newspapers on stock price changes (see also Garcia, 2013). Moreover, future research could build upon the insights of this study to evaluate the reaction and outcome of banks to the loss of reputation. For example, our study suggests that one strategy to restore reputation is the enhancement of the perceived familiarity of an organization with the evaluator (e.g., via the proclamation of a cultural change after the financial crisis) as a measure to develop distinct organizational features within the banking industry (Butzbach, 2016).

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[9] Self-description of Deutsche Bank in the Annual Report 2012 (Page 1) arguing about the aims of social acceptance and financial performance (in-crisis): "Deutsche Bank is in a process of transformation. We regard the challenges facing us as an opportunity for change. We are preparing ourselves for a more complex relationship with the economy and with society, fiercer competition, additional regulation and tighter supervision. We want to win back peoples trust in our bank and do our part to improve the image of the financial industry. We are convinced that commercial success and social acceptance do not have to be mutually exclusive."

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Figures and Tables

Figure 1. Geographic distribution of sample newspapers in Germany[i]
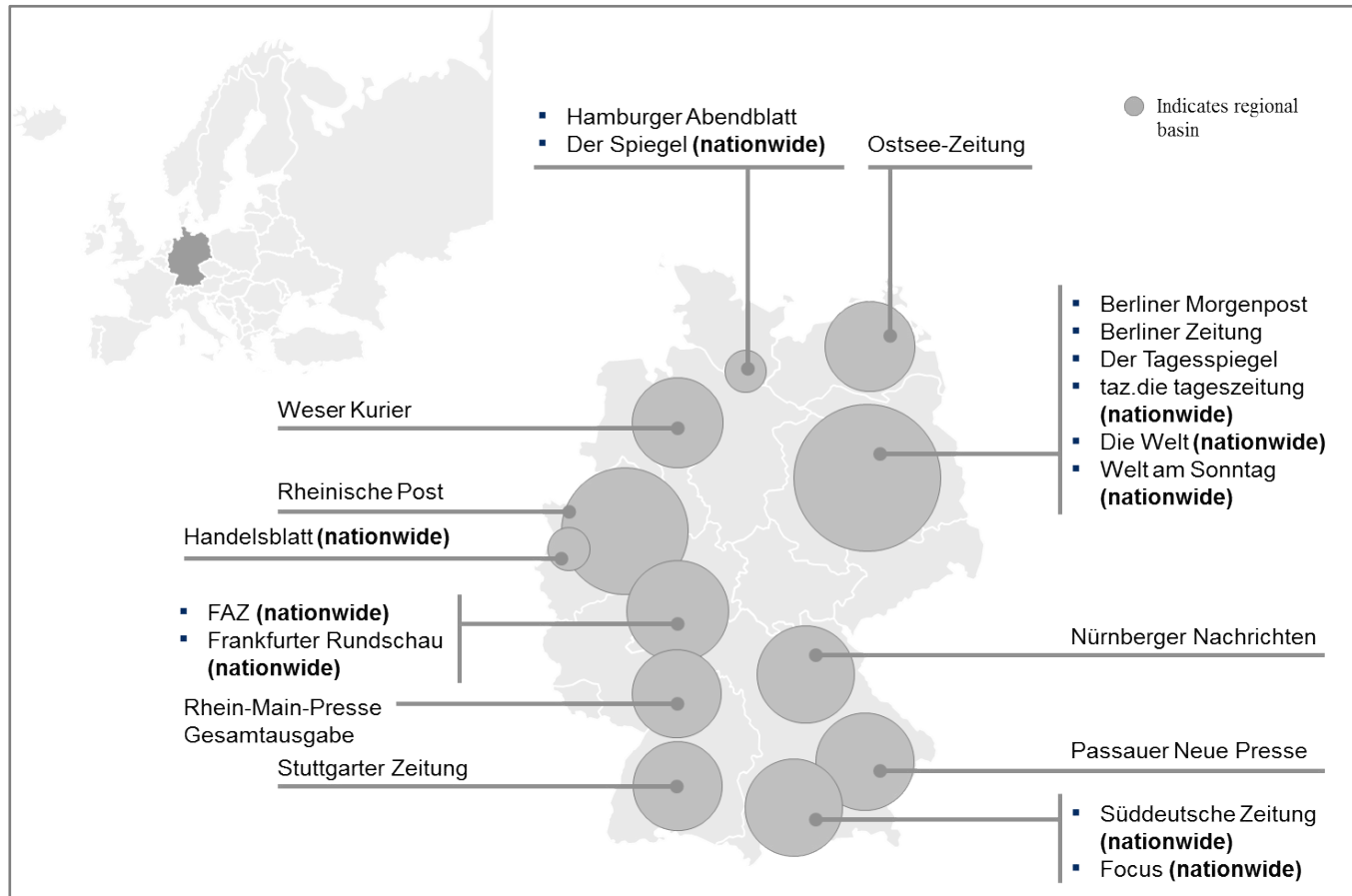
[i]   We gather articles from 20 widespread German newspapers and magazines that represent a mixture of nationwide and regional newspapers with a circulation of more than 100,000 copies each in Germany in the year 2012. We also include the newspaper "taz.die tageszeitung" (although it has a circulation of less than 100,000 exemplars) because it is an influential nationwide newspaper that triggers attention from other media.

Figure 2. Aggregated organizational reputation of banks on a monthly basis

Panel A: Visibility (measured by number of articles per month)
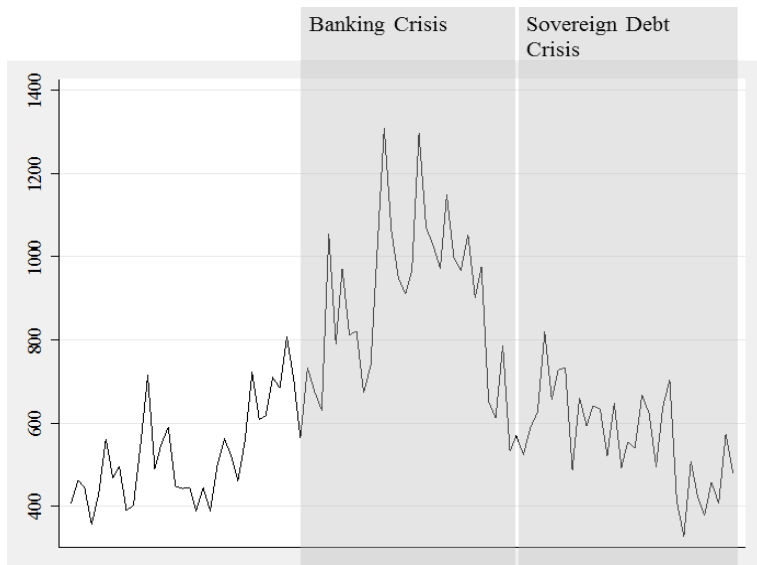
Panel B: Favorability (measured by the mean sentiment score of articles)
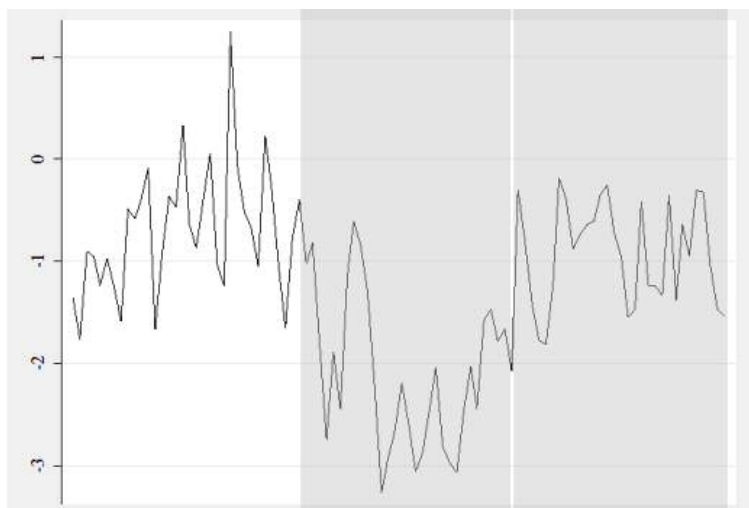
The pre-crisis period is from January 1, 2005 to June 21, 2007; the banking crisis is from June 22, 2007 to December 31, 2009; the sovereign debt crisis is from January 1, 2010 to December 31, 2012.

Table 1. Variable descriptions

Variables	Description	Source
Dependent variables		
Number of articles	Number of articles per week	
Financial word ratio	Share of words identified in the register of a highly circulated German textbook on introduction to business and economics (Wöhe 2013) to all words per article	German newspapers, German magazines (online archives or hardcopies)
Sentiment	Average sentiment score of full texts per week using the German dictionary of Remus et al. (2010) developed to analyze financial newspaper articles	
Financial performance		
Return on assets	Book value of pre-tax income divided by the book value of total assets (winsorized at a 5%-level)	BankScope - Bureau van Dijk, (Local) annual reports, association of private banks, association of savings banks and cooperative banks
Financial loss	1 if bank reports negative income; 0 otherwise	
Yearly change of total assets	Yearly change of book value of total assets (winsorized at a 5%-level)	
State aid (log)	Logarithm of sum of state aid from the German government received per bank	Federal Agency for Financial Market Stabilisation (FMSA)
State aid (dummy)	1 if bank receives state aid in Germany; 0 otherwise	
Familiarity		
Country	1 if home country of bank is Germany; 0 otherwise	Annual reports
Branches	Logarithm of number of branches (including headquarter or any other physically visible building) in Germany per bank	(Local) annual reports, association of private banks, association of savings banks and cooperative banks
ATMs	Logarithm of number of ATMs per bank in Germany	
Employees	Logarithm of number of employees of banks in Germany	
Charity	Logarithm of expenditures (cash out) of banks on charity in Germany	(Local) annual reports and CSR reports of banks as well as press review
Charity mentions	Number of articles per bank and week in the years 2005/2006 when words associated to 'charity' are mentioned	German newspapers, German magazines (online archives or hardcopies)

(Table continues on next page)

Table 1. continued

Variables	Description	Source
Control variables		
Total assets	Logarithm of book value of total assets	(Local) annual reports, association of private banks, association of savings banks and cooperative banks
Financial crisis	1 during the time period between June 22nd, 2007 until September 5th, 2012; 0 otherwise	
Banking crisis	1 during the time period between June 22nd, 2007 until December 31st, 2009; 0 otherwise	
Sovereign debt crisis	1 during the time period between January 1st, 2010 and December 31st, 2012; 0 otherwise	
Business-model fixed effects	Indicator for different business model orientation as defined by BankScope database	BankScope - Bureau van Dijk
Calendar week fixed effects	Indicator for each week (independent from specific year)	
Newspaper and article characteristics		
Distribution of newspaper	Average (mean) distribution number of newspapers in Germany on a quarterly basis	German Audit Bureau of Circulations

Table 2. Descriptive statistics and correlation matrix

Panel A: Sample of 92,219 newspaper articles

	Mean	SD	(1)	(2)	(3)
(1) Sentiment score	-1.55	6.80			
(2) Financial word ratio [%]	3.01	2.59	-0.05*		
(3) Distribution of newspaper	279,255	137,543	-0.03*	0.02*	
(4) Financial crisis (dummy)	0.75	0.43	-0.09*	-0.12*	-0.01

* $p < .01$.

Panel B: Sample of 12,620 bank-week observations

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)
(1) Number of articles	7.30	12.80						
(2) Sentiment score	-1.42	4.45	-0.02					
(3) Financial word ratio [%]	3.37	2.00	-0.10*	-0.03*				
(4) Financial performance	-0.49	1.87	-0.13*	0.02	0.02			
(5) Familiarity	0.85	2.36	0.49*	0.13*	-0.10*	0.05*		
(6) Total assets (log value)	12.58	1.61	0.17*	-0.03*	0.01	0.07*	0.14*	
(7) Financial crisis (dummy)	0.70	0.46	0.07*	-0.15*	-0.12*	-0.19*	-0.04*	0.00

* $p < .01$.

Table 2. continued

Panel C: Sample of 12,620 bank-week observation (3,784 pre-crisis; 8,836 in-crisis)

	Before the Financial Crisis		Financial Crisis	
	Mean	**SD**	**Mean**	**SD**
(1) Number of articles	6.02	8.57	7.85	14.20
(2) Sentiment score	-0.38	3.95	-1.86	4.58
(3) Financial word ratio [%]	3.72	2.18	3.21	1.89
(4) Financial performance	0.16	1.44	-0.75	1.95
(5) Familiarity	0.98	2.37	0.80	2.36
(6) Total assets (log value)	12.57	1.53	12.58	1.65

* $p < .01$.

Table 3. Regression analyses of organizational visibility (H1)

	Model I (H1a) DV: Number of articles per week	Model II (H1b) DV: Financial word ratio [%]	Model III (H1c, H1d) DV: Number of articles per week
Base effect: Before the financial crisis			
Financial performance	-0.997**	0.035	**0.119**
	(-8.97)	(1.71)	**(0.72)**
Familiarity	1.955**	-0.042	**0.560**
	(4.75)	(-1.15)	**(1.27)**
Total assets (log value)	1.474**	0.066	1.593
	(5.78)	(1.84)	(5.95)
Incremental effects: Financial crisis			
Financial crisis (dummy)	**1.124****	**-0.405****	-3.015
	(5.21)	**-9.62**	(-1.95)
Financial performance x financial crisis (dummy)			**-1.403****
			(-11.32)
Familiarity x financial crisis (dummy)			**1.883****
			(23.99)
Total assets (log value) x financial crisis (dummy)			0.177
			(1.44)
R-squared (overall)	28.2%	3.1%	30.8%
Number of observations	12,620	12,620	12,620

Note: T-statistics are in parentheses. * $p < .05$; ** $p < .01$. Unit of observation is bank-week. Reported are the results of GLS random-effects models with banks included as random effects. All models include an intercept, business model fixed effects, and calendar week fixed effects.

Table 4. Regression analyses of organizational favorability (H2)

	Model I (H2a)	Model II (H2b)	Model III (H2c, H2d)	Model IV (H2c, H2d)	Model V (H2c, H2d)
	DV: Sentiment All articles	DV: Sentiment All articles	DV: Sentiment All articles	DV: Sentiment Non-financial articles	DV: Sentiment Financial articles
Base effect: Before the financial crisis					
Financial performance	0.458**	0.458**	0.094	0.044	-0.055
	(10.79)	(10.58)	(1.51)	(0.50)	(-0.92)
Familiarity	0.271**	0.271**	0.130**	0.045	0.072
	(4.54)	(4.22)	(2.70)	(0.68)	(1.50)
Total assets (log value)	-0.063	-0.051	0.007	0.067	-0.222*
	(-0.95)	(-0.747)	(0.11)	(0.49)	(-2.31)
Financial word ratio		-0.022			
		-0.70			
Incremental effects: Financial crisis					
Financial crisis (dummy)	**-0.991****	-0.902**	0.954	3.320*	-1.074
	(-10.83)	(-5.37)	(1.39)	(1.99)	(-0.91)
Financial performance x financial crisis (dummy)			**0.382****	**0.461****	**0.536****
			(6.97)	**(4.79)**	**(8.16)**
Familiarity x financial crisis (dummy)			**0.147****	**0.149***	**0.058**
			(4.16)	**(2.04)**	**(1.07)**
Total assets (log value) x financial crisis (dummy)			-0.169**	-0.338**	0.003
			(-3.10)	(-2.37)	(0.03)
Financial word ratio x financial crisis (dummy)		**-0.030**			
		(-0.76)			
R-squared (overall)	8.1%	8.1%	9.0%	8.5%	10.9%
Number of observations	12,620	12,620	12,620	6,411	7,017

Note: T-statistics are in parentheses. * *p* < .05; ** *p* < .01. Unit of observation is bank-week. Reported are the results of GLS random-effects models with banks included as random effects. All models include an intercept, business model fixed effects, and calendar week fixed effects. We perform a median split based on the proportion of financial words to categorize articles in those that are non-financial and those that are financial.