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REPUTATIONAL RISK: PROBLEMS WITH UNDERSTANDING THE CONCEPT AND MANAGING ITS IMPACT

1. INTRODUCTION

Crisis and post-crisis restructuring always result in an increased interest in the issues of trust and corporate culture, as scandals and excesses of the pre-crisis period comes to light, and the amounts spent to rescue banks raise public opposition[1]. Therefore, the post-crisis period has brought an increased interest in reputational risk, particularly within the banking sector and among its customers. Reputational risk is not a new concept, but the efforts to manage it as a self-standing type of risk, rather than within an operational risk framework, are quite recent. The methodology to manage and measure operational risk has been advancing rapidly in recent years, fuelled by a number of well-publicised case studies, such as the bankruptcy of Barings and problems of Societe Generale due to rogue traders, the Allied Irish Bank and UBS losses due to unauthorised trading, or huge sums paid by banks and insurance companies to settle allegations of sales abuses. However, reputational risk is more difficult to define and manage, as it

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1 Walter (2013).

relies heavily on external perceptions and is sometimes viewed as a "risk of risks" or as an impact of other event[2]. As it took over a decade to develop an acceptable infrastructure for operational risk management, reputational risk is most probably at the beginning of a similar process.

Thus the aim of this paper is to analyse reputational risk as a self-standing type of risk and to trace its sources and consequences, particularly in the context of the drastic drop in confidence in banks in the post-crisis period. In the empirical part, the paper suggests a new methodology to measure reputational risk, by approximating it by a new indicator: Stakeholder Reputation Score (SRS) and running panel models, examining its impact on bank performance in listed banks in CEE-11 countries.

The paper is organised as follows: sections 2 and 3 review the approaches to define reputational risk, section 4 analyses the literature on factors causing reputational risk and its impact, section 5 reviews the approaches to measure reputational risk, section 6 describes the proposed index of reputational risk (Stakeholder Reputation Score, SRS) and summarises the results of the panel data models aimed at measuring the reputational performance premium for CEE banks, while the last section concludes the paper.

2. REPUTATIONAL RISK FROM A REGULATORY PERSPECTIVE

Risk appears with every banking product and operation, and managing risk constitutes an everyday banking activity. Risk can be defined as uncertainty concerning the return or outcome of an investment or an action, and risk management is a process by which managers identify, assess, monitor and control risks associated with financial institutions' activities[3]. Its objective is to minimise negative effects on the financial result and capital of a bank. However, in financial institutions risk can be treated both as a threat and also as an opportunity[4]. Banks manage risk at many levels, taking account of both macro and micro factors, in many cases external to the decisions taken by bank. Moreover, in many cases risk is interconnected, both within a bank and in the whole system. Risk management generally encompasses the process of identifying risks to the bank, measuring exposures to those risks, ensuring that an effective capital planning and monitoring programme is in place, monitoring risk exposures and corresponding capital needs on an ongoing basis, taking steps to control or mitigate risk exposures and reporting to senior management and the board on the bank's risk exposures

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[2] ACE (2013).
[3] Koch, Scott MacDonald (2015).
[4] Marcinkowska (2014).

and capital positions[5]. In the future, the new challenges will come from expanding regulations, raised customer expectations due to technological progress and the emergence of new types of risks[6].

Historically, banks' efforts in managing risk have tended to focus on credit and market risk. However, risk management in banking has been transformed over the past decade, largely in response to regulations that emerged from the global financial crisis. The Basel 2 Agreement stressed the importance of three main categories of risk: credit, market and operational risk; the Basel Committee[7] described the latter as the possibility of direct or indirect loss resulting from inadequate or failed internal processes, actions of people or systems, or losses related to the impact of external events. Although the definition was quite broad, reputational risk, as well as strategic risk, have not been included. Basel 2[8] and Basel 3[9] kept reputational risk out of the pillar 1 capital requirement and reputational risk is currently not subject to any specific capital requirements in the EU. Capital Requirements Directives[10] applicable to EU countries require only that the competent authorities evaluate reputational risks arising from securitisation transactions and that financial institutions develop methodologies to assess the possible impact of reputational risk on funding positions[11]. In the US, reputational risk is one of the Federal Reserve System's categories of safety and soundness and fiduciary risk (credit, market, liquidity, operational, legal and reputational) and one of three categories of compliance risk[12].

In light of the significant number of recent operational risk-related losses incurred by banks, in June 2011 the Basel Committee published the "Principles for the Sound Management of Operational Risk", which incorporated the lessons from the financial crisis. The eleven principles cover governance, the risk management environment and the role of disclosure, and address the three lines of defence: business line management, an independent operational risk management function and an independent review. In 2014, the Committee conducted a review in the form of a questionnaire, involving 60 systemically important banks in 20 countries, in which banks self-assessed their implementation of the Principles. A key finding of the review was that banks have made insufficient progress in implementing the Principles[13]. Hence in 2014 the Basel Committee proposed a revision to

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5 Basel Committee (2011).
6 McKinsey (2015).
7 Basel Committee (2001).
8 Basel 2 (2004).
9 Basel 3 (2010).
10 Capital Requirements Directives (2011).
11 Dey (2015).
12 Business Insurance (2016).
13 Basel Committee (2014).

its operational risk framework that sets out a new approach for calculating operational risk capital. Also, the Financial Stability Board stressed the importance of operational risk in the post-crisis environment, defining it as a synthetic one, including people risk, outsourcing risk, internal and external fraud, money laundering and technology risk[14].

In 2009, the Basel Committee passed the document addressing the need to strengthen risk management by banks, in which reputational risk was defined as a multidimensional process, based on the perception of other market participants[15]. More precisely, reputational risk was explained as the actual or potential risk related to earnings or capital, arising from negative perception of financial institutions by the current and potential stakeholders (customers, counterparties, shareholders, employees, 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 its continued access to sources of funding, including the interbank market or the securitisation processes. In this document, the Basel Committee stressed the need to manage reputation risk, identifying its sources and taking it into account when testing the resilience of the bank business model to external shocks [Basel Committee 2009]. The Fed's *Commercial Bank Examination Manual* defined reputational risk as "the potential that negative publicity regarding an institution's business practices, whether true or not, will cause a decline in the customer base, costly litigation or revenue reductions"[16].

3. REPUTATIONAL RISK AS A BROAD AND MULTIDIMENSIONAL CONCEPT

Reputational risk – damage to an organisation through loss of its reputation – can arise as a consequence of operational failures, as well as from other events. Both operational and reputational risks belong to a similar area, as operational problems can carry negative consequences for a bank's reputation, affecting client satisfaction and shareholder value. However, those risks can also include a broader set of incidents, such as fraud, privacy protection, legal risks, physical (e.g. infrastructure shutdown) or environmental risks. Reputational risk exists on many levels and is difficult to quantify. It can also be defined as the risk of economic loss associated with a negative image of the bank by the clients, supervisors, regulators and the public. Risk management is result-oriented, with different priorities given to avoidance of operational problems or reputational risk, and a different time

14 FSB (2012).
15 Basel Committee (2009).
16 Business Insurance (2016).

horizon for maximising the value of the company. Reputational risk is associated with faulty strategy, poor management and leadership, or a wrong system of incentives, inadequate supervision and problematic corporate culture.

Steinhoff and Sprengel[17] observed that risk awareness is probably the most important factor for risk reduction, so it should be placed inside the corporate governance framework, particularly from a "who is responsible for what" angle. Reputational risk is not regulation or compliance-driven, but determined by stakeholder expectations. However, corporate culture is also a very broad concept and can be defined in many ways[18]. The development of corporate culture is a long-term, continuous process, where the results are visible in the long term. The definitions emphasise that it rests on a set of values shared by a community, which affects its organisation and motivate behaviour within the organisation[19]. The period of crisis often results in an increased interest in corporate governance, however, changes in prudential regulations correcting errors in risk management are usually easier than the long-term changes in the corporate culture of market participants[20].

Traditionally, the financial services industry worked according to easily understandable principles, with clearly defined risk profiles: for a loan, an enterprise went to a commercial bank, to raise funds on capital markets it turned to an investment bank. In the last twenty years those divisions were blurred, and new players, such as hedge and equity funds were offering para-banking services[21]. However, from the crisis perspective, the strategy of a "financial supermarket" and a "too big to fail" scale turned out to be very risky. Although systemic risk associated with the activities of large, global banks was among the top causes of the global financial crisis, after the crisis, their role has been further strengthened. In many countries, post-crisis restructuring took the form of mergers and acquisitions, particularly of investment banks by universal ones in the US, or merging the nationalised banks to control losses (the Netherlands, the UK). So the question of managing reputation risk in the process of acquisition is another important challenge[22]. Consistency of culture ensures a friendlier merger, but the not necessarily homogeneous cultures of the merging companies can have a positive effect on the results of the merger[23].

The 2007–2009 crisis caused multibillion losses and reviled the weaknesses of the growth foundation and failure of risk management systems in large global

[17] Steinhoff and Sprengel (2014).
[18] Guiso, Sapienza, Zingales (2006).
[19] Carretta, Farina, Schwizer (2007).
[20] Walter (2013).
[21] Rajan (2005).
[22] Schoenmaker (2011); Dermine (2006).
[23] Fiordelisi, Soana, Schwizer (2013).

banks. Consequently, there has been a renewal of interest in the creation of a stable and functional risk culture. This includes, among others, a broadening of the scope of analysed risks beyond the regulatory requirements. Moreover, as the empirical research has indicated, reputational risk increases with the scale and profitability of banks, making the subject even more relevant in a global system characterised by a highly concentrated banking markets[24]. A series of scandals revealed during the crisis and in the post-crisis period strongly influenced the deterioration of reputation and loss of confidence in the banking market. While building and maintaining a solid reputation is important for all types of organisations, it is especially important for financial institutions. Trust in the integrity of the financial sector is the cornerstone of its stability and growth. The concept of trust is closely related to that of reputation, the latter is past and the former is forward-oriented. Both depend on the operational decisions taken by banks in the past. There are some mechanisms that can be used in enhancing trust, such as codes of ethics, internal anti-fraud systems, independent ethics audits and reputational indices. Indirect measures involve membership of a professional association or in self-regulatory organisations, which protect the reputation and discipline among its members, setting standards in codes of conduct and developing mechanisms of better risk assessment process[25].

Many definitions stressed that reputational risk is multidimensional and reflects the perception of other market participants. It can also be defined as the risk to bank goodwill that is not associated with deterioration of book value and is typically reflected in a falling stock price[26]. There is also a problem of time frame. In most cases, the effects of a scandal or unexpected loss are immediate. The loss is seen as a signal that the company has a weak control environment. Shareholders may also sell shares if they believe that future losses are inevitable. However, there are also cases of more prolonged problems with corporate culture which gradually erode customers' and business partners' trust. In some cases, reputational problems have a negative impact on the financial results, but there are also opposite cases[27].

The growing awareness of reputational risk is also reflected in annual surveys conducted by the European Banking Authority and reported in *Risk Assessment of the European Banks*. This document includes a section on reputational risk, particularly assessing its impact on consumer confidence[28]. The reports showed growing awareness of reputational risk in the European banking sector, as indicated

24 Fiordelisi, Soana, Schwizer (2013).
25 Morris and Vines (2014); Marcinkowska (2013).
26 Walter (2013).
27 Marcinkowska (2013).
28 EBA (2014, 2015, 2016).

by 33% of responding banks in 2013, 44% in 2014, and 68% in 2015. According to EBA reports, what had a particularly detrimental impact on consumers were failures with regard to rate benchmark-setting processes, the mis-selling of banking products, and more recently misconduct related to foreign exchange rates, violations of trade sanctions and redress for payment protection insurance, and floors for mortgage loans at variable interest rates. The range of identified detrimental business practices remains wide and misconduct costs remain high. The share of banks indicating that they have paid out more than EUR 1 billion in compensation, litigation and similar payments increased in 2015 to 32% of participating banks (16% in 2014 and only 8% in 2013)[29]. Efforts to adjust culture and risk governance are the most widely considered approach to addressing reputational and legal risks (85% in 2016), an increase from less than 50% of respondents in previous surveys. However, in the 2016 Report, only about 10% of surveyed banks indicated their intent to adjust products and business models in an effort to address reputational and legal risks. Other empirical studies show that reputational risk is particularly important for large global banks and those with relatively low capitalisation, so it should be an important subject of supervisory concerns.

4. BENEFITS FROM REPUTATION AND TRUST IN BANK SURVEYS

Reputational risk is usually due not to incidental events, but is the result of poor long-term decision-making processes. The causes are often linked to the pressures on results, the asymmetry of the profit to risk ratio, conflict of interest related to the complexity of bank business models and to compensations based on bonuses[30]. Financial services differs significantly from the industrial sector. Key stakeholders of banks are depositors, creditors and the government (insurance). As banks are financed largely through debt, shareholders have a lesser importance than in corporations. However, bank governance prioritises shareholder interests and bank ownership to be concentrated in institutional investors with a bigger risk tolerance than other stakeholders. Consequently, governance of financial institutions facilitates operational risk, which may erode shareholder wealth and may fail to meet the expectations of other stakeholders[31].

The 2008 financial crisis had a significant effect on banks' reputations and trust, and only recently can we observe a gradual rebound of trust: financial services has recorded an 8-point increase from 43% in 2012 to 51% in 2016 on a global basis. Financial services, however, is still the least trusted industry

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29 *Ibidem*.
30 Waler (2013).
31 Dow (2014).

among those surveyed by the Edelman Trust Barometer[32]. Inside the industry, employees are more trusted than senior executives and CEOs to communicate on topics like financial earnings, crises and the treatment of customers. In the US, the Reputation Institute compared the financial industry problems with the past reputation of tobacco firms. In the post-crisis period the financial sector has been obliged to pay incredible amounts of litigation expenses, with the most notable being JP Morgan paying 13 billion of dol. settlement to the US government over behaviour leading to the crisis in 2014, Deutsche Bank investigated for tax evasion and money laundering, in addition to Libor fixing in 2012, or large banks fined for the Libor scandal in 2015. However, in 2016 for the first time the large banks gain in the US ranking – of the 33 banks evaluated, 10 banks had an "excellent" reputation among their customers, compared to eight in 2015[33]. Other surveys have also shown that inside the banking industry, those with the best reputation have divisions related to new technologies, eg. internet banking and ATMs, though not telephone banking[34].

Inside the banking sector, reputation is often treated in the same way as a "brand", i.e. an intangible asset that can be impaired by operational mistakes or inappropriate behaviour. In this approach reputational risk is a derivative risk, arising as a result of damaging action[35]. Reputation may also serve as a cushion against losses, i.e. companies with a better reputation suffered less severe declines in market value during the crisis periods although the empirical evidence varies in this respect – in some cases a good reputation softens the impact of failures, in others it may be dangerous, as other objective indicators of strength, such as capital or liquidity, might seem irrelevant. The third way is not to treat it as an asset, nor as a kind of equity capital, but as a set of obligations towards stakeholders, which have to be fulfilled[36].

Thus, reputation can be summed up as having three main manifestations:

- reputation as asset (stakeholders' goodwill),
- reputation as liability (stakeholders' expectations),
- reputation as capital (buffer against failure, helping to maintain goodwill when failing to meet expectations).

The impact of reputation on performance is a direct consequence of interaction of those domains[37].

As early as 2005, the Economist Intelligence Unit Report observed that protecting a firm's reputation is the most important and difficult task facing the

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32 Edelman Trust Barometer (2016).
33 American Banker (2016).
34 Ernst and Young (2014).
35 Steinhoff and Sprengel (2014).
36 *Ibidem*.
37 *Ibidem*.

firm's managers and reported that in a survey of 269 senior executives responsible for managing risk, reputational risk emerged as the most significant threat to business out of a choice of 13 categories of risk. Reputational risk was defined as an event that undermines public trust in bank products or brands[38]. Reputation is based on aggregate past experience; however, it is directed towards the future and reflects the expectations concerning the firm[39]. Customers satisfied with the services of the bank have a greater loyalty, which helps to improve the bank's image and its competitive position[40]. In contrast, problems with a bank's reputation can lead to[41]:

- loss of current or prospective customers,
- loss of employees or managers in the organisation,
- departure of current or future business partners,
- an increase in the cost of financing through a loan or capital markets.

Moreover, reputational problems of large commercial or investment banks have been widely publicised, aggravating the problem and the damage. The most famous reputational problems include[42]:

- bad strategy – for example, a failed attempt to build a "financial supermarket" by American Express in the 80s and Citigroup in the 2000s. Combining commercial and investment banking has always been difficult, as these areas have fundamentally different corporate cultures, risk profiles and environmental control. The investment part feels unduly "insured" by the stable commercial part, which, however, is not able to cover the losses conglomerated during the crisis;
- poor risk management, such as widely publicised problems with internal control and fraud in Barings Bank, and later on in Societe General and UBS,
- aggressive strategy and problems with corporate culture, leading to market manipulation, as with the investment bank Salomon Brothers in the 1970s;
- incompetently applied new products, such as an excessive expansion of the "junk bonds" market in the 1980s and securitisation transactions before the crisis, particularly on the part of the US investment banks,
- abuse of market power: most recent examples include Libor manipulation and FX manipulation by large global banks.

Reputational problem in the above-mentioned institutions often resulted in either immediate bankruptcy, or long-term loss of customers and business partners, leading to the destruction of the brand and perception of the company. An example

38 The Economist (2005).
39 Edelman Trust Barometer (2014).
40 Fiordelisi (2009).
41 Eccles, Newquist, Schatz (2007).
42 Masiukiewcz (2009); Docherty and Viort (2014).

is the decision of the Citigroup in 2003 to abandon the name "Solomon" in its investment part, because it placed too much of a burden on the bank's reputation. In contrast, one can cite many positive examples of the beneficial role of reputation and positive perception of corporate culture that have stabilised or increased the market position of the bank. As an example can serve a specific corporate culture developed by Santander Bank, managed through three generations by the Botín family, giving the bank's corporate culture a sense of stability and continuation of[43].

Kaiser[44] analyses two surveys conducted by KPMG among the G-SIBs (the Global Systemically Important Banks) in 2013 and 2014 and responded to by 10 banks and a survey of the German banks, responded to by 18 institutions, 13 of which belonged to the 20 biggest German banks in 2012. In the surveys, 60% of both global and German banks asserted that reputational risk stands in its own, rather than being a consequential risk, or trigger to other risks; however, most banks did not include it in their risk inventory and admitted that it is not explicitly addressed in their risk strategy. Another question showed that only 55% of the G-SIBs and 60% of the German banks prioritised their stakeholders in order to manage reputational risk more efficiently. German banks gave the highest priority to customers, while global banks gave top priorities to customers, employees and regulators. The surveys demonstrated that banks put the main emphasis on self-assessment of reputational risk, only supplementarily including expert opinions, interviews with senior management and analysis of press and social media; and that they register and report losses due to reputational risk mainly as a part of the operational risk database, so although banks were aware of the need to include reputational risk in their overall risk mapping, in everyday life they dealt with it in the operational risk management framework.

5. PROBLEMS WITH MEASUREMENT OF THE REPUTATIONAL RISK

The efforts to manage operational risk have been successfully quantified in the last decade, but for reputational risk the typical approach is still to monitor it inside the broadly defined "risk culture". What gets measured gets managed [Diermeier 2008]. However, quantification of reputation risk is extremely difficult as there is no universally accepted methodology and the concept is quite broad. If we define reputational risk as unexpected losses due to the reaction of stakeholders to an altered perception of an institution[45], there are many possible ways of

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[43] Guillén, Tschoegl (2008).
[44] Kaiser (2014).
[45] *Ibidem*.

approximating this risk. Moreover, reputational risk does not act in isolation; on the contrary, it is interrelated to many other types of risk. Some sources of gain/loss in reputational capital include: economic performance, stakeholder interface and the legal interface, which can be reflected in client flight, loss of market share, investor flight and increase of cost of capital, talent flight and increase of contracting costs[46]. Assuming that reputational risk is managed through strong corporate governance, another approach is to create indices that measure the quality of firms' corporate governance structure and link it to the stock price-based performance of the company, assuming that the change in corporate governance index is a signal of quality of firm management[47].

The empirical studies typically focus on various surveys, case-studies or media coverage of detrimental events. There is also a lack of tools to link reputational risk with financial performance and it is unclear how reputation risk can impact capital[48]. In many companies, reputational problems are still considered rather as a problem of public relations than a strategic one and the response is frequently inadequate to the scale of the damage. The problem of reputational risk measurement is further aggravated for CEE banks, as the stock markets there are not efficient in discounting information[49], so the panel data models using stock market information may be misleading.

Assessing reputational risk is most often not an objective process, but rather it is a subjective assessment that could reflect a number of different factors. Reputation could be perceived as an intangible asset, synonymous with goodwill, which is difficult to measure and quantify. Consistently strong earnings, a trustworthy board of directors and senior management, loyal and content branch employees, and a strong customer base are just a few examples of positive factors that contribute to a bank's good reputation[50].

Establishing a strong reputation provides a competitive advantage. A good reputation strengthens a company's market position and increases shareholder value. It can even help attract top talent. Communication between a bank and its stakeholders can be the foundation for a strong reputation. Bank examiners may consider whether an institution responds to customer concerns; whether the stock analyst recommends buying or selling and why; and what the shareholders, employees or general public are saying about the institution. They also consider whether the institution is expanding outside its normal geographical area and is supportive of the community. On-site, examiners will talk to both bank employees

46 Walter (2016b).
47 Fox, Gilson, Palia (2016).
48 Diermeier (2008).
49 Kil (2015).
50 Business Insurance (2016).

and management to get a sense for corporate ethics. Examiners will assess whether an institution's expertise is adequate and controls are in place to oversee growth if the institution should engage in riskier products or enter into new business lines[51]. Also the rating agencies, such as Standard & Poor's Corp., Moody's Investors Services Inc. and Fitch have significantly increased their emphasis on reputational risks related to corporate governance. The rating agency's primary focus is the ability and willingness of an entity to make full and timely payment of debt service on its financial obligations. However, a damaged reputation can significantly affect the performance and, ultimately, the ability to borrow capital. For example, S&P issued a statement saying that costs associated with the Costa Concordia disaster had negatively affected the firm's operating performance in 2012. Another example of the importance of reputation in obtaining the rating score are public universities in the US, which rely heavily on their reputation and brand as a strategic asset[52].

A measure that is sometimes used is the difference between the immediate costs of a crisis versus damage to a firm's market capitalisation in the period following a crisis event[53]. Another frequent approach in modelling reputational risk is to analyse it within an operational risk framework, assuming that operational loss events can lead to significant reputational losses, and to the check the impact of bank reputational problems on bank market capitalisation. Reputational loss is there defined as market value loss that exceeds the announced operational loss[54]. Another frequent approach is to conduct an event study analysis of the impact of operational loss events on the market values of financial institutions by examining a firm's stock price reaction to the announcement of particular operational loss events such as internal frauds, estimating the Reputational Value at Risk at a given confidence level, which represents the economic capital needed to cover reputational losses over a specified period[55].

6. EMPIRICAL ANALYSIS OF THE REPUTATIONAL RISK IN THE CEE BANKING: STAKEHOLDER REPUTATION SCORE

Reputation can be perceived not only as a problem, but also as a positive factor contributing to the performance premium. The empirical part adopts this approach, aiming to examine the relationship between a synthetic indicator of a reputational risk and bank performance, asking the question as to whether there is a reputational premium. To test the role of reputational risk for bank

[51] Brown (2016).
[52] Business Insurance (2016).
[53] ACE (2015).
[54] Eckert, Gatzer (2015).
[55] Micocci et al.

performance in CEE (11) countries, a panel data model with fixed effects was used (with Hausman and Breuscha-Pagana tests), based on individual bank data from the Bankscope database. In the sample, 42 banks listed on CEE stock exchanges were analysed, for which the rating information from at least one of the three major agencies: Standard & Poor's Rating Services ("Standard & Poor's"), Moody's Investors Service Inc. ("Moody's") or Fitch Ratings Ltd. ("Fitch") were accessible: 15 from Poland, 12 from Croatia, 4 from Bulgaria and Slovakia, 3 from Romania and 1 each from the Czech Rep., Hungary, Lithuania and Slovenia. The first step was to establish a reputational risk index; the following one was to test its impact on bank performance.

Reputational risk was represented by a synthetic index: Stakeholder Reputation Score (SRS), comprised of three indicators, based on the perspective of the three major bank stakeholders. It was defined according to the following formula:

SRS = market perspective + client perspective + investor perspective.

The fourth important stakeholder would be the government, but this was omitted due to the lack of appropriate indicator. In the index, these three perspectives were approximated by:

SRS = (a) credit agencies' ratings + (b) deposit growth + (c) bank stock returns.

There is a long debate on the relevance of the rating information and rating agencies' credibility, particularly after the global crisis[56], but nevertheless the credit rating encompasses a broach range of information. Credit ratings express credit rating agencies' forward-looking opinion about the creditworthiness of an obligor and its capacity and willingness to meet its financial obligations in full and on time[57]. The credit rating represents an evaluation by the credit rating agency of the qualitative and quantitative information for the prospective debtor[58]. In the paper, the ratings were employed both at a country level (CR) and at the bank level (BR).

The sub-indexes in SRS (a,b,c) were calculated as follows:

a. ratings: scores from major credit agencies were used and the average score (arithmetic mean; in points) was established as in table 2, in a scale 1–16, adjusted by rating perspective of +/– 0.5 percentage points; a stable outlook did not cause adjustments in the assessment;

[56] Grothe (2013); Eckert, Gatzer (2015).
[57] S&P (2016).
[58] ECB (2009).

b. deposits: the annual growth rate of current deposits from the non-financial sector was used (converted to points);
c. stock return: the annual rate of return from bank stock was used, adjusted by splits and dividends paid (in points).

Table 1. Scoring scale used in the model

Rating Agency assessment			Model score
S&P	Fitch	Moody's	
AAA	AAA	Aaa	16
AA+ AA AA–	AA+ AA AA–	Aa1 Aa2 Aa3	15 14 13
A+ A A–	A+ A A–	A1 A2 A3	12 11 10
BBB+ BBB BBB–	BBB+ BBB BBB–	Baa1 Baa2 Baa3	9 8 7
BB+ BB BB–	BB+ BB BB–	Ba1 Ba2 Ba3	6 5 4
B+ B B–	B+ B B–	B1 B2 B3	3 2 1

Point values of the sub-indices (a,b.c) of the SRS were calculated by assigning a numerical value each year to the corresponding decile for each indicator and for the whole group, in the following way: from –5 to –1 respectively for deciles from 1 to 5; 0 points for the median for the entire group; from 1 to 5 respectively for deciles from 6 to 10. Consequently, the SRS index ranges from –15 to +15 points for the three indicators and represents an approximation of the bank's reputational risk.

The next step was to run a panel data model, for the period 2009–2014. The dependent variable was a Multi Level Performance Score (MLPS), which was defined as the sum of points awarded in five key areas for long-term evaluation of bank performance: three performance indicators (ROE, C/I, and loans to assets), and two sustainability indicators (Z-Score and NPLs). Thus, MLPS = ROE + C / / I + L / A + Z- Score + NPLs[59].

[59] Miklaszewska, Kil (2015).

The MPL Score was calculated as follows: for each indicator the whole group was divided into ten deciles, the median value is 0 (neutral); each subsequent decile above the median for the ROE, L/A, and Z-score ranged from 1 to 5, and each successive decile below the median had a negative value and ranged from –1 to –5. For C/I and NPLs the signs were the opposite. This indicator has a simple interpretation: the higher the value of the MLP Score, the better the assessment of the bank's results.

A panel data model with fixed effects was used, which measured the impact of reputational risk (approximated by the SRS score) on bank performance, measured by the comprehensive index Multi Level Performance Score (MLPS). However, for a robustness check simple indicators were also tested, such as profitability (ROE) and bank stock rate of return (RR). The explanatory variables are defined in table 2.

Table 2. Description of explanatory variables

Symbol	Description	Rationale/data source
a. macroeconomic variables		
Δ GDP	Real GDP growth rate (%)	Macroeconomic business cycle (World Bank: World Development Indicators)
HHI	Herfindahl-Hirschman Index for Credit Institutions	Banking market concentration (BSCEE Review and ECB Database)
SB	Total bank assets (% of GDP)	Size of the banking sector (Raiffeisen Research)
CR	Country LT credit rating	Country credit standing (Bankscope, rating agencies' internet sites)
b. bank-level variables (data source: Bankscope)		
ln_TA	Logarithm of Total Assets (in USD)	Bank size
SRS	Reputational risk index	Approximation of reputational risk
L_D	Loans to Deposits ratio	Bank funding risk
NeII_NoIOI	Net Interest Income/ Total Non-Interest Operating Income	Income diversification (bank business model)
S_TA	Securities/Total Assets	Market risk
LA_DSTF	Liquid Assets / Deposits and Short-Term Funding	Liquidity risk

The results of estimations are summarised in tables 3–4 for the reputational effects on bank performance, measured by ROE and the comprehensive MLP Score.

Table 3. Panel data estimations for MLPS, CEE 2009–2014

Control variables:	2009–2014	
const	–79,050 *0,121*	
Δ GDP	0,369 *0,068*	*
HHI	–249,297 *0,078*	*
SB	2,351 *0,827*	
CR	–3,789 *0,008*	***
ln_TA	7,173 *0,030*	**
SRS	–0,265 *0,011*	**
L_D	0,218 *0,000*	***
NeII_NoIOI	–0,012 *0,017*	**
S_TA	–0,039 *0,688*	
LA_DSTF	0,178 *0,026*	**
R^2	0,856	
R2 corrected	0,837	

Note: ***, ** and * correspond to 1%, 5% and 10% significance level.

Source: author's own calculation.

The estimation results presented in tables 3 and 4 indicate that analysing bank performance, both approximated by short-term ROE and by the comprehensive indicator: MLP Score, the index of bank reputation SCR (similar to the country's rating on a macroeconomic level) not only did not have a positive impact, but affected bank performance strongly negatively, similar to the HHI concentration index. Factors with the most positive efficiency impact were the size of the bank, its financing risks and the high level of GDP growth.

Table 4. Panel data estimations for ROE, CEE 2009–2014

Control variables:	2009–2014	
const	–187,278	*
	0,082	
Δ GDP	0,121	
	0,747	
HHI	–504,163	*
	0,076	
SB	21,042	
	0,288	
CR	–2,037	
	0,424	
ln_TA	12,325	*
	0,072	
SRS	–0,357	*
	0,081	
L_D	0,168	**
	0,048	
NeII_NoIOI	–0,003	
	0,672	
S_TA	0,488	**
	0,012	
LA_DSTF	0,292	*
	0,067	
R^2	0,639	
R2 corrected	0,489	

Note: ***, ** and * correspond to 1%, 5% and 10% significance level.

Source: Own calculation.

7. CONCLUSION

The reputational risk literature and surveys analysed in the paper,suggested that banks should treat reputational risk as a separate class of risk and analyse it beyond the framework of operational risk and corporate governance. It should not

be narrowed down to a "public relations" response to crisis events, but treated as a strategic type of risk, with a strong potential to harm the value of the company.

However, as the reputational literature and many case studies indicate, it is very difficult to categorise and quantify reputational risk, as it can arise as a consequence of other risks and many events. The panel data models for banks from the CEE-11 countries analysed in the paper, have also indicated that proper management of reputational risk may not be important (and even harmful) for assessment of bank performance, which may explain why many banks dealt with reputational risk mainly in the context of minimising the loss after a scandal, which constitutes crisis management, rather than management of reputational risk.

Abstract

Interest in reputational risk as a self-standing type of risk is relatively new. The research is driven not so much by regulatory requirements, but by stakeholders' interest. Therefore, the purpose of this article is to trace the sources of reputational risk and consequences of the problems associated with a bank's negative reputation. The paper focuses on the differences in the definitions and methodological problems of its measurement. The empirical part proposes a new index measuring reputational risk, based on the perspectives of important stakeholders. The panel models analyse the impact of the index on bank performance in CEE.

Key words: reputational risk, reputational index, performance of CEE banks

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