Usefulness of enterprise risk management in two banks

Roy Liff and Gunnar Wahlstrom
University of Gothenburg, Gothenburg, Sweden

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Abstract

Purpose – The purpose of this paper is to investigate how the management control system, the bank's control package, influences opinion about the usefulness of risk measurement (RM) in different control contexts before and after a financial crisis, to understand what influences the usefulness of enterprise risk management (ERM) manifested in RM.

Design/methodology/approach – The study is based on semi-structured interviews in 2000-2010, with senior bank managers of two international banks (Bank A and Bank B) – both ranking among the top 100 in the world but differing structurally and culturally.

Findings – The two banks took opposite trajectories. Bank A went from high to low expectations of usefulness; Bank B went from low to high expectations. The different attitudes toward RM exhibited by Bank A and Bank B are explained by differences in their control packages, manifested by technocratic control and socio-ideology.

Originality/value – This study reveals that there are not merely different degrees of RM usage in the two banks but that they also show two diverting trajectories. Given this finding, the significance of the organization structure and its control packages (especially the alignment between these two factors) is analyzed to find a plausible explanation for the different experiences of senior managers toward the usefulness of RM. This study contributes to ERM research and to the contingency theory of management accounting.

Keywords Banks, Longitudinal study, Enterprise risk management, Control packages

Paper type General review

1. Introduction

For most banks, the international financial crisis of 2007-2009 arrived suddenly and unexpectedly. Some argue that the banks failed because of excessive risk taking. Whether or not a bank failed, it would have had a certified enterprise risk management (ERM)[1] in place that included risk measurement (RM), as justified and promoted by regulatory bodies (Basel Accords[2]). Could the observed, excessive risk-taking amongst senior bank managers be blamed on the difficulty in dealing with the concept of RM in ERM – a concept developed for and refined in the financial sector (Chua, 1996; Porter, 1995; McGoun, 1992, 1995)?

Over the past 30 years, regulatory organizations for banks have advocated an increase in the use of RM in banks. This has been successful in the sense that RM is well-established in regulatory documents for banks, such as the Basel Accords. Notably, some researchers have strongly criticized the theoretical underpinnings of RM (Broadbent *et al.*, 2008; Chua, 1996; Keasey and Hudson, 2007; McGoun, 1992, 1995; McGoun *et al.*, 2003), given the confusion between calculable risk and uncertainty (unique situations for which no reference classes with known probability distribution can be specified).

The research literature that focuses on ERM partly supports and partly rejects the views of regulators and policymakers on the value of ERM in the financial industry (Baxter *et al.*,

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2013; Beasley *et al.*, 2005; Hayne and Free, 2014; Hoyt and Liebenberg, 2011; Pagach and Warr, 2011). To understand the causes of the variety of uses and usefulness of ERM, however, the most promising track seems to be the elaboration of an understanding of influences on the use and usefulness of RM. RM is a newcomer in a world of sophisticated models, so there is need for further examination of the efforts to integrate RM with existing control systems. This research focuses on the usefulness of RM, and specifically on senior bank managers' decision-making.

RM has received little explicit research attention, with a few exceptions: Wahlström (2006, 2009), Mikes (2009, 2011) and Hall *et al.* (2015). According to Wahlström, the use of RM in banks is a consequence of the degree of centralization in the organizational structure: The more centralized the bank, the more difficult it is to use RM. In Mikes (2009, p. 22) model, the attitude toward numbers and calculations among senior bank managers explains the attitude toward quantifying risks and the use of RM in managing risk. Hall *et al.* (2015) discuss whether these difficulties in using RM may be attributable to the difficulties that managers experience in integrating these data in the judgmental process of their decision-making. Because RM should be integrated into a complexity of management control regimes, it is necessary not merely to study the influence of the organizational structure (Wahlström, 2006, 2009) or attitudes toward numbers (Mikes, 2009, 2011). The analysis should also be conducted from the perspective of senior bank managers and from their way of perceiving RM in their control context and their way of perceiving the concept of risk – not merely from the perspective of risk experts (Hall *et al.*, 2015).

There is a wide variety in the extent to which RM and ERM is implemented, used and valued among industries and organizations – a situation for which there are many explanations in the ERM literature. A contingency approach (Burns and Stalker, 1961; Lawrence and Lorsch, 1967) is one option contributing to theories of management accounting in particular and management control systems more generally. Contingency theories of the factors that influence the design and implementation of control systems have dealt with such variables as environment, technology, structure, size and strategy (Langfield-Smith, 1997; Chenhall, 2003). In particular, contingent influence on risk-management control depends on at least three variables: central government policies, information and communication technology and organizational size (Woods, 2009). It seems crucial, however, to understand the influence on RM of the features of an organization's overall management control system and the dynamics between its elements; the internal context variation is key to the understanding of variation in use of RM between organizations.

This paper addresses the need for studies that attempt "to take an overview of the overall package of controls being deployed in an organization and to study the dynamics of how these develop and the outcomes that result" (Otley 2016, p. 55). Still there is one external context variable that may be worthy of inclusion in the study: the market situation. The concept of perception of risk may be attributed to whether the bank is operating in normal times or in crisis times. The practical relevance of criticism of the theoretical underpinnings can be investigated in times of crisis, when uncertainty is high and the relevance of historical data usually used in risk calculations is low. Accordingly, there is a need to cast a wider net than was used in many previous studies, to obtain a more comprehensive understanding of the factors that influence the use and usefulness of ERM manifested in RM.

The goal of this study, therefore, is to investigate how the management control system, the control package (Otley, 1980) of a bank, influences the opinion of RM's usefulness in

different control contexts before and after a financial crisis, to understand what influences the usefulness of ERM manifested in RM.

A concept of strategic alignment between technocratic control and socio-ideological control is used here to describe the control context. The empirical data from two internationally active banks, Bank A and Bank B, span over the period 2001-2010, covering normal times and times of financial crisis. Both banks are among the 100 greatest in the world in assets (*Forbes*, 2014). Despite many similarities between Bank A and Bank B, there is one critical difference: Bank A uses information to control its portfolio of credits from a distance to a much greater extent than Bank B does; Bank B tends to rely on personal, local information in which each credit decision is evaluated individually. This study provides an adequate general context and two basic managerial cultures to address the research question: How do senior bank managers' attitudes about the usefulness of RM vary over time?

This study contributes to the contingency theory of management accounting by demonstrating an appropriate match between ERM/RM and control systems and through its emphasis on ERM/RM as a central aspect of an accounting system under defined circumstances over time – over normal times and over periods of crisis. Because there is a dynamic process between the elements in the control system and between these elements and ERM during different market situations, this paper demonstrates a dynamic mechanism between two contingency variables and the outcome of ERM, beyond a static analysis of the influence of certain contingency variables. It demonstrates that the bank that demonstrated greater faith in socio-ideological control than in technocratic control (in which management accounting belongs) was better able to utilize RM in normal times and in crisis, because of its greater ability to handle the shortcomings of RM emanating from a faulty underpinning theory.

The next section presents previous results of RM in banks, followed by an introduction of the theoretical framework, suited to a description of the two studied banks from a holistic organizational viewpoint. The method section is followed by a presentation of the two banks from their chosen holistic view of the interaction between organization structure and the means of control that they use in their efforts to achieve strategic alignment in their operations. Differences between the banks in these respects are used to analyze their different paths to RM in the two subsequent sections. The paper ends with a discussion of the results of the empirical study and concludes with some theoretical reflections on these results, offering suggestions for future research.

2. Previous research

With the increased interest in ERM as an integrated way of managing risk, firms have implemented ERM programs and ERM units and have appointed Chief Risk Officers. In this way, various categories of risk have been managed in separate units or departments (Hoyt and Liebenberg, 2011; Beasley *et al.*, 2005; Pagach and Warr, 2007). However, this holistic risk perspective did not always mean that RM was integrated with other corporate areas (Colquitt *et al.*, 1999; Mikes, 2009) as intended [Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2004]. Beasley *et al.* (2008) found that the board and senior managers had the perception that ERM provides strategic advantages in ERM-mature organizations (indicated by formal RM policy, RM training programs, an RM committee and several other indicators of risk maturity). The failure to link ERM to performance management in financial institutions through the use of RM seems to be an on-going issue (Kaplan and Mikes, 2012).

This failure is a bit surprising, given that the three Basel Accords favor the statistical, deductive approach (i.e. RM), which places trust in market efficiency and the tools of modern finance. Chua (1996) and Porter (1995) both claim that numbers, which have a functional purpose, are used to simplify a complex reality. It seems, therefore, that bank managers, especially senior bank managers who oversee bank operations in various countries would welcome the use of RM as a way of improving their ERM, which is traditionally based on non-risk-specialist judgements. Quantitative studies also suggest a positive relationship between more advanced levels of ERM implementation and firm performance (Florio and Leoni, 2017; Callahan and Soileau, 2017).

The literature provides some explanations for why organizations have found it difficult to make use of RM. These difficulties may be attributable to difficulties in using these data when integrated in a decision-making process that involve judgement of qualitative information as well. Hall *et al.* (2015) discuss this matter from the perspective of risk experts' influence on bank managers' decision-making. They claim that risk experts may use such tools as valuation methods and risk scenario techniques to present their numbers rather than presenting as numbers are often presented – in diagrams and graphs – and that these tools may serve as communicative supports for the managers' judgmental processes.

Some studies of the usefulness and extent of ERM implementation have also touched upon the use and usefulness of RM. Like Hall *et al.* (2015) and Meidell and Kaarbø (2017, p. 52; their italics), the question of how the ERM function influences decision-making was studied from the perspective of the risk managers' influence attempts. Their study demonstrates that risk managers use "selling new ideas and managing knowledge across boundaries". To promote ERM, it mattered not only how the idea was presented but also how it was bundled with other strategic issues, how managers were involved and how well risk matters were linked to the regular decision-making processes. According to the researchers, differences in the processes of the risk managers' sense-giving explain the variance of ERM practices across organizations. Meidell and Kaarbø (2017) pinpoint the importance of both strategic and processual linkage to on-going decision-making in determining the influence of ERM studied from the perspective of the sense giver: the risk managers. Hall *et al.* (2015) and Meidell and Kaarbø (2017) point to the importance of linking ERM both processually and strategically to the on-going decision-making process. Gurd and Helliar (2017), who took the sense-makers' perspective, also pinpointed the importance of understanding RM in the context of a company's strategy. Meidell and Kaarbø (2017) and Gurd and Helliar (2017) concluded that there is a positive correlation between the internalization of risk management in the managers' strategic thinking and the influence and usefulness of RM. Thus, as Jabbour and Abdel-Kader (2016) have explained, one success factor may be that an internal, strategic agent drive the adoption processes of RM.

One difficulty in integrating ERM in the strategic process seems to have a structural explanation. As Mikes (2011, p. 227) explained, risk-management professionals in a more positive calculative culture were not involved in strategic decision-making; their bank appeared "to be more effective in creating an independent and distinct expert function". According to Wahlström (2009), the centralized organization, with its large centralized staff, relied on an isolated risk function – which was an unsuccessful solution because the risk experts became isolated from the senior managers decision-making processes. Lim *et al.* (2017) argue that the isolated risk function in combination with the performance management systems that encourage revenue-driven mind sets among bank managers caused a difficult interplay between ERM and different elements of the management control

regimes. These explanations underline the notion that if the risk experts should have the possibility of integrating risk aspects in the organization's strategy, ERM must be integrated into the management control systems, which seem to be difficult from an isolated position in the organizational structure.

How successful the integration of risk aspects will be seems to be related to the way of using the calculative component – the way information is conveyed by numbers. Arena *et al.* (2010) argue that ERM is problematic only when such technical and operable tools as risk maps expose it. The use of ERM may change decision-making if the risks are presented as "real" and if their possible consequences relate to managerial action and responsibility. Arena *et al.* (2010) found, for example, that ERM can promote social interaction between risk experts and managers. In this interaction, as managers became increasingly aware of uncertainty and risk issues, the calculative regulation and its assumptions in ERM became feasible to evaluate and seemed less of a black box. Tekathen and Dechow warn against the possibility that ERM failures, as a matter of calculation, may undermine a creative process of organizational engagement with uncertainty.

In a study of RM in the banking sector, Lim *et al.* (2017) offer a somewhat different explanation for the limitations of its capabilities and overall effectiveness. Their investigation points to conceptual rather than operational findings. In their view:

> [. . .] there are strong analytical grounds for questioning the current adequacy of institutional responses to risk management failures in the banking sector and raising the real possibility that existing, regulatory and industrial endorsed, models of risk management are fundamental flawed (Lim *et al.*, 2017, p. 89).

Additionally, this explanation concerns the interplay among different elements of the management control regimes. Lim *et al.* seek more profound explanations, such as faulty theory for the concept of risk and the models of risk management.

In essence, previous researchers have concluded that ERM differs by type of industry and that ERM can be used differently within the same industry. Previous explanations from the view of the risk managers indicate the degree of integration of risk aspects in the senior managers' decision-making depends on the extent to which RM and risk aspects are integrated processually and strategically in the decision process. The decision process is then guided by the organization's business strategy and informed by an existing management control system.

Previous studies indicate that it is problematic for risk managers to exert influence from an isolated position in the organization structure. Another problem concerns managers' difficulties in relating to information from numbers embedded in such readymade methods as graphs and diagrams, which are difficult to understand. The common denominator for these explanations is that RM must be integrated into the organization's existing control package and must contribute to the fulfilment of the organization's strategy to be successful. To explain differences in the "factual" use of ERM among companies, one feasible way forward is to study the opinions of senior managers working in different control contexts. Thus, two organizations were studied, using a general theory that enables the classification of these companies through archetypes. The data analysis has been guided by the two archetypical organizational traits. This research particularly investigated whether the criticisms that Lim *et al.* (2017) identified regarding fundamental conceptual flaws have practical relevance. By investigating the influence of a crisis on the use of RM, this study contributes to contingency theory of management accounting, especially that of Woods (2009).

3. Two different management control packages

3.1 Management control packages

One goal of this study was to examine the opinions of senior managers working in different control contexts [or what Otley (2016) called management control packages]. Management control systems (packages) in specific organizations can be explained by a theory of strategic alignment among internal control regimes. Strategic alignment refers to the arrangement of *technocratic* and *socio-ideological approaches* as the main strategies for achieving an organization's goals and setting the stage for an organization structure. These existing alignments appear to be essential for the integration of a new control regime into the entire management control system. The concepts of technocratic control and socio-ideology were used to abstract the characteristics of the two studied organizations as ideal types, which provided an analytical tool for explaining differences of opinion between the two organizations.

Technocratic control and socio-ideology will assume different features in organizations. *Technocratic control* specifies what should be achieved and how it should be measured (Cäker and Siverbo, 2014). It specifies the ways in which hierarchical communication (Cäker and Siverbo, 2014; Merchant and Van der Stade, 2007) utilizes rules, procedures, standard budgets, performance measures and reward programs (Cäker and Siverbo, 2014). In the case of a centralized organization, that information is processed at headquarters. Decision-making information is highly standardized, and some departments are managed by numbers. Consumer loans constitute a prime example. In a centralized organization the orders of high-ranking managers can be executed more effectively than they can in a decentralized organization. To initiate change, the centralized organization is aligned to formalized systems, providing managers with signals that something may be going on. The hierarchical structure, the epitome of which is a military structure, enables the implementation of fast and turnarounds, whereas a decentralized organization will undertake small, gradual changes.

Technocratic control is crucial in both centralized and decentralized organizations but in different ways. Local managers in a decentralized organization are authorized to make decisions without the interference of top managers, which would shift responsibility upwards, running counter to the very notion of decentralization. Thus, small changes are made continually, and fundamental changes are implemented slowly. In a highly decentralized organization, headquarters may not even use budgets (Wallander, 1999). Technocratic control functions are also tight in the decentralized model, and top management intercedes if necessary. Even a decentralized organization must have a net of strict technocratic controls, as there must be some way of controlling any possible misconduct or incompetence of local managers (Cäker and Siverbo, 2014). In the centralized organization, on the other hand, technocratic control is used in day-to-day decision-making.

Socio-ideology is less direct than is technocratic control, as it involves social relations, identity formation and ideology (Alvesson and Kärreman, 2004; Jaeger and Baliga, 1985). Managers in other forms of control regimes give instructions for desired behavior and output, whereas socio-ideology provides guidance to employees by communicating the core ideas of the organization's influence on employees' thoughts and actions (Alvesson and Kärreman, 2007; Bergström *et al.*, 2009; Hope and Fraser, 2003). According to Alvesson and Kärreman (2004, p. 426), socio-ideological control can be defined as "efforts to persuade people to adapt to certain values, norms and ideas about what is good, important, praiseworthy, etc in terms of work and organizational life". The term "ideology" refers to certain values, norms and ideas, and "socio" refers to a process whereby the individual is led to internalize the ideology.

Socio-ideological control has been associated with culture and, more specifically, to clans as a form of control, which differs from the organizational forms of control familiar in markets and organizations (Langfield-Smith, 1997) – control forms that align organizational and individual identity (Alvesson and Kärreman, 2007). It has been argued that the clan is an appropriate organizational control form when the level of uncertainty is too great to manage by the other forms of control and that clan members are the only people trusted (Alvesson and Kärreman, 2007; Ouchi, 1979). Socio-ideology control may play a key role in controlling employees who are dealing with complex situations (Ouchi, 1979) and in unforeseen situations in which it is possible or helpful to provide instructions. Furthermore, this may mean that socio-ideology is used when it is not possible to find an optimal solution, and it is necessary to settle for incomplete but acceptable solutions or what Linsley and Shrives (2014) have labelled "clumsy solutions".

Thus, the decentralized organization is more dependent on strong *socio-ideology* than the centralized organization is. A decentralized organization is dependent on small steps for survival, whereas a centralized organization is able to implement turnaround forcefully, with support from headquarters. A strong *socio-ideology* allows the decentralized organization to be continually adjusted through the local manager's small steps.

It has been suggested that when technocratic control is inappropriate or impossible, socio-ideology is the substitute (Merchant and Van der Stade, 2007; Ouchi, 1979) and when technocratic control is incomplete, socio-ideological control takes over (Cäker, 2008). It is crucial for successful companies to adjust values and beliefs in accordance with the changing context. In the best of cases, the organization will be resilient to disasters and crises, as management continually changes its actions as the context changes (Boin and van Eeten, 2013).

RM is a vital part of ERM in banks. RM is aligned to technocratic control as RM delivers numbers. But numbers have flaws: they simplify reality (Chua, 1996, Porter, 1995; Young, 2001). Thus, to overcome the flaws of technocratic control, socio-ideology can step in to improve decisions and contribute to a successful ERM.

Organization structure is a response to technocratic control and socio-ideology. The two contrasts of centralized or decentralized organization are normally used to manifest structure. Depending on an organization structure, the required staff will differ: what they do and with whom they communicate. According to Cummings (1995, p. 103):

> The term centralized indicates that authority to make important decisions lies towards the "head" or centre of an organization, while conversely decentralization implies more autonomy, whereby authority is vested in those further removed from the centre.

This perspective is strongly related to the notions of span of control, organization of support functions and liaison devices (Ferreira and Otley, 2009; Mintzberg, 1983). The degree of centralization vs decentralization is recognized by the size of the departments at headquarters. A centralized organization characterizes large, influential departments at headquarters, which may create high costs for the organization. Any large, centralized departments in a supposedly decentralized organization, on the other hand, jeopardize the whole idea of decentralization. Cummings (1995) has argued that the degree of centralization–decentralization is a continuous struggle for organizations, which must continually adjust themselves to new conditions; the forces for centralization or decentralization may vary from time to time and between normal times and times of crisis (Langfield-Smith, 1997).

3.2 The two banks[3]

Banks A and B were founded in the mid-nineteenth century and cover most business segments. They each represent one of two industrial spheres in the export-dependent country of Sweden. When Sweden's many multinational companies further expanded abroad in the 1980s, it set the stage for international contacts with the two banks. Although the government rescued other Swedish banks, Banks A and B have weathered financial crises and maintained their independence since the Great Depression – a clear sign of good management. In the 1970s, one of the banks established a decentralized management style whereas the other bank become centralized.

3.2.1 Bank A – a centralized bank. The centralization of Bank A's headquarters came about in the mid-1970s, to avoid competition between divisions emanating from bank mergers in 1972. This latest reorganization was the beginning of path dependency, and the colorful, *authoritative* CEO. An authoritative CEO was in force throughout the entire period studied and is currently valid, making the structural feature of centralization highly institutionalized (Peters *et al.*, 2005; Pierson, 2000). Given the bank's *authoritative leadership,* the CEO is still highly involved in top business deals.

According to annual reports, Bank A decreased in size from 670 local branches and 21,500 employees to 286 local branches and 16,000 employees. It continued to institutionalize centralization, including such functions as call centers.

Ambitious employees prefer to work at the bank's head office, where several hundred experts are employed and all significant decisions are made. The professional groups are organized as a functional department. They demand recognition for specialized competence and *boundaries* between themselves and other departments tend to be preserved. Senior management is often *recruited* from outside, and several cost-cutting programs have resulted in employment reductions at head office over the past 25 years. Bank A adopted new technologies, such as internet banking, earlier than Bank B did.

Regarding the ERM practice for Bank A, it was the first bank in Sweden to start building models and collecting RM data. RM specialists contacted other international banks to develop a best practice. Among the domestically listed and internationally active banks, Bank A was regarded as the one at the forefront in developing RM for daily decision-making – tasks that were undertaken by staff members rather than by consultants. It is one of many manifestations of Bank A's faith in the advancement by technology.

Senior managers in Bank A tend to trust expertise supported by *theory* and to believe that banking decisions regarding company credit require well-educated personnel with expertise knowledge. Each analyst, who has at least a master's degree in economics or management and is stationed at headquarters, specializes in specific industries, because it is assumed that specialization leads to improved decisions. Bank A's top managers trust that *higher education* and *academic leadership* among their employees are skills that allow them to exercise good credit judgement.

The role of expertise in credit control can be manifested in syndicated loans to companies around the world; they involve large sums and contacts with other banks. Bank A relies on its expert staff to analyze companies and price the loan accurately, according to a risk-and-return formula. If the price is right, Bank A is willing to enter into syndicated loan arrangements with other banks. Bank A becomes one of many banks involved and the customer does not necessarily have a personal relationship with a Bank A's employee. One could argue that this is evidence of Bank A having a greater risk appetite than Bank B.

Bank A has *expanded* into emerging economies, especially the Baltic countries, where the absence of a long-standing, independent banking tradition and fragile legal and political institutions suggest a higher credit risk than would be found in the Nordic countries.

Bank A has developed formal, bank-wide rules specifying the roles of each bank manager, creating boundaries and setting limitations that restrict their authority and responsibility. Home mortgages and smaller company loans are often arranged by telephone or over the internet, and head-office subcommittees may manage them. To some extent, this arrangement creates a distance between bank and borrower. Bank A also uses portfolio theory to evaluate the quality and diversification of its portfolio of loans. *Information is created and evaluated at headquarters*. Every loan is re-evaluated annually; each department is on a budget.

At Bank A, only senior managers, most of whom work at head office, are eligible to receive stock options can participate in the *bonus* program.

3.2.2 Bank B – a decentralized bank. In the 1970s, Bank B appointed a new CEO, who reorganized the bank by applying a decentralized organizational structure with local entrepreneurial branches and *regional* banks, designed to be small enough to maintain a focus on individual customers – a structure that is still in place today (Kroner, 2009), along with a flat organization, socio-ideology and technocratic control.

If a Bank B region becomes too large, it is divided into two – under a small head office with no public relations department or budget. It was, in fact, one of the beyond-budgeting pioneers of the 1970s. Bank B has ten regional banks, each with its own management control and board of directors. Its local branches form the core of the bank. *Decentralization* has been articulated as the bank has grown – not by acquisition but by opening new branches – from 518 in 2000 to 810 in 2013. As of January 2014, 11,503 people were employed by Bank B. Individuals tend to stay for a long time.

The bank has been slow to adopt new technologies such as internet banking, which does not suit decentralization well. But a customer can use an internet login through the local branch and still be connected locally, where business is conducted. The solution strengthens the organization structure to emphasize *independent branches*.

On behalf of the ERM practice in Bank B, it was the last one of the four listed domestic business banks to develop RM for daily decision. The late start was due to resistance among senior banks mangers that risks could be measured. Top executives were also reluctant to implement RM, as they could solve the problem of how RM would be incorporated into daily decisions without disturbing local responsibilities for credit. It was later solved, and the CEO released enormous sums of money to accomplish a fast introduction of RM. Thus, instead of hiring staff to develop models, the bank used consultants from Oliver Wyman.

Managers in the branch offices of Bank B have a high degree of individual responsibility and enjoy great freedom in their decision-making. Local branch managers are responsible for recruiting and hiring personnel, for instance. And because local branch managers cultivate customer relationships and assume responsibility for all customers, regardless of the size of their business transactions, employees at branches with multinational customers have the opportunity to achieve a level of competence that allows them to manage complex business. These entrepreneurial activities have fostered a reluctance to adopt portfolio theories. There is a reliance on the individual bank manger's ability to judge the client – a philosophy that leads to an attitude and practice of risk avoidance. A staff member can even override the computer-based loan application system without sanctions (Kroner, 2009). *Practice rules over theory* in this bank.

The local branch controls credit directly, and customers' personal relationships with the bank manager and staff help to ensure that customers will try harder to fulfil their loan agreements. Managers are comfortable with *learning by doing*. It is not surprising, therefore, that Bank B rejects syndicated loans. Bank B rejects syndicated loans, because it does not have full information; it must rely on recommendations from another bank. There are no

personal relationships between the customer and the credit officer, and such loans make it impossible to fulfil the socio-ideological trait of *personal responsibility*. When loan officers feel personal responsibility for defaulted loans, it is assumed that local branch managers work harder to manage the loans and reduce defaults. Managers at headquarters step in only when operations are not working properly or when invited. Every loan is re-evaluated quarterly, and Bank B's proportional credit losses are among the lowest in the industry.

Recruitment and a career in Bank B almost always include employment in a local branch. For the past 50 years, the vast majority of senior managers in Bank B have been recruited from within. Because middle and senior managers are evaluated on the number of new managers they have created, they have an incentive to let their skilled staff advance rather than retaining them to provide good performance within their own field of responsibility. This system creates a staff network of social relations, in which a manager with a problem knows where to go for advice.

Because of its low-cost emphasis compared to the emphasis of its main competitors, Bank B has been able to expand further into the mature markets of Great Britain and Holland, with an emphasis on wealthy customers. To have wealthy customers and to expand in mature markets with well-functioning legal systems are issues that speak to Bank B's *socio-ideology* of caution.

Bank B has a bonus program, which is equal for all employees. If credit losses are lower, return of equity is higher and the cost/ratios lower than the average of its main competitors, funds are allocated to the bonus program. When employees retire after 30 years, they can expect to receive more than €1m in bank shares, which, from a Swedish point of view, constitute personal wealth. The huge sum acquired on the day of retirement stimulates long tenure, and the low credit losses encourage employees to be cautious.

4. Research method

The purpose of this study was to investigate how the management control system, the control package of a bank influences opinion about the usefulness of RM in different control contexts before and after a financial crisis. Its goal was to provide an understanding of the factors that influence the usefulness of ERM, as manifested in RM before and after a financial crisis; it was therefore necessary to analyze information spanning over a crisis. Longitudinal research provided the opportunity to study the evolution of the relationship among variables that change meaning at different historical moments (Rose, 2000; Ruspini, 2002). In this case, emergent opinions on RM were studied in two control contexts.

Interviews with senior managers were conducted over a 10-year period, using semi-structured interviews, and annual reports covering 25 years in two banks were examined, with an eye to different types of organization structure, technocratic control and socio-ideology. Beyond those differences, the banks have enough similarities to allow for comparative interpretations (Free, 2008).

4.1 Data collection

The primary source of data was 49 semi-structured interviews with senior bank managers over a 10-year period, focusing on the use of RM. Interviews were conducted in the two banks in three sequential periods: 16 in December 2000 and January 2001 and 33 from June to August 2010. The interviewees were senior bank managers at two of the most internationally active and largest listed banks on the Stockholm Exchange.

The interviewees hold a variety of positions, including those of chief financial officer, the chief credit officer, bank analysts, senior advisers to the CEO, head of auditing, chief of treasury, chief of risk management, project leader for implementing RM and head of

operational risk. Because most of the respondents were given new positions during the lengthy time span for the three studies and organizational changes, no managers were interviewed more than once; the exceptions were a senior adviser, the heads of auditing and a head of group risk control, who were interviewed in both periods. Appendix provides a table with categories of interviews for Banks A and B in each of the two studies. In a few cases, the snowball sampling procedure was used, whereby interviewees suggested other relevant people who could serve as interviewees (Patton, 2004). This diversity in employee positions, combined with the length of the research period, created a large data set. The face-to-face interviews normally lasted around 50-60 min, were audiotaped and later transcribed.

Following Kvale's (1996) recommendations for semi-structured interviews, the interview began with broad questions. "What is the greatest risk the bank faces? What is the best feature of Basel II? How does the bank prepare for Basel II?" In the last study by these authors, in 2010, questions were changed from "Basel II" to "Basel III". Thematic follow-up questions were prepared in advance (Is there internal resistance to RM? How would you describe the relationship between the accounting department and the RM department?) and followed any emerging themes that arose.

To build rapport with the bank managers and to gain their trust as they described their views on mandatory regulations, interviews were conducted conversationally. To encourage openness, the interviewees were guaranteed anonymity (Miller *et al.*, 1997) and were given time to respond freely. These conversations were framed by asking respondents about real events they had experienced rather than asking about their "theories of the world", which might have reflected social imprints (Alvesson, 2003). Each interviewee's responses were compared with the responses of other interviewees and with information from various bank documents (Kumar *et al.*, 1993; Seidler, 1974).

4.2 Method of analysis

Both authors were involved in a discussion of the content and interpretation of the data throughout the analysis. The main conclusion was that the two banks developed in opposite directions in their use of RM. This somewhat puzzling finding was gradually developed over time during the two independent investigations and analyzed in three steps.

4.2.1 Step 1. Interview transcripts were read and reread. In the first study – 2000-2001 – the attitude toward RM was positive in Bank A skeptical in Bank B. In the last study, in 2010, Bank A was negative and Bank B was positive toward RM. To refine this finding, two bank archetypes were developed to distinguish the organizational traits of the two banks.

To further develop the finding of differential development, themes were uncovered using patterns and connections to categorize interviewees' statements, based on their descriptive content in each of the two studies. This inductive approach generated empirical – as opposed to theoretical – categories that were as close as possible to the interviewees' responses (Kvale, 1996): acceptance of or concern about the usefulness of RM:

(1) The statements that fell into *acceptance* of RM was that a new set of information could be beneficial in several dimensions: for control purposes, for individual productivity and for the improved profitability analysis of both products business areas.

(2) The statements that fell under *concern* were about RM's inability to deliver action-oriented information, questioning whether RM could change ways of doing successful business and the way it isolated the RM specialists.

4.2.2 Step 2. Data were searched iteratively for illustrative quotations by the bank managers (Charmaz, 2006; Denzin and Lincoln, 2011).

4.2.3 Step 3. The reasons for Banks A and B's two different paths in their involvement with RM were the focus of this step. The theoretical framework of technocratic control and socio-ideological control guided us in our explanation of why one bank could be successful in the use of RM, whereas the other took a different direction.

5. Two paths to risk measurement

This section presents a contrast in the use of RM between the two banks, with different holistic approaches to strategic alignment during a business cycle, including boom and bust in the 10 years between 2000 and 2010.

5.1 Bank A

5.1.1 Acceptance: (December 2000 to January 2001). When Bank A implemented RM, it lacked the personnel to develop models and collect data; it hired new staff and organized a department rather than relying on outside consultants. The project to implement and maintain RM was among the ten largest projects in the bank's history. Some older bank managers criticized the project, complaining that it consumed resources that could have been better used to develop operations. A few critics – mainly older senior bank managers – noted that the new, young recruits came directly from universities, lacked banking experience, obtained high salaries and were promoted into high positions. But it soon became evident to everyone in Bank A that RM provided valuable information that should be used daily. Yet faced with the specialists' use of statistics and other numerical calculations, some senior bank managers thought their long, hard-earned experience with and knowledge of banking was not valued and took early retirement.

Prior to the onset of the financial crisis, senior managers at Bank A were enthusiastic about RM, as it provided different information than the bookkeeping system did. The new risk-related information helped to overcome the lack of personal contact with customers and improved customer information. The use of information on risk-adjusted yield was particularly perceived as a major improvement, enabling senior management to compare such different operations as merchant banking and retail banking in different geographical areas. Risk-adjusted yield is the return from divisions adjusted to operational, credit and market risks. The potential damage that operational risks could make was invisible before the bank introduced risk-adjusted yield, which was now perceived to be achieving true and fair performance. With this new information available, senior managers thought that it would be possible to allocate capital to divisions and projects where the yield would be the highest. As Bank A's Head of Credit explained:

> With our models, we contribute to the governance of a big bank, with our many operations at local branches in different countries. We help earn money. We can provide information that enables us to compare the operations of the bank's insurance division with the operations of the bank's asset management division.

RM was perceived as a useful tool that improved management: The different operations could be examined and compared to each other. As the CFO said during the same set of interviews:

> We think there is a great difference in measuring and not measuring risk-adjusted yield. We have relatively good models because we have worked a lot with risk-adjusted yield. It is only by using risk-adjusted yield that it is possible to examine and compare various operations.

To avoid duplication, Bank A gradually replaced information from transaction-oriented accounting (bookkeeping) to RM information. Loan officers thought RM was complex, but

because the general economy was strong, they did not challenge the usefulness of the data it provided or the way it was implemented. It was not possible to make any judgement about the reliability of RM for management purposes.

Senior managers' experience during the financial crisis in 1992 had demonstrated some of the advantages of RM. Interest rates had risen dramatically to 500 per cent, as the government had tried to defend the Swedish krona and senior managers at Bank A drafted, although never submitted, an application for government aid. This financial crisis meant that the owners and senior management were close to being replaced. It was time for a reality check! The solution, they thought, is this new set of risk information, which would provide early signals, thereby limiting the consequences of the next financial crisis. In addition, RMs could strengthen the function of headquarters, which fit well into Bank A's centralized organization. With access to a resource and with support from the CEO and the bank's owners, who were involved operationally, senior managers' attitudes were that the bank was involved in a successful RM initiative. Their position was supported by the fact that the Swedish Financial Supervisory Authority and the Bank Association regarded Bank A as having greater competence in the field than other listed banks in Sweden. Furthermore, Bank A was perceived to be far ahead of the others in the process of implementing and using RM.

Senior bank managers in Bank A seemed to agree that RM was beneficial and that it should be implemented as quickly as possible. There was little internal concern over its use initially – especially because those senior managers who had opposed it had already left the bank – and its advantages encouraged co-operation among departments. Recognizing the need for co-operation among the various operations, everyone was keen to get RM functioning on a daily basis across the bank. Co-operation occurred in various projects and involved people from different operations. The work with risk-adjusted yield improved internal control over operational efficiency and effectiveness. It also meant that division and department yields were measured in a similar way. Divisions and departments had now to adjusted their yields to operational risks.

The organization structure, which placed decision-making at headquarters, was clearly in line with RM, as models were developed and data collected by central functions. Plausibly, RM supported the ideology of emphasizing theory and academic leadership, as highly educated individuals were recruited directly from universities. RM also enabled technocratic control, for the interviewees described RM as a sophisticated tool for managing a bank.

5.1.2 Concern: (mid-2010). After Lehman Brothers declared bankruptcy in 2008, the global banking sector was disrupted. It was the greatest global depression since the 1930s, resulting in millions of lost jobs [Financial Crisis Inquiry Commission (FCIC) , 2011]. Now the value of RM would be tested! As markets fell, Bank A had to issue new shares, guaranteed by the main owners, to increase the bank's equity funding. The financial difficulties led to devastating criticisms that RM was delivering obsolete information, and trust in the project diminished.

Senior managers began to wonder if their RM models were targeting the "right" risks, noting that the financial crisis was liquidity-driven and that the present RM did not cover liquidity risks. Moreover, data were often found to be invalid. When both models and data were regarded as unusable for decision-making, RM was naturally questioned. As one credit risk officer explained, in 2010:

> I believe that the statistical models do not deliver the truth. When we use Basel II, we have only the bond defaults in the United States from the 1960s and 1970s to build on. How useful is that information for managers? It's very dangerous to say that now that we have Basel II, we can use

> it. Acquiring historical data has been the biggest problem; the data are too limited and not of sufficient quality. Also, acquiring such data takes time and is an aggravation. Like most banks, we have a complex legal structure and are present in many geographical areas.

Ultimately, senior management was reluctant to allow data from the RM specialists to influence their decision-making, perhaps because RM is based on historical observations and, as such, the data collected in normal times do not apply in times of financial crisis. As the Head of Credit said in 2010:

> Risk measurement is like driving a car in a city you've never visited before. You get driving instructions from someone who is just looking out the back window. You get information too late.

When the Head of Credit in one of the hundred largest banks in the world expresses serious doubts about the usefulness of RM information for prediction, its use for decision-making is obviously circumvented.

Because of the critique of RM, specialists within the field became isolated. They could not easily move between departments, and their career paths at Bank A were limited. As the Head of RM said, during a mid-2010 interview:

> Nearly all my staff members are risk-measurement professionals. Only a few in my department have management skills, and almost none have general business skills. They are often hired from a marketing firm, straight from university, or from some area of IT. Without a business background, they have great difficulty advancing in the organization.

As the relevance of the RM specialists was questioned and they lost status, they exerted less influence over the other bank professionals. Nevertheless, they continued to claim that more models were needed to assess liquidity risk if future financial crises were to be avoided.

In summary, Bank A changed from acceptance (when senior management embraced RM) to concern (when the RM specialists were isolated). Ultimately, users were of the opinion that RM was a poor tool for making decisions.

The financial crisis created a need for change. The organization's structure of centralization placed experts at headquarters. But signals were late in arriving at headquarters, causing technocratic control to be perceived as inadequate because, according to the interviewees, the main cause for the crisis was the liquidity risk, and it was not targeted. Nevertheless, the socio-ideology of the bank appeared unchanged, although experts within RM became isolated.

Bank A took the following path:

- *Acceptance* existed when senior managers received another set of information that was regarded as valuable (2000-2001).
- *Concern*: When RM was used in the financial crisis, the usefulness of information produced by RM was questioned in terms of its value in helping managers make improved decisions. RM was largely ignored (2010).

5.2 Bank B

5.2.1 Concern: (December 2000 to January 2001). The introduction of RM collided with Bank B's socio-ideology of responsibility among personnel, and a relatively small headquarters operation. RM requires the employment of a greater number of staff members at the bank's head office, to develop models and collect data. The senior bank managers were of the opinion that it was not possible to identify and measure all risks, and they had the strong conviction that portfolio theory was not applicable. The lead idea was to deal with each credit on its own merits. In addition, employees' responsibility is grounded in

close face-to-face relationships with customers, whereas RM is a tool for distance. Thus, senior managers believed – at least at first – that the advantages of measuring risk were minimal.

The reluctance to embrace RM resulted in Bank B getting a late start in its use; by the time the bank was ready to incorporate it, it had little effect on daily operations. As the Head of Credit said:

We are trying to implement risk measurement, not change our way of doing business.

5.2.2 (December 2000-January 2001). Bank B used RM that worked in parallel with its existing accounting information. The cautious view toward RM was based on suspicions about the portfolio theory upon which RM is built. The consensus was that RM would increase costs and would provide little additional useful information. But although it introduced a strong incentive, Basel II was not mandatory. Banks would be allowed to operate with a lower capital requirement if RM were to be approved by the Swedish Financial Supervisory Authority. It was on this basis that Bank B implemented RM.

Bank B emphasizes personal responsibility for credit officers, meaning that head office cannot interfere with credit decisions without assuming the responsibility for any credit problems. If that were to happen, local credit officers who were overruled by head office would likely become disengaged from the credit decision, relinquishing responsibility for the crucial customer–bank credit relationship.

A regular and frequent review of all creditors enabled Bank B to take quicker action on credit problems, either by allowing a competitor to assume responsibility for a problem customer or, if the problem were judged to be temporary, by trying to help the customer. Bank B emphasized helpfulness and taking more time to solve problems for individual credit cases, and it experienced few credit losses relative to its competitors. Implementing such tight and frequent credit monitoring and control is time consuming and requires information that is much richer than is necessary for statistically driven RM. Notwithstanding these credit-control policies, senior managers in Bank B believed that the greatest risks cannot be measured – the type of risks that can stress the bank, force it into bankruptcy or create a major fraud or public scandal.

The information provided by RM was perceived to be unsuitable for managing a bank. During the first set of interviews, the Head of Internal Auditing said:

> It's always difficult to foresee the unforeseen, to predict the unpredictable, and to identify unlikely situations in an attempt to avoid them. There are people who argue that regardless of how good your internal control is, an incident like Barings can happen again; you can always end up with a couple of employees who together can create an unforeseen situation. There is the same likelihood of this happening to our bank, Citibank, or any other bank. Regardless of the volume of business, these types of unlikely events will always occur. If two key people choose to collaborate in order to defraud their employer, I can readily envision a situation in which they could circumvent the internal control system that the bank has established.

The senior management of Bank B, aware of potential conflicts with its corporate culture, was reluctant to implement RM. Because the first response was to avoid implementation by not hiring RM specialists, there was no opportunity for Bank B to create boundary procedures and boundary objects (Star and Griesemar, 1989) to foster co-operation among RM experts and credit officers. Consequently, RM was an issue of concern only for senior managers, who worked hard to find a solution that would avoid the concern.

In summary, senior managers at Bank B were resistant at first to a bank-wide implementation of RM. They *ignored* RM and *parallel work was created,* because of strongly rooted socio-ideology and technocratic control. Senior bank managers were convinced that they worked for one of the best banks in the world. As profits and revenues steadily

increased over time, they believed that their bank had proven to be successful and that the organization was becoming larger and stronger. In an effort to manage, the senior managers relied on cost/income ratios and credit losses, thus creating strong technocratic control by numbers; users were not keen on implementing an additional set of information, as they could not identify enough benefits.

5.2.3 Accept: (mid-2010). Bank B was generally well prepared for the global financial crisis that began in 2007 and spread in 2008. In 2007, senior management learned that the Bank of England had provided liquidity support to the British bank, Northern Rock. Bank B reviewed its loan portfolio and reduced its exposure. Thus, the unfolding financial crisis reinforced senior management's awareness of risks in the credit portfolio, and RM revealed additional information about credit not previously available. Senior management especially appreciated the use of RM information to depict migration of credit-risk portfolios among risk categories. As the Head of Credit explained, mid-2010:

> I've started to use the risk-measurement information. We can see that it's possible to use it even more. I'm especially interested in the composition of the credit portfolio and the risks with it. We at head office are interested in the composition of the credit portfolio and how it has changed in the last 12 months, as far as the different risk classes go. We're interested in migration of the portfolio. I also present this information to the senior management team at head office. I explain changes in the portfolio and the various risk categories related to large and small companies and to individuals. Because of Basel II, we now get quite good risk information.

Although RM was viewed positively, the information arrived too late for action. By the time senior management contacted a local branch about a loan problem, the branch manager was already aware of it. RM provided certain information, but it did not replace the accounting information. According to senior managers, the signal about the health of a credit portfolio (mainly migration) diverged from the signal provided by the traditional accounting system (mainly reserves of future credit losses and actual credit losses).

Senior managers at Bank B's head office gradually realized that RM provided additional information, which was a significant factor in following the bank's development. From RM, they received more information about the credit portfolio, particularly the migration of credit, and they recognized that that the bank's accounting system was unable to deliver this information. Because of the co-operation between RM specialists and other professionals, the bank confirmed that RM complemented rather than replaced the existing information system. Because RM was subordinated to accounting in the organizational hierarchy and had little staff, it did not threaten other professionals. Moreover, with borrower ratings now available from the RM, a calculation of the cost of capital for the branches was made possible. It enabled branches to identify an effect of taking risks and improving judgement of customers. Thus, senior managers believed that RM had played a key role in overall bank management during financially difficult times.

RM strengthened technocratic control by enabling a different set of information for managers. It contributed to the preservation of the existing organization structure, as the new set of information was used for control purposes and for day-to-day management. One reason for this direction was the strong ideology of individual responsibility for handling credit. Employees were responsible for whatever credit they granted; yet, RM originated at headquarters and strengthened *its* power. But at the same time local independence was strengthened, as top management could see the positive effects of branch performance. Bank B's solution for the use of RM was enabled by a firmly rooted socio-ideology that made the bank adhere to its perceived successful strategic alignment.

Bank B took the following path:

- *Concern:* When RM was introduced, the opinion among the bank managers was that it violated the judgements made by individual credit officers. RM was largely ignored for decision-making.
- *Acceptance* of RM existed when senior managers received more information about the migration of the credit portfolio in the financial crises.

The usefulness of RM for the banks

The two banks took opposite trajectories. Bank A went from high expectations of usefulness to low expectations, whereas Bank B went from low to high expectations (Figure 1).

6. Differences between the two banks

Both banks used RM, but they used it differently as part of ERM. At Bank A, senior bank managers initially perceived RM as a useful tool in their control of the bank. At Bank B, senior managers initially ignored RM but eventually found it to be a useful tool. The two banks chose different organization structures: a large, centrally located, expert staff at Bank A and a dispersed, integrated, competent staff at Bank B. These different structures determined different preconditions for the integration of RM into the senior bank managers' control processes.

The centralized technocratic control in Bank A is well suited to the theory and practice of RM. Senior management at Bank A may have been more positive toward RM initially because the data had to be collected and stored at head office, which strengthened its centralized technocratic control. Managers and executives at Bank A, who supported general risk theory and mathematical models, trusted the specialist staff at head office. A structure with a centralized technocratic control suits portfolio theory and professional groups that demand recognition for their specialized competence and seek to preserve boundaries between themselves and other employees (Cäker and Siverbo, 2014; Merchant and Van der Stade, 2007). The risk experts' self-confidence in their specialized expert knowledge set them apart from other bank professionals at Bank A. This conviction, together with the grouping of risk experts in a large, separate staff, explains why they and their information were distanced from strategic decision-making after the financial crisis. Consequently, Bank A, which chose the large staff solution and initially took the more positive approach to RM, eventually decoupled RM from its strategic control processes when it failed to guide the bank through the financial crisis.

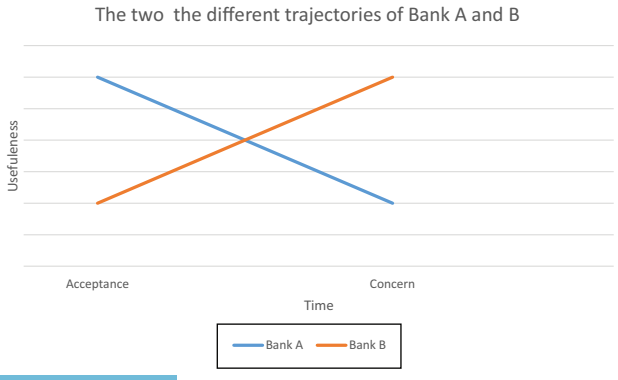

Figure 1.
The diagram above illustrates the different trajectories of Banks A and B

Managers and executives at Bank B were skeptical of the mathematical models based on the general risk theory of decision-making, believing that they threatened such critical characteristics of their socio-ideological control as personal freedom, entrepreneurial spirit, identity formation and ideology (Alvesson and Kärreman, 2004; Jaeger and Baliga, 1985). Bank B's socio-ideological control focused on practice over theory: Doing is more important than thinking, and managers in a decentralized bank are comfortable with learning by doing in making their loan decisions. Thus, a small, specialized staff gradually introduced RMs in an integrative and complementary manner, mainly with existing data. Managers sought the risk managers' assistance only on specific occasions.

This difference in the ability to implement RM appears to depend on how well the new control regime fits with the present entire strategic alignment. For Bank B, but not for Bank A, RM initially offered poor tools. The organizational isolation of the risk group at Bank A, with its centralized organization structure, created acceptance initially; it ultimately resulted in neglect and unproductive outcomes, however.

What constitutes this difference in ability to assess the relevance and make use of RM data? Why did the attitude toward RM go from support to disillusionment at Bank A but not at Bank B? It appears to be associated with recognition of the limitations of RM data in an upcoming crisis. In normal financial times, risk is at least partially calculable and useful. Historic or market data are available and can be projected into the future. In a pending financial crisis, reliable historical data become irrelevant, and market data are unavailable. There is only uncertainty. The ability to see and recognize this situation may be the crucial difference between the two banks and their ability to benefit from RM information. Unlike Bank A, Bank B was able to use the information to its advantage. In an impending financial crisis, there is no complementarity between judgement and RM, and RM information must be set aside.

Senior managers at Bank B placed greater trust in their experience and in the knowledge acquired through their experience. The RM work was better integrated and involved staff at local offices in their daily work. The result was a gradual and successful evolution of acceptance of RM. The usefulness of RM seems to have differed between the two banks because of the ability of Bank B's staff to recognize the usefulness and limitations of RM when quantitative (hard) data are combined with qualitative (soft) information. This is especially important in an impending financial crisis, when it is necessary to judge whether the situation allows probabilistic calculus or if it is characterized by uncertainty. Differences in bank control systems are important, as the balance between technocratic control and socio-ideological control influences a bank's ability to find "clumsy" solutions that can be quickly implemented. The socio-ideological control allows decision-makers to see beyond hard, technocratic information in search for clumsy solutions. It is like all solutions: imperfect and requiring compromise but nevertheless resulting in improvement. The idea that there is one, and only one, best solution can lead to failure. Furthermore, the maneuvering space of entrepreneurial risk experts in developing successful ways of communication and rendering their risk expertise influential seems to have been more beneficial in Bank B – at least following the financial crisis – which may be due to the less dominant technocratic control in Bank B.

Numbers were important in the technocratic controls of both banks, but an attitude toward RM seems to go beyond an attitude toward numbers. Rather, the RM attitude seems to be an attitude about principles – about how to act, about principles obtained from models and theoretical knowledge and some from memory. The greater the extent to which the thinking and acting of employees and local decision-makers has been influenced by socio-ideological guidance (Alvesson and Kärreman, 2007; Bergström *et al.*, 2009; Hope and

Fraser, 2003), the more capable they are of managing greater complexity in times of crisis (Merchant and Van de Stade, 2007; Ouchi, 1979). The crisis that was developing introduced an incredible increase of complexity when calculable risk turned to uncertainty. Thus, the features of a socio-ideology can manage greater complexity (Merchant and Van de Stade, 2007; Ouchi, 1979). Furthermore, it seems reasonable to exclude major changes in strategic alignment as an explanation for why the banks changed their attitudes toward RM during the period studied. The organizational traits are institutionalized and path dependent (Peters *et al.*, 2005; Pierson, 2000) in both banks, because no significant changes in structure or control were undertaken during the period under study. Not even the significant setback in Bank A caused any change of opinion about the control process. The bank had kept its large staff of risk experts and was as centralized as ever by the end of the study.

This difference in ability to use RM depends on the balance in the banks' strategic alignment between structure and the two different methods of control in the bank. When a technocratic control perspective is dominant and where RM is considered a calculative practice with problematic theoretical underpinnings, it may result in a failure of RM in an upcoming crisis. The paradox is that, although it is relatively easy to implement RM in a centralized bank, its usefulness will be limited because technocratic controls dominate as signals from other information sources become silenced.

7. Discussion

Difficulties encountered in using RM in ERM may explain the variation in use of ERM among different companies and industries (Arena *et al.*, 2010; McGoun, 1992, 1995; Wahlström, 2006, 2009). The difficulties seem, in turn, to depend on the ways in which control is chosen and how the control systems are intertwined with the organization in the entire strategic alignment. The results of this study, which, like that of Gurd and Helliar (2017), were expected to be consistent with the strategy of the firm, demonstrate the importance of understanding risk management in the context of the company's strategy. When the perception of ERM in Bank B changed gradually from a regulatory imperative to be value added, the adoption process gained momentum (Jabbour and Abdel-Kader, 2016).

The ideas presented by Hall *et al.* (2015) and by Meidell and Kaarbø (2017) seem to be supported by this study. The degree in which managers were involved and how well risk matters were linked to the regular decision-making processes seems to have influenced the managers' opinions of the usefulness of ERM. The way in which the risk experts made sense of risk management seems to be a key factor in understanding variation in the use of RM.

To knit together the results of this study with the results of Mikes (2009, 2011) and Wahlström (2006, 2009) concerning the importance of organizational structure with the results of this study, the findings at Bank A are consistent with the Mikes' (2009) findings that the organization of risk expertise in a large and separate team contributes significantly to isolation between risk managers and other bank managers. Risk experts who worked as a group at Bank A had great faith in their RM financial tools and models that increased their sphere of control, at least initially, even in areas in which uncertainty was a relevant factor. As Wahlström (2006, 2009) contends, it is essential to understand such structural differences in the concentration of experts in departments located at headquarters, to understand the different roles of RM among banks. Organizational structure does matter, but its role is as an intermediary rather than a primary factor in causing difficulties, by providing ERM with an appropriate role in the entire internal control regime of a bank.

Yet the explanation offered here differs from Mikes's (2011) explanation about the difference in the use of RM by the two bank archetypes. These research findings suggest that they are not primarily based upon their attitude toward numbers and calculative

processes, as Mikes (2011, 2009) concluded. The archetypes of both banks indicate a positive attitude toward the use of numbers; both banks use numbers to control their operations. Both banks have considerable international operations and numbers are effective for achieving control from a distance (Porter, 1995; Robson, 1992).

The most important ingredient in the explanation for diverging trajectories of the bank managers' opinions of the usefulness of RM was raised in the Lim *et al.* (2017) hypothesis: Because models of risk management are fundamentally flawed, the overall effectiveness of risk management in banks is limited. This explanation can be taken a step further by arguing that the consequence is contingent upon the banks' management control packages, particularly the way in which the strategic alignment between the control elements is arranged.

Negative experiences from Bank A point to the problem of calculating risk and using the risk models in a formal correct way, as suggested by Arena *et al.* (2010) and by McGoun (1992, 1995). This situation appeared in the developing crisis when the ERM's risk assumptions were no longer realistic. A crisis, almost by definition, must be regarded as a rare or even unique situation for which no reference classes with known probability distribution can be specified. Unfortunately, this experience may, as Tekathen and Dechow (2013) contend, result in an undermining of the entire RM process and its results, in that the implementation of ERM may merely create a certain level of legitimacy for an organization.

While Bank A managers take a quantitative risk approach, the managers in Bank B take a qualitative approach in their decision-making. Before the crisis, RM in Bank A was better aligned with Bank A's strategy, but this seems to have caused a delay in changing the role of RM, when the figures were no longer reliable and the risk was no longer calculable. The more cumbersome alignment process in Bank B never gave RM the role of providing the answers to the credit process. This way of achieving strategic alignment seemed to be more fruitful in the long run. The positive opinions from Bank B are clearly in line with Tekathen and Dechow's (2013) results, suggesting that ERM's merit is in the resolution of ambiguities and the support of heterogeneity in the search for pragmatic solutions. They claim that this creative process may accelerate organizational engagement in times of uncertainty. As in Bank B, ERM may stimulate an internal debate to find the clumsy solutions that nevertheless foster improvement and require compromise (Linsley and Shrives, 2014), to facilitate management's decision-making in difficult situations.

It appears to be the complexity of aligned strategies – particularly the role of socio-ideological control – that plays a decisive role in understanding the attitude to optimal or clumsy solutions (Linsley and Shrives, 2014). An organization with strong and centralized socio-ideological control and a decentralized structure may provide risk experts with a better opportunity to communicate their views of risks and make way for the development of tools (Hall *et al.*, 2015) that could result in heuristic devices for handling RM in a complex situation – as when calculations that are relevant in normal times no longer work.

8. Conclusions

The aim of the study was to investigate how the management control system – the control package (Otley, 1980, 2016) of a bank – influences opinion about the usefulness of RM in different control contexts before and after a financial crisis, to understand what influences the usefulness of ERM manifested in RM.

The difference accorded the roles of RM and ERM in the two organizations may impact their usefulness, especially in the uncertainty surrounding times of crisis. These results indicate that Bank A, with its ability to align the concept of RM more closely to the regulators' intended design, was delayed in its reaction to the financial crisis. This, together

with the managers' attitudes toward RM after the crisis, suggests that the difficulties associated with RM and ERM were not a matter of poor implementation on the part of Bank A. In contrast, RM had difficulty in aligning its original design in Bank B; yet, it was used as a heuristic device and served to guide the less-than-optimal and clumsy solutions in a situation of uncertainty, where alertness to contextual change matters. These differences in the outcome of ERM, especially in crisis, may also create differences in the long-run use of ERM between Banks A and B and suggests that these differences are unlikely to diminish.

Senior managers in Banks A and B realized that their bank had to comply with the Basel regimes, which rewards use of RM and are aimed at preserving the financial system. RM is theoretically underpinned by the assumption that risk can be calculated as a probabilistic measurement of various risk outcomes that follow a normal distribution. But one characteristic of financial crises is an observation not recorded in a normal distribution. To comply on a company level with a regulation regime not primarily suited to this context may be a challenging task. It seems from this study that top management in both cases is struggling to fit the regulation regime into the established control package. Differences between the banks' control packages may partly explain why there are such great variations in the way ERM is used and how useful it is perceived to be. In the control package, the socio-ideology control rather than technocratic control enables bank managers to look beyond numbers delivered by RM. A strong socio-ideology makes an organization alert to flaws in its information system.

This study makes three contributions similar to those of Meidell and Kaarbø's (2017): 10-year longitudinal research, evidence of risk experts' influence on decision-makers and a theoretical approach to strategic alignment. First, this paper offers a *longitudinal case study of two banks over a period of 10 years* – two banks that developed RM practice in response to regulatory rationales. For one bank, the decision to implement RM was also based on performance rationale. Previous ERM studies have focused on specific cases in industries other than banking (Meidell and Kaarbø, 2017), using methods other than face-to-face interviews with senior bank managers over time.

Second, evidence of *risk experts' influence on organizational decision makers* (Hall *et al.*, 2015; Mikes, 2009, 2011; Meidell and Kaarbø's, 2017) in the two banks is provided, through differences in the way socio-ideology control conditioned the response to RM.

Third, the theoretical approach of *strategic alignment manifested by technocratic and socio-ideological approaches* has not been used previously in the ERM literature, and it does not appear to have been used in the management accounting research literature. The theoretical lens used here aids in an understanding of the acceptance of RM and the ways in which it differs over time and as a function of the organizations' control packages.

Furthermore, this study has identified some theoretical implications. The theory of neoliberalism has advanced in society at large, but it also influences the bank managers' daily actions as manifested by RM. It rests on trust for efficient markets and is a prerequisite for the functioning of RM. But as various researchers (McGoun, 1992, 1995; Power, 1997; Lim *et al.* (2017) have noted, it is not without its flaws in its theoretical underpinnings in RM. Nevertheless, the paradigm of RM for improved ERM is firmly rooted. To overcome the flaws of the theoretical underpinnings of RM and to find a way to comply with RM, the theoretical framework used here points to the need of a strong socio-ideology control regime based on individual responsibility. But responsibility demands information (Ijiri, 1982). A strong socio-ideology that uses the capacity of individuals over systems creates a parallel system of information that naturally minimizes flaws in the RM system. In the bank in which RM was accepted, managers of the organization were able to depart from recommendations given as output from the RM system. Members in the other case had to

subordinate themselves to the system, however, and when the flaws of RM become obvious for all managers, the acceptance of RM naturally declined. The ideal, then, appears to be two parallel systems of information, as they complement each other and compensate flaws in the respective systems.

This study contributes to the contingency theory of management research in identifying two more significant contingency variables: the control package (Otley, 2016) (socio-ideology and technocratic control) and the market situation (normal times versus times of crisis) and especially the influence of the dynamic between these variables, to add to Woods (2009) previous variables for contingent influence on risk management control; central government policies, information and communication technology and organizational size.

The results of this study have practical implications for the future. RM is a key aspect in bank regulation, as it aims to preserve stability in society and avoid bank failures. When two banks have opposite trajectories of the usefulness of RM, however, questions must be raised about the effectiveness of regulation by RM, as manifested in the Basel Accords. Banks must regularly complete reports for the supervisory authority about their risk exposure based on RM. The neglecting of RM could possibly be bridged by a close, regular and frequent personal interaction between trustful and skillful personnel from the supervisory authority and senior bank managers. A change of direction to personal interactions aims to establish a mutual relationship of trust that can overcome various stances between authorities and banks, as when risk exposure seems to be increasing. Regulation quality will increase at the expense of increased costs for personnel at supervisory authorities. Nevertheless, positive long-run effects will be created as the risk of bank failures and financial crisis decrease, along with their consequent societal instability.

This research may well be location-specific, having been conducted in Sweden – a country with a strong business culture and a willingness to comply with the Basel Accords. The research conditions for this study were not ideal, because it was impossible for the researchers to observe internal meetings and daily practice. Senior managers at both banks were interviewed, however, and a good understanding of the issues and problems addressed in these meetings and of the functioning of RM were acquired. That said, the level of access may be limited in business cultures less open than that of Sweden.

Future researchers may want to undertake a similar approach in smaller banks with fewer RM resources and in less well-managed banks, to examine the impact of these factors. Observational data appear to be the best method for conducting such studies, as they lead to a better understanding of the way RM is assessed in managerial discussions. Future researchers could also address the need for effective banking regulations that can create conditions promoting clumsy solutions. Studies on the dialogue between national regulatory institutions and national banks that deal with the evaluations and implementations of international regulations would be helpful. Scholars need to know more about attitudes toward supervisory authorities within banks on a country-by-country basis.

Notes

1. ERM is defined by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in the following way: "Enterprise Risk Management is a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite, to provide reasonable assurance regarding the achievement of the entity's objectives" [Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2004].

2. Most countries in the world use the Basel Accords; for European Union member states, they are implemented nationally through EU Directives. When the Basel Committee on Banking Supervision issued Basel I in 1988, they indicated that this was merely the first step in linking a bank's capital requirements to its risk exposure. In Basel I, RM was applied to market risk. In 2002, when Basel II was issued, two additional risk measurements were added: credit and operational risk. Basel II, in comparison to Basel I, had strong incentives to encourage banks to use RM for daily decisions. If banks had sufficiently advanced models and sufficient data and, importantly, used RM for daily decisions, they were allowed to operate with lower capital requirements, thus allowing them to increase their returns with more capital employed. In response to the financial crisis of 2008, Basel III added risk measurement for bank's liquidity.
3. If not mentioned otherwise, facts are from the annual reports of the two banks or from interviews with their managers.

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Corresponding author

Gunnar Wahlstrom can be contacted at: Gunnar.Wahlstrom@gri.gu.se

Appendix

Table A1. List of interviewees and number of interviews in two banks and two studies

Interviewees	Study 1 New year 2000-2001	Study 2 Summer 2010
Interviewees, Bank A		
Head of credit, credit analyst, credit officer, head bank analyst	XX	XX
Head of group risk control, head of operational risk	X	XX
Chief of treasury, staff treasury		XX
Head of auditing, staff auditing	XX	X
Credit risk officer, staff risk measurement	X	X
Senior adviser to the CEO, head of division	X	XX
Head risk measurement, head model builder, head risk control, staff risk measurement	XX	XXX
Accounting head, staff accounting, chief financial officer	X	X
Sum	10	14
Interviewees, Bank B		
Head of risk control for division x, head operational risk		XX
Project leader, risk control, financial analyst	X	XX
Manager of investor relations, manager of government relations		XX
Director of Division X, Y	X	XX
Head of risk reporting, accounting specialist		XX
Chief of treasury, treasury risk control		XX
Chief risk reporting, chief risk control		XX
Head of credit, credit analyst, bank analyst	XX	XX
Head of auditing	X	X
Chief financial officer, former CFO	X	XX
Sum	6	19