Basel II and the associated uncertainties for banking practices

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Abstract

Purpose

This paper aims to explore uncertainties in the interaction between Basel II and banking practices.

Design/methodology/approach

The research setting is a centralized bank's risk control organization and its commercial lending operations. The bank, despite its early adoption of the Basel II Accord, experienced severe credit losses during the global financial crisis. The data consist of interviews with twelve decision-makers and risk specialists at the bank and interviews with four professionals outside the bank after the global financial crisis.

Findings

This paper finds that there are three types of uncertainties in the interaction between Basel II and banking practices. The paper also describes corroborative examples of efforts to reduce such uncertainties. Among such efforts, the decision-makers excluded the risk specialists from decision-making and decentralized decision-making to branch offices.

Research limitations/implications

Although the literature generally portrays bank decision-makers and risk specialists as opposing groups, this research finds that the bank interviewees present complementary and confirmatory accounts on three types of uncertainties.

Practical implications

The findings suggest that increased regulatory pressure have operational implications for banking practices.

Originality/value

The paper has contemporary relevance with its sole focus on credit risk after the transition period provided for Basel II Accord.

Keywords: Credit risk, Uncertainty, Basel II, Decision-makers, Bank, Risk-specialists

1. Introduction

The interaction between regulation and banking practices became a hot topic after the global financial crisis (hereafter, the crisis) (De Bondt, 2010; Petitjean, 2013). Prior to the crisis, the introduction of the Basel II Accord (hereafter, Basel II) was expected to improve credit risk measurement (Basel Committee on Banking Supervision, 2004, 2006; Jackson, 1999; Ojo, 2010). Credit risk is defined as the potential that a bank's borrower or counterparty will fail to meet its obligations in accordance with the agreed terms (Basel Committee on Banking Supervision, 2006). Credit risk measurement is a development of the popular trend of using sophisticated quantitative models to measure and control risk (Chua, 1996; McGoun, 1995; Power, 2004a; Power, 2004b).

Yet studies claim that Basel II has created several uncertainties in the banking sector. Even before the introduction of Basel II, banking researchers warned of the dangers associated with credit risk measurement for control of risk (Danielsson *et al.*, 2001; Heid, 2007; Jarrow, 2007). In his examination of the interaction between Basel II and banking practices, Wahlström (2009) found that Basel II should create fewer uncertainties in centralized banks than in decentralized banks, because Basel II confirms current banking practices promoting a 'multidivisional organizational structure' (see Chandler, 1962), and leading to more standardized internal 'information systems' (see Kumra *et al.*, 2006). Although researchers from diverse theoretical schools have studied Basel II, in general, they do not conceptualize uncertainty. This has been confirmed by reviews (e.g. Otley and Soin, 2014) indicating that the literature has generally not explicitly acknowledged that organizations are subject to high degrees of uncertainty. In this paper, we define uncertainty as depending on the individual's available information and as a phenomenon that impacts decision making (Galbraith, 1982; March and Shapira, 1987). In

particular, this paper uses Brunsson's (2000) conceptualization of three types of uncertainties: estimation uncertainty, uncertainty in cognitive structure, and judgment uncertainty.

The principal goal of this paper is to explore uncertainties in the interaction between Basel II and banking practices. Basel II is suitable for an empirical investigation because it has generally been well accepted worldwide following its introduction in 2007 and had been implemented in banks by the time of data collection (Chey, 2014; Ojo, 2010; Van Hoose, 2007). Related to banking practices, the paper focuses on commercial loans, which comprise the major share of banks' loans (DeYoung, 2010). The paper then looks at credit risk as a critical aspect of bank risk. According to Mikes (2011), credit risk should allow for sophisticated measurements that meet the objectives of Basel II. Specifically, the paper examines the perceptions of bank decision-makers and risk-specialists in response to research calls for more in-depth and qualitative investigations of the relationships between regulations and banking practices (Hopwood, 2009; Soin and Collier, 2013). Practically, these findings are relevant, given the regulatory enforcement of banking practice as reported in the press (O'Connor *et al.*, 2014; Wolf, 2014) and recent consulting reports (e.g. Härle *et al.*, 2016).

The contribution of this paper is twofold. First, the study reports on accounts of three types of uncertainties: estimation uncertainty, uncertainty in cognitive structure, and judgment uncertainty (Brunsson, 2000). This case study concludes that decision-makers and risk-specialists are in agreement on the three types of uncertainties. This finding challenges the idea that decision-makers have different perceptions than risk specialists in regard to perceived uncertainties (cf. Mikes, 2009, 2011; Wahlström, 2006, 2009). Second, researchers have also debated the value of credit risk measurement as the regulatory approach for control of risk (e.g. Power, 2009). Therefore, the findings of this paper provide practical insights into the conclusion that credit risk is appropriate for sophisticated measurements with regard to commercial lending

(Basel Committee on Banking Supervision, 2004, 2006). Practically, these findings are relevant given the surge in the regulatory enforcement of the banking sector (e.g. Basel Committee on Banking Supervision, 2010) and its negative impact on commercial lending as also reported in the press (e.g. O'Connor *et al.*, 2014).

The structure of the paper is as follows. Section 2 describes the paper's frame of reference. Section 3 presents the research method. Section 4 describes the paper's findings on credit processes and includes the interviewees' comments about uncertainties. Section 5 presents the paper's discussion and conclusions, as well as suggestions for future research.

2. Frame of reference

2.1 Basel II improves credit risk measurement and control

This section describes how Basel II intends to improve credit risk measurement and control. A primary design attribute of Basel II is to work along the 'multidivisional organizational structure' (see Chandler, 1962; Kipping and Westerhuis, 2014; Williamson, 1975) of banks, which implies a separation in the control of tasks from their operational execution. While it is important that task completion remains with the operational staff, task control is primarily a responsibility of management (Lucas, 1993; Williamson, 1975). In order to separate the control of tasks from their 'practical execution' (see Robson, 1992), a vertical division of labor (see Simon, 1997) between management and operations is necessary, with several layers of control, for example, the popular concept of 'lines of defense' (see Jorion, 2009). Meanwhile, the separated entities depend on each other for the fulfilment of deliverables. The division that arises in the formal setting of the relationships requires regular organizational exchanges of information. This then requires the standardization of the content of information to maintain the separation between management and operations.

A second design attribute upon which Basel II relies is the 'bureaucratic mechanism' (see Ouchi, 1980) of standardization, which entails the setup of particular 'information systems' (see Kumra *et al.*, 2006) to facilitate the mediation and distribution of information between separated entities. The production of information, which begins with a 'vertical' (see Macintosh, 1985) collection of accounting information from operations and continues with calculations of the information using scientific models applied on a forward-looking perspective on the basis of issues known *a priori*, e.g. past records of loan defaults (Esposito, 2011; Knight, 1921; McGoun, 1995; Stein, 2002). The results of these calculations and measurements are the so-called risk-based measures, such as internal credit ratings. Internal ratings provide information on borrowers' repayment capabilities or creditworthiness (Jacobson *et al.*, 2006).

Management can use centralized risk-based measures in their monitoring of loan portfolios (Jacobson *et al.*, 2006; Jorion, 2009). Monitoring is the process in which loans are evaluated in order to detect possible defaults. Banks monitor borrowers' repayment behaviors and fulfilment of contractual obligations from the time of loan origination through the loan maturity dates (Lee and Sharpe, 2009). Monitoring also involves situations in which banks evaluate the aggregated credit risks in portfolios and hedge for unwanted risk in the financial markets, for example, through securitization (Cebenoyan and Strahan, 2004). In operations, bank loan officers can use internal ratings for loan origination. Loan origination is the process in which loan officers gather relevant information on borrowers in the expectation that they can identify non-creditworthy borrowers (Lee and Sharpe, 2009; Santomero, 1997).

The use of such design attributes has created a role for specialized management accountants (or risk-specialists) who are now responsible for producing information on risk and for distributing that information to management (Mikes, 2011; 2009). This professional specialization builds conceptually on the concept of the division of labor – that is, the division

between the “thinkers” and the “doers” (Brunsson, 1993). According to Mikes (2011), risk-specialists, as professionals, are expected to occupy boundary work. Moreover, risk-specialists adhere to the standards of the professional or expert groups of which they are members (Sinclair, 1995), such as the Global Association of Risk Professionals (Jorion, 2009).

Given this new category of bank employee, the task of management is then to coordinate the work of risk-specialists with that of other employees, e.g. bank loan officers (Mikes, 2011). The literature recommends placing the risk-specialists in risk control offices close to management to ensure their independence from operations (Aebi *et al.*, 2012). The risk control office, as a recently recognized business unit in banks, has achieved a relatively high position in the organizational hierarchy of banks, as well as exclusivity from lower administrative units, e.g. the accounting department (Mikes, 2009). The risk control office achieves this status because of its scientific classification and its association with sophisticated technologies (Lam, 2003; Power, 1992). Moreover, the literature recommends that management appoint chief risk officers to head the risk control office (Aebi *et al.*, 2012; Beasley *et al.*, 2005; Hall *et al.*, 2015; Lam, 2003).

The implementation of Basel II should offer management several benefits. One benefit is that the risk control office will produce relevant numerical information before decisions are taken (Chua, 1986). Thus, management will receive information that has already been analyzed for ‘relevance, precision, and reliability’ (see Raiffa, 1968) by the risk-specialists. As a result, because the management has information that facilitates ‘future predictions’ (see Esposito, 2011), they should be more efficient and more selective in loan originations and loan portfolio monitoring.

Another benefit is that the information provided gives management the power to exercise control over operational decisions (Simon, 1997) from a distance (Robson, 1992). Although the

risk control office is independent from bank operations, because of its proximity to management, it should be useful to management in strategic and operational decisions (Aebi *et al.*, 2012; Lam, 2003; Mikes, 2011; Williamson, 1975). Greater control of risk can improve the overall alignment between strategy and operations (Woods, 2009).

In this arrangement, it is also important to recognize the critical causes of uncertainty that may diminish these suggested benefits. A group of management accounting researchers concerned with several risk management standards and frameworks have expressed several concerns about the banking relationships between decision-makers (e.g. operations managers, senior executives, and other top managers) and risk-specialists. These researchers report that decision-makers have different perceptions of the measurement capabilities of risk than risk-specialists (e.g. Wahlström, 2006). They claim that decision-makers are skeptical of risk-specialists' influence on strategic decisions (e.g. Mikes, 2009) and that decision-makers blame the risk-specialists for working on different maps than the decision-makers (e.g. Mikes, 2011).

2.2 Uncertainty

According to Brunsson (2000), one can categorize uncertainty as three types: *estimation uncertainty*, *uncertainty in cognitive structures*, and *judgment uncertainty*.

- Estimation uncertainty is the uncertainty that individuals experience when they are unsure of the correct estimation of a given descriptive element / event in their cognitive structures. This relates to the basic concept of uncertainty, which is defined as lack of knowledge and information (Knight, 1921). This uncertainty, which arises with difficulties in assessing the effect of an action, is more empirical than logical. Such uncertainty can be reduced with more and better information.

- Uncertainty in cognitive structures is the uncertainty that individuals experience when they are unsure if their cognitive mapping presents a valid picture of reality. This uncertainty is important because it leaves the outcome of the action completely open. However, such uncertainty can negatively influence the propensity to act, because it may create difficulties for individuals in envisioning possible actions or in establishing criteria for specifying actions in greater detail. In extreme cases, when individuals lack the relevant cognitive structures, such uncertainty can be reduced with more general knowledge or greater familiarity with the situation or particular reality.
- Judgment uncertainty is the uncertainty that individuals experience when they are unsure of the normative standards and values in situations. Then, it is difficult for them to assess actions. Like uncertainty in cognitive structures, judgment uncertainty involves logical challenges to evaluating cause and effect relationships. However, while uncertainty in cognitive structures hinders the consideration of beginning an action, judgment uncertainty hinders the consideration of completing the action. This uncertainty can be reduced by a clear understanding of individual preferences.

An understanding of these three types of uncertainty is useful for studies in organizational settings where decision-making is coordinated and actions occur in complex relationships among various units (Brunsson, 2000). Ultimately, uncertainty in the organizational context is a condition that organizations prefer to avoid before making decisions (Galbraith, 1982).

3. Research method

3.1 Research approach

This study uses the research approach often used in qualitative field studies. The study analyzes bank employees' perceptions (Hopwood, 1972), at the micro-sociological level (Mikes, 2011), which relate to their interpretations of a control system's purpose.

3.1 The case

The research was conducted at one of the largest banks in Northern Europe (hereafter, the Bank). The Bank was one of three banks in a previous study that examined several banks' perceptions of Basel II (Wahlström, 2009). The Bank provides general banking services, such as investment banking, retail banking, and commercial lending. The last activity is its main focus. The Bank has an international presence with operations in more than twenty countries. In the early 2000s, the Bank began expanding into emerging markets (hereafter, Market X). In the crisis, when the Bank's lending activities were severely affected, a government bailout came to its rescue. The paper focuses on the Bank's commercial credit operations.

3.2 The data collection process

After gaining management approval at the Bank, 'semi-structured interviews' (see Qu and Dumay, 2011) were conducted between June and September 2010. According to Alvesson (2003), interviews can be useful for capturing rich accounts of the interviewee's experiences, knowledge, ideas, and impressions. The initial interviewees were the following: five decision-makers and seven risk-specialists. In these initial interviews, the questions focused on the design attributes of Basel II: the responsibilities of the risk control organization, the standardization of information, the employment of risk-specialists, and the descriptions of the credit processes for loan origination and loan monitoring. Additional questions dealt with the challenges the interviewees noted as far as the interaction between Basel II and the credit

processes. In May 2014, the Bank's Chief Risk Officer was again asked to reflect on previous accounts and to validate the previously collected data.¹

In May and June 2014, interviews were conducted with four professionals from outside the Bank. These professionals were the following: a consultant at an international auditing firm, a consultant at a global consulting firm, and two representatives from the Swedish Financial Supervisory Authority. The purpose of these interviews was to learn about recent developments in regulations with respect to banking practices. Moreover, in these four interviews, the emerging interpretations of uncertainties related to credit risk measurement for control of risk were presented, and interviewee feedback was requested. See the Appendix for a list of the Bank interviewees and the other interviewees.

All of the interviews were held at the interviewees' offices. The interviews, which lasted between 60 and 90 minutes each, were recorded digitally. Transcripts of the interviews were prepared for analysis. In addition to the interviews, the Bank's annual reports from 1990-2010 were reviewed to obtain an understanding of the Bank's development with respect to risk control, commercial lending, and its foreign expansion.

3.3 Data analysis

The interview transcripts were analyzed iteratively in two steps. In the first step, a search was made for descriptions of the design attributes of Basel II and the credit processes with respect to commercial credits. In the second step, the accounts of challenges were sorted, and duplicates were eliminated. They were then filtered through Brunsson's (2000) uncertainty typology. In this step, critical interpretations of the decision-makers' and the risk-specialists' accounts were also made due to their different responsibilities, e.g. thinkers and doers

¹ The former title of the individual in charge of risk at the bank was the Vice President of Credits and Head of Group Risk Control. Today, the individual in that position is called the Chief Risk Officer.

(Brunsson, 1993; Lucas, 1993); boundary works (Mikes, 2011); managerial accountability² versus professional accountability (Sinclair, 1995). Critical interpretations focus on ideology, power, and social reproduction (Alvesson and Sköldberg, 2009).

4. Findings

4.1 Risk control, risk measurement, and credit processes

This section begins with descriptions of the design attributes of Basel II and outlines the two credit processes – loan origination and loan monitoring – in the Bank. For the purpose of compliance with Basel II, the Bank has created a risk control office with four areas of responsibilities: I) identifications, measurement, and management, II) control through limits, III) an internal model for economic capital, and IV) capital adequacy requirements. For the commercial loans, in particular, the risk control models, such as the Risk-Weighted Asset model, comply with the Basel II requirements. Other Basel II certified models used at the Bank are the probability of default model and the loss given default model. Risk-based measures were also developed to capture the variances in business cycles and shifts in macroeconomic conditions that are relevant for commercial firms.

. . . in regard to credit risk, there is the standard, foundational, and advanced level . . . for this bank, it was foundational in 2005 . . . and we are about to qualify for the advanced level in 2010. With regard to commercial loans, this bank is qualified for “through the cycle” method . . . We are the only one [bank] that uses the through the cycle method; that is, we take into account both the business and the financial risk. (Credit Risk Analyst, June 2010)

With these examples of risk-based measures, the Bank qualified for an advanced level of compliance and heightened its status with the supervisory authority that oversees banks’

² Administrative, bureaucratic and managerial accountability are sometimes construed as the same thing, as all three arise by virtue of a person’s location within a hierarchy in which a superior calls a subordinate to account for the performance of delegated duties. Managerial accountability is seen to focus on monitoring inputs and outputs or outcomes, while administrative accountability is concerned with monitoring the processes by which inputs are transformed (Sinclair, 1995, p. 227).

implementation of Basel II. The Bank's top managers were enthusiastic about the adoption of Basel II.

As other interview accounts indicated, the Bank had created a comprehensive risk control office with access to resourceful staff who communicated effectively. In 2010, the Bank's risk control office had more than 200 risk-specialists divided into several functional teams working with credit analysis and risk measurement models. These risk-specialists also communicated with management and the supervisory authorities. Younger professionals held some of the most senior positions in risk control. They were graduates of well-known universities with advanced degrees in subjects such as mathematics, physics, and economics. The risk-specialists had offices very near the top managers' offices so that they could easily discuss emerging loan portfolio issues. These specialists also had a dotted line reporting relationship with the Board of Directors that allows them to call the Board members' attention to emerging issues.

Since 2005, the Bank has increasingly centralized decision-making at its bank headquarters. This effort has influenced the design of loan origination procedures, which now consist of three hierarchical processes. In the first process, loan officers conduct the initial screening of a loan applicant and prepare a memo on their findings. A credit analyst from the risk control office assists bank loan officers with loan applications above the 10 million euro limit. In the second process, second opinion teams, consisting of tenured bank loan officers with various industry specialties, are sometimes involved in the evaluation of the loans. Risk control office prepares a credit rating for the decision committee. In the third process, decision committees at the Bank's head office, consisting of three to five senior loan officers with specialized training in various industries and contracts, meet to either approve or reject the loan application. One risk-specialist described the process of presenting the probability of default at the point of loan origination. This account also illustrates the kind of scientific approach that the risk control

office follows when it assembles information that has been analyzed for relevance, precision, and reliability.

We evaluate the performance [of borrowers] with financial numbers, by comparing the past and trying to predict future trends by some indicators. We also look at the borrowers' business, operations, industry, and market share, coupled with some sensitivity analyses. So far, we have used words to describe these features. To get it all together, to a number, next, we transform the words to a rating class in 16 steps that indicate a certain probability of default. We also calibrate the rating with a pool of default statistics provided by the international credit rating agencies. This rating is then presented with our detailed analyses of the firm to the decision committee. (Manager of Credit Analyst Team, June 2010)

To monitor loans, risk control office reports annually on total credit limits and rating class migrations, as well as data from risk-sensitive models such as Value at Risk and Risk-Weighted Asset. The reports are distributed to the business unit managers, the Chief Executive Officer, and the Board of Directors' Risk Committee.

4.2 Estimation uncertainty

Several accounts by decision-makers revealed that estimation uncertainty is inherent with Basel II. Here is one representative statement of the type of estimation uncertainty that Basel II creates:

At the management level, one has, of course, learned lessons. Basel II is like driving in a town you have not visited before. You have to follow instructions from someone looking through the rear window. Basel II is a lot about retroactive probability distribution for the future, which can entail entirely new setups / constellations. (Chief Risk Officer, June 2010)

One risk-specialist emphasized that estimation uncertainties are even greater in certain parts of the commercial loan operations:

Market X has systems that are not built for total perfection. On the one hand, it moves much faster than the rest of Europe. Its people are proud and ambitious. On the other hand, its short history makes things harder. Basically, you have short time series. Then, of course, you can be cautious on how the time series have been established and can compare them with statistics from other markets. But we rarely

had cases of countries that went from developing to developed. Also, the data we could acquire were over ten years old. (Manager of Credit Risk Control, June 2010)

One decision-maker suggested that despite the rather frequent and comprehensive reporting, there is a need for assessments of the value of the information.

It is obvious that once the numbers are presented, they are already old. (Director of Commercial Credits, June 2010)

Such delays are seen as a consequence of the accounting methods, which do not provide adequate information:

...an issue not considered by Basel II is the time lag. For example, once firms are in the rating class 16 default, it can take at least 2-3 years or even 7-10 years before the case is considered resolved. Meantime, the loss given default measure is not immediately available as a reflection of the current state. Instead, default statistics will adjust after the cases are resolved. (Credit Risk Analyst, June 2010)

According to the follow-up interviews conducted in 2014, since 2010, many efforts at the Bank have focused on developing more sophisticated technologies and acquiring more input-data for the risk control office.

A pre-condition for making precise quantifications has been to own our data. Primary, it is our own data and information systems which are important for making longer time series analyses. Secondly, it is important to have reference data that we develop together with other banks, a so-called international data consortium. Another pre-condition has been to upgrade the tasks of the risk-specialists and invest in different rating tools. (Chief Risk Officer, May 2014)

Moreover, the number of employees in the risk control office has increased by 50%. The efforts to reduce estimation uncertainty have also required improved distribution and coordination of information flows in a timelier manner among decision-makers. Also, risk control office has increased the frequency of its reports to top management and to the Board of Directors. The industry consultants, however, have challenged the acquisition of more resources. They envisage continuous data problems in banks.

4.3 Uncertainty in cognitive structures

Several decision-makers thought the risk-specialists lacked practical familiarity with financial crises. They also thought the risk control office primarily employed recent university graduates who were quantitatively skilled, but had little, if any, banking experience. Moreover, these decision-makers said that uncertainties in the cognitive structures of the risk-specialists prevented the monitoring of possible credit losses. A decision-maker explained:

What really frustrates the people in the risk control office [the risk-specialists] is that they don't understand why our loan losses didn't equate with the macroeconomic trends. The loan losses in the foreign operations could have been higher if we [decision-makers] had not gone through a credit crisis in the home country during the eighties. (Chief Risk Officer, June 2010)

The Bank's exposures in Market X resulted in large credit losses and near bankruptcy. By 2009, the foreign loan portfolio in Market X, which accounted for 10% of the Bank's total loan portfolio, was the cause of 80% of the Bank's credit losses. A risk-specialist explained why the risk control office failed to predict the crisis:

The financial systems were comfortable since nothing occurred between the years 2004 and 2007. (Manager Group Risk Control, June 2010)

In contrast, another risk-specialist stated that the risk control office had noted the possibility of the loan portfolio problems in advance of the crisis:

... if we take the Market X operation. The very first time it was brought up in the reports was in the fall of 2006. Then, the idea of slowing down the expansion of the credit activity was awakened... but it is not like one goes to the next meeting and slams on the brakes. That is not the way it works here. But the discussion goes on ... (Credit Risk Analyst, June 2010)

Uncertainty in the cognitive structures implies failures in establishing the criteria for specifying actions in greater detail. One decision-maker who oversaw the foreign operations and departure decision from Market X specified the complex process of exiting a market:

. . . we started braking in 2006. But then, we received a lot of criticism. We reduced our market share in a couple of years, but the stock market gave us the thumbs

down. The local governments [in foreign markets] criticized us for limiting their growth potential. We were also seriously questioned by the local central banks [in foreign markets] because we didn't lend money to individuals. Another insight that was rather unique during all my years was this. We had a meeting with the credit managers and chief executive officers for the local banks and explained that we were heading into bad waters. We would have to reduce the credit expansion. The local management teams started reacting against us. We were almost run over and looked like fools in that meeting. We are talking about people in their 30s and 40s who had not experienced fluctuations and just saw opportunities. (Senior Board Advisor, International Operations, August 2010)

Thus, uncertainty in the cognitive structures associated with credit measurement allows the specifics of actions to be completely up to the discretion of the decision-makers, many of whom require more general knowledge about these situations. Accordingly, the bank had installed more risk competency at the most senior level as per the follow-up interviews conducted in 2014.

We have installed a risk committee at the board level that has received an active risk mandate. This committee meets monthly, while the rest of the board receives quarterly reports from me. In addition, the bank has installed a group risk committee, which is headed by the chief executive officer, which meets monthly. I and several risk specialists provide information to these committees. (Chief Risk Officer, May 2014)

4.4 Judgment uncertainty

Judgment uncertainty is the uncertainty individuals experience when they are unsure of the values in situations. As the next two accounts illustrate, judgment uncertainty is attributed to both the decision-makers and risk-specialists.

There is still a big gap between the "risk side" and the "business side" of the operations. The business side needs to be considered more, and the information from the credit risk models evaluated more . . . Many of the risk-specialists are too quantitatively-oriented, but they are, of course, really skilled at what they do. . . (Head of Audit and Compliance, June 2010)

For many, the measurement of risk was too theoretical. As a result, the distance between the risk control office and operations was wide. Between these two poles, there was no one. Management should listen to both, of course. (Manager Group Risk Control, June 2010)

According to several interviewees, judgment uncertainty with respect to credit risk measurement makes it difficult for decision-makers to predict action outcomes. The next account illustrates how such uncertainties influence loan monitoring.

For example, you can produce models that would support massive purchases of Australian corporate bonds. According to Basel II, this investment should not require any capital because of the diversification effects. This is, of course, nonsense, since our bank has no knowledge of the particular risks in those firms. Therefore, we [the decision-makers] would never make such loans, and we would never permit models to lead us astray... (Chief Risk Officer, June 2010)

In the next comment, the chief risk officer explains how the decision-makers and risk-specialists were separated in order to avoid conflict:

I cannot see how the credit process would be supported by the competency of risk-specialists in the long run ... meanwhile, I do not want the risk-specialists to attend the meetings and take these committees hostage. They are supposed to be statistically oriented and should remain in their offices . . . The bank assesses creditworthiness on a probability of default scale ... The risk-specialists are the owners of this concept. In reality, the decision-makers want to be held accountable for the business decisions . . . or else there will be uncomfortable conflicts. (Chief Risk Officer, June 2010)

In 2014, the bank charged the risk control office with sole responsibility for the calculations on the capital requirements for Basel II. Decision authority for commercial loan originations was delegated to the branch office managers, within certain limits. The follow-up interviews with bank professionals and industry consultants revealed that judgment uncertainty is likely to remain a problem for banks. Furthermore, judgment uncertainty overshadows the other two types of uncertainties in magnitude.

5. Discussion and conclusions

Regulations acquired heightened status after the crisis (De Bondt, 2010; Petitjean, 2013). For credit risk measurement, Basel II requires banks to adopt design attributes that are intended for the measurement and control of risk. As the decision-makers' and risk-specialists' accounts illustrate, there are three types of uncertainty in the interaction between Basel II and banking

practices with respect to commercial loans. This study also presents an analysis of the efforts at one bank to reduce such uncertainties.

First, the findings reveal that estimation uncertainty relates to the technical knowledge behind credit risk measurements when accounting methods and information on past credit outcomes/defaults are ‘inadequate or lacking’ (see McGoun, 1995, p. 512). Estimation uncertainty influences the value of information between management and operations. Because of this uncertainty, the decision-makers and the risk-specialists interviewed for this study jointly expressed doubts about the value of the information for commercial lending. Previously, difficulties in measuring operational risk have been observed (cf. Wahlström, 2006).

Given that decision-makers are ‘bounded’ (see Simon, 1997) by the resources available, reducing estimation uncertainty, on the one hand, requires improving the production of information. For example, Brunsson (2000) suggested that estimation uncertainty can be reduced with more and better information. In previous studies (e.g. Wahlström, 2006), the risk-specialists, unlike the decision-makers, have been more optimistic about increased investments in technologies and resources. While in this study, the increased investments were related to regulatory enforcements following the crisis (e.g. Basel Committee on Banking Supervision, 2010). On the other hand, reducing this uncertainty is paradoxical, given how crisis prone the standard risk-based measures are, e.g. pro-cyclicality (see Heid, 2007). For instance, studies show that in a crisis situation, risk measurements may be unable to predict “occurrences so revolutionary and unexpected by anyone” (Knight, 1921, p. 176). Then, the demand for ‘implicit knowledge’ (see Jones, 2007) increases significantly and/or the events may not permit the use of prior measurement.

Second, the findings highlighted the critical issue with uncertainty in the cognitive structures of risk-specialists that can hinder decision-makers’ consideration of actions, as well as deter the

control that management is expected to exercise over operations. For instance, one finding – that ‘external accountability processes’ (see Lucas, 1993) exist outside the realm of credit risk measurement – meant that the risk-specialists could not foresee the specifics of the decision-makers’ actions. Moreover, the uncertainty about the expertise in the risk control office revealed that the risk-specialists’ ambition to engage in strategic decisions was hindered. In Baxter and Chua’s (2003) terminology, this hindrance was by “spaces unmanageable and unknowable” (2003, p. 111). This finding is consistent with the skepticism that Mikes (2009) found in the cases on risk-measurement and risk-specialists’ involvement in strategic decisions. To reduce this uncertainty, the findings have shown how the involvement of top managers was beneficial because the ‘doers’ (see Brunsson, 1993) could add more general knowledge before taking control over decisions.

Third, the findings have provided an insight into the ‘relative status of the information’ (see Raiffa, 1968) in the deliverables from the risk control office to management. At the same time that the risk control office produces knowledge that offers a sense of certainty, it also creates uncertainty about that information. For example, the findings revealed that the risk control office can make recommendations on corporate bond investments in foreign markets for the purpose of ‘diversification’ (see Cebenoyan and Strahan, 2004), which is an instance of loan portfolio monitoring (see Lee and Sharpe, 2009). However, the risk control office would have limited knowledge about the new exposures to credit risk in that market that would lead to judgment uncertainty among decision-makers when making the investments. Another example from the findings is that decision-makers perceived the information (based on precise metrics) from the risk control office as “too theoretical”, hence, difficult to use for decision-making. Previously, Mikes (2011) reported that decision-makers acknowledge they operate by making

different maps than risk-specialists. As such, the issue with judgment uncertainty involved both the decision-makers and the risk-specialists.

To reduce this uncertainty, the two groups worked separately, because the top bank managers preferred to “regulate” in order to reduce tension and conflicts. According to Brunsson (2000), judgment uncertainty can be reduced by a clear understanding of individual preferences. As a result, the risk-specialists were excluded from critical stages in the credit processes because their expertise was effectively ignored, but the information from the risk control office was used for the purpose of communication with supervisory authorities [cf. Mikes’ (2011) findings on boundaries for “downstream consequences”]. Moreover, in this centralized bank, loan origination was decentralized back to the branch office level to reduce this uncertainty.

Despite the inevitable and ‘explosive’ (Power, 2004b) development of risk measurement, as well as regulatory enforcement (De Bondt, 2010), the comparison of the decision-makers’ accounts with the risk-specialists’ accounts on uncertainties confirms that the two accounts were the same in many respects. Of course, the risk-specialists’ ‘professional accountability’ (see Sinclair, 1995) could have explained why they distanced themselves from the possible causes of the uncertainties, since the outcomes of the accounts have consequences for them, and later, will be personally associated with them.³

However, in this research, the risk-specialists described the uncertainties in considerable detail. Possibly the reason was that they had just witnessed a shocking financial crisis (described as second-order changes: Bartunek and Moch (1987)). It seems that the risk-specialists were reluctant to contradict the decision-makers. Both groups addressed the banking industry risk management practices differently over time, as previous field studies have shown (cf. Mikes,

³ “In particular, scientists will draw boundaries between what they do and consequences for downstream in order to escape responsibility and blame, which often come coupled with intrusive demands for accountability.” (Mikes, 2011, p. 4).

2009, 2011; Wahlström, 2006, 2009). Nevertheless, as this research finds, decision-makers, adhering to ‘managerial accountability’ (see Sinclair, 1995), have reduced the risk control boundaries. This finding suggests that the expansion and contraction of the ‘boundary work of risk-specialists’ (see Mikes, 2011) is a design attribute of control systems that stems from managerial intentions and is not based on the choices made by risk-specialists.

This study is subject to limitations. First, the accounts of uncertainties were emphasized during the crisis, especially with respect to the Bank’s foreign operations. In the future, there will be different contextual settings with opportunities to conduct similar research. Second, as far as the interviews with bank employees, this research included only the decision-makers and the risk-specialists involved with commercial lending. Other actors in banks that deal with other types of risk may provide different accounts. Third, with respect to Brunsson’s (2000) typology, this paper does not test the robustness of it. Nor does the paper operationalize the model by investigations other than by using it as a filter for the research findings.

Future studies could examine the possible effect of new regulatory requirements and the applicability of the three types of uncertainties in other banking contexts. With respect to the reported uncertainties and the efforts to reduce them, future studies could evaluate the concept of risk culture in light of the recent regulatory emphasis and the banks’ compliance actions (O’Connor *et al.*, 2014).

Appendix: The interviews

Bank interviews

Nr.	Job titles	Date	Decision-maker	Risk-specialist
1	Director of Commercial Credits	6/9/2010	x	
2	Head of Audit and Compliance	6 /9/2010	x	
3	Chief Risk Officer	6/11/2010	x	
4	Manager of Basel II Project	6 /14/2010		x
5	Credit Risk Analyst	6/14/2010		x
6	Manager of Credit Risk Control	6 /15/2010		x
7	Manager Group Risk Control	6 /16/2010		x
8	Manager Portfolio Analyses	6/17/2010		x
9	Manager of Credit Analyst Team	8/19/2010		x
10	Senior Board Advisor	8/23/2010	x	
11	Manager of Insurance Division	8/23/2010	x	
12	Credit Portfolio Analyst	9/20/2010		x
13	Chief Risk Officer	5/9/2014	x	

Additional interviews

Nr.	Job titles	Date	Institution
1	Partner, Risk consulting practice	5/7/2014	International Auditing firm
2	Associate consultant	5/12/201	International Risk consulting firm
3	Senior risk expert	6/12/2014	Swedish Financial Supervisory Authority
4	Head of banking supervision	6/12/2014	Swedish Financial Supervisory Authority

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