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**Abstract**

This paper, based on a five-year longitudinal study at two UK-based banks, documents and analyzes the practices used by risk managers as they interact and communicate with managers in their organizations. Specifically, we examine how risk managers (1) establish and maintain interpersonal connections with decision makers; and how they (2) adopt, deploy and reconfigure tools – practices that we define collectively as *toolmaking*. Using prior literature and our empirical observations, we distinguish between activities to which toolmaking was not central, and those to which toolmaking was important. Our study contributes to the accounting and management literature by highlighting the central role of toolmaking in explaining how functional experts may compete for the attention of decision makers in the intraorganizational marketplace for managerially relevant information. Specifically, as risk management becomes more tool-driven and toolmaking may become more prevalent, our study provides a more nuanced understanding of the nature and consequences of risk management in contemporary organisations. An explicit focus on toolmaking extends accounting research that has hitherto focused attention on the structural arrangements and interpersonal connections when explaining how functional experts can become influential.

Key words: Risk management; toolmaking; influence; functional experts

*“Men compete with men today not by teeth but by tools...” (Gilfillan 1935, 63).*

## **Introduction**

Risk management as a technical discipline has been present in financial institutions for more than 50 years; however, its separation from insurance and corporate finance is a more recent phenomenon (Butterworth, 2001). Fuelled by regulators’ and market participants’ long-held demands for “good management,” since the late 1990s, risk management has been advocated as a corporate governance and management control practice applicable across all industries (COSO, 2004; ISO, 2009). Reports of practice and emerging empirical research indeed reveal risk management as a more visible and prominent practice in many organizations (Mikes, 2009; 2011; Beasley et al., 2011; Deloitte, 2011, 2012; PricewaterhouseCoopers, 2012; Jordan et al., 2013; Tekathen and Dechow, 2013).

However, despite evidence of risk managers’ increased visibility and prominence in organizations, the global financial crisis of 2007-2009 and continuing risk management failures, such as the one implicated in J.P. Morgan’s multi-billion dollar loss in 2012 (Rose, 2012), call for an examination of the nature of the influence that risk managers might actually have on decision making in financial institutions. In fact, we have little empirical evidence about the ways in which risk managers affect executive decision making in their institutions (Bookstaber, 2007). Although the presence of prominent risk managers in a financial institution does not necessarily mean that excessive or unnecessary risk taking would be avoided, by improving our knowledge about *how* risk managers interact with managers, we can add another dimension to our understanding of the potential effects and unanticipated consequences of risk management. Specifically, we suggest that by understanding the “influence activities” (Howard-Grenville, 2007) through which risk managers become part of the executive decision-making processes, we will gain valuable insights into how risk experts identify events, developments and trends that constitute the emerging risk management agenda in their organizations, and how they bring these agendas to the attention of others.

One of the salient features of risk management is the ubiquitous presence of tools such as value-at-risk software, risk-adjusted capital models, risk maps and risk reporting frameworks. Field study evidence indeed highlights that risk managers in banks develop a variety of such tools and deploy them in different ways (Mikes, 2009, 2011; Arena et al., 2010). Jordan et al. (2013) recently provided a detailed empirical account of how, in a non-financial setting, a specific risk management tool, the risk map, was central to the management of a prolonged and multifaceted project by facilitating the creation and

communication of different representations of the project. Surveys also document the rising visibility of quantitative tools-based techniques such as economic capital calculations and stress testing (Deloitte, 2011; KPMG, 2011; PricewaterhouseCoopers, 2012), which are deployed in communication between risk managers and different stakeholders. Such risk management tools collect information from business units about the “riskiness” and corresponding capital requirement of their activities (including past activities and estimates about future activities), and then produce and disseminate tool-generated assessments of the risk implied in these activities back to those business units and, crucially, to executives who (supposedly) make decisions using these assessments. Risk managers frequently have strong affinity with risk management tools: they develop and deploy them, take part in reconfiguring them and, importantly, can depend on the tools for connection with, and a potential point of influence on, senior executives. As such, the practices that connect risk managers, tools and other organizational actors present a potentially fertile ground for examining the dynamics of risk managers and their (potential) impact on corporate decision-making processes.

This paper, based on a five-year longitudinal study at two UK-based banks, documents and analyzes the practices used by risk managers as they interact with executives and other professionals in their organizations. Specifically, we examine how risk managers practice their expertise and communicate it to others through the development, operation and deployment of tools, and through weaving those tools into the fabric of organizational activity. Our research, thus, centers empirically and analytically on the observed practices by which experts adopt, adjust and reconfigure tools that embody their (and potentially others’) expertise – practices that we define collectively as *toolmaking*.

Our research makes two contributions to the literature. First, we provide a detailed empirical account of an important, but hitherto understudied part of organizational decision making: how risk managers incorporate their expertise into the routines and practices according to which decisions in financial institutions are being made. As criticisms leveled at “missing” risk management during the recent financial crisis emphasize (Bookstaber, 2007), such analysis is important because assessment of the effectiveness of risk management would benefit from a better understanding of how risk managers become involved in, and potentially have an impact on, decision-making processes in financial institutions. In particular, our study addresses directly this gap in the current accounting and risk-control research by showing that toolmaking is central to risk managers’ interactions with other managers. This insight resonates with a wider body of managerial research highlighting the key role that tools play in communication processes between experts and others in organizations (Bechky, 2003a; Carlile,

2002; Kaplan, 2011a; O'Mahoney and Bechky, 2008). Our focus on toolmaking provides a further perspective on how tools can be studied in organizations because it focuses attention on the development and on-going adaptation of tools, how this process interacts with the expertise of the functional expert and the business managers, and its links with the ways in which functional experts can become influential in organisations. Our focus on examining the specific ways in which risk managers operate in organizations also resonates with calls to move beyond standardized risk management approaches to uncover the potential for more fine-tuned and creative approaches to risk management (Huber and Scheyt, 2013).

Second, we contribute to the literature on organizational influence gathering by examining in detail the dynamics between functional experts and managers. This contributes to prior research in management accounting that has examined changes and transitions in the roles that accountants can play in organizations and the tensions that arise as management accountants aim to fulfil the dual role of the “bookkeeper” and the “business partner” (e.g., Morales and Lambert, 2013; Baldvinsdottir et al., 2009; Byrne and Pierce, 2007; Jarvenpaa, 2007; Mouritsen, 1996; Granlund and Lukka, 1998). In particular, Morales and Lambert (2013: 233) recently examined how management accountants “attempt to strengthen their business orientation,” however, they find that the notion of “business orientation” is highly ambiguous and open to interpretation and contestation.

In the following section we discuss the relevant literature, drawing on both management accounting studies and wider managerial research. The third section describes our research methods. The fourth and fifth sections present the two case studies. The final section discusses our findings and develops a conceptual framework on the roles of toolmaking in explaining the dynamics between experts and managers and, in particular, focusing on the instances where experts seek influence.

### **Experts and their interactions with managers**

To conceptualise the interactions between functional experts, such as risk managers, and managers, we are aided, firstly, by studies in the management accounting literature that examine the practices and roles of management accountants as experts and their relations with managers. In addition to the observation that not all management accountants aspire to greater business orientation, and some resist perceived pressures to operate as consultants or advisers to the business (Morales and Lambert, 2013), in the literature there has also been a specific focus on the changing and more “strategic” role of management accountants (e.g., Morales and Lambert, 2013; Kaplan, 2011; Baldvinsdottir et al., 2009; Power, 2007; Byrne and Pierce, 2007;

Jarvenpaa, 2007; Granlund and Lukka, 1998; Mouritsen, 1996). In particular, research indicates that management accountants are increasingly perceived as action-oriented communicators and potential business partners, playing a prominent role in analytical tasks, risk assessment, advisory services and direct involvement in decision making through close interpersonal connections with managers (e.g., Kaplan, 2011; Byrne and Pierce, 2007; Jarvenpaa, 2007; Mouritsen, 1996). Similarly, the establishment of management accountants as “business partners” calls for their active involvement in the operational and strategic decision making processes of organizations (Byrne and Pierce, 2007), where they can operate as “true members” of management teams (Granlund and Lukka, 1998: 187) with regular interaction with, and close proximity to, business managers (Morales and Lambert, 2013; Burns and Baldvinsdottir, 2005). Echoing the normative implications of these studies (and in particular, the predominant aspirational role of the financial expert as “business partner”), the practitioner literature on risk management promotes the view that chief risk officers should focus on developing fruitful interactions between risk managers and the organization’s managerial and executive layers (Economist Intelligence Unit, 2010); for example, by positioning themselves in the role of “a strategic business advisor” (KPMG, 2011: 27). A similar implication follows the observation that the rising visibility of enterprise risk management and risk managers in organizations reflects an apparent and ongoing reconfiguration of uncertainty into an area of management (Power, 2007), which places demands on the risk manager to be a proactive assessor and communicator of uncertainty, capable of operating as a potential partner to business decision makers rather than as a reactive control agent.

The focus on the increasing centrality of risk managers can be seen as a recent act in a broader process unfolding both inside and outside organizations: the contest of functional experts for visibility and voice in the competitive landscape of management practices and ideas (Guadalupe et al., 2012). From this perspective, the work of risk managers and other experts is part of a broader struggle for recognition, where there are tensions between risk managers’ “idealized occupational aspirations” and what is possible and feasible in a particular organizational setting (c.f. Morales and Lambert, 2013: 228). The resulting struggles for recognition are also framed by a commonly held view that, based on their conventional role in the decision-making process, organizational actors are divided into two categories – experts and managers. This traditional perception of experts as the collectors, compilers and generators of “decision-relevant” information and that of managers as decision-makers presents a picture of the organization as an arena in which top managers’ attention and decision-making authority are typically (although not always) sought-after resources. Experts, according to this view, are

expected to compete and/or collaborate to gain control over these resources. Similarly, experts can be seen as actors who operate in a marketplace of ideas and issues, in which they compete for the attention of key organizational decision makers (Dutton et al., 1997, 2001). Experts may do so, for example, by “issue selling”, guiding top management to pay attention to issues and trends that have implications for organizational performance and to understand those issues and trends in certain ways (Howard-Grenville, 2007).

The literature thus portrays two archetypical modes of activity that are potentially helpful in understanding the interactions between functional experts and managers. First, as part of their struggle for recognition (of their expertise), the experts compete for managerial attention. Second, to achieve managerial recognition, they aim to convince managers to use their methods of defining, measuring and representing the business environment. These two modes of activity inform our conception of the interactions between experts and managers. Specifically, we emphasize the importance of intraorganizational connections between the experts and decision makers. Such connections depend on organizational procedures (formal reporting lines, committee memberships and so on), but are also frequently embedded in an interpersonal dimension. For example, the expert may be a member of an executive decision-making forum in the organization. Such membership may provide the expert with opportunities to engage in issue selling or framing the discussion and, at the same time, may also contribute to the construction of trust between the expert and the executives.

### **Experts in tool-rich environments**

Given the centrality of tools in financial risk management, we extend the prior discussion by focusing on research that examines how communication across professional boundaries within the organization is facilitated by the development and application of tools. Here we draw on a growing literature that analyzes the connections between experts, their tools and organizational dynamics. For example, Qu and Cooper (2011) examine the process of inscription building for a balanced scorecard, and show how interactions between consultants and clients affect the shape of this accounting tool. Relatedly, redeploying the concept of accounting inscriptions as well as that of mediation, Jordan et al. (2013) showed how the graphical representations of risk maps acted as a mediating instrument that helped multiple parties working on a joint project in the Norwegian petroleum industry to communicate and to build confidence in their project and its progress. The management literature further examines the interrelations between tools, experts, and managers, and focuses empirically on how tools such as “common models, maps, and devices that demonstrate systemic approaches to cross-

functional issues” enable and frame communication among organizational stakeholders (Kellogg et al., 2006: 24). Studies also show that tools-based communication can alter organizational practices and encourage the emergence of innovation (Boland et al., 2007; Schmickl and Kieser, 2008) and help in the accumulation of knowledge and the facilitation of organizational learning (Dodgson et al., 2007; Cacciatori, 2008).

This line of research indicates that much of the interaction between experts and others revolves around the potential ability of tools to represent and transfer knowledge. This involves the concentrated efforts of particular experts to establish and maintain their tools’ capacity to operate as communicative platforms *vis-à-vis* other organizational actors and thus potentially to influence their framing of organizational issues. Kaplan (2008) highlights the role that tools may play in “credibility battles” as different expert groups promote their strategy analyses and solutions, and points to the central role of the documents that engineers and marketers deployed in arguing for and against an engineering project in a large communications technology firm. Kaplan’s (2011a) follow-on study explicitly focused on the pervasiveness of PowerPoint as a tool of communication in the strategizing process, where it both enabled collaboration, knowledge sharing and coordination, and it also was mobilized in political efforts to adjudicate competing interests through the selective inclusion of information and actors. Kaplan’s insight that the collective use of a tool (the Power Point template) enables the assembly, interpretation, representation and sharing of information, is also reflected in studies that focus on how experts can deploy and develop tools in order to engage in knowledge sharing and collaboration. For example, Bechky (2003a, b), in her study of an engineering company, showed how communication between engineers and technicians typically relied on engineering drawings, which provided a helpful tool through which to illustrate designs, provide feedback and catch any potential problems before construction. Carlile’s (2002) study of an automotive component manufacturer revealed how tools (such as drawings, spreadsheets and production schedules) can help in solving problems that occur across functional boundaries by creating a shared language, providing opportunities to understand the perspective of others and facilitating a process whereby actors from different functions can work together to develop new solutions.

These studies also show that tools, and the practices through which they are introduced into the organization, are not merely implemented by experts, but are also negotiated among different groups of actors. This indicates that the dynamics that evolve around the use of tools, and not only the qualities of the tools themselves, should motivate and stand at the center of empirical examinations. Accordingly, we pay close attention to tools as they are used in a specific context, focusing on the content of the tools, the motivations of the actors using them,

and the purposes to which the tools are put (c.f., Jarzabkowski and Kaplan, 2014). This discussion, thus, leads us to ask how experts maintain or alter their relations with the tools through which they interact with others.

### **Experts and their attachment to tools**

Experts, the literature shows, can manipulate the communicability of the tools to maintain a preferred position of knowledge in relation to others. For example, Bechky (2003a) shows that experts can maintain a high degree of abstraction and formalization embedded in the communicative tool (technical drawings) so as to necessitate their mediation in the communicative process. In contrast, experts can bring about their own obsolescence by educating others to do without them (Burns and Baldvinsdottir, 2007). As Power (1992: 8) put it: “Expertise, if it is to survive as unique expertise rather than being broadly disseminated, can never fully disclose itself.” As such, experts can resist transferring “too much” of their knowledge to others (Byrne and Pierce, 2007), fortifying their position by maintaining enough indeterminacy that they are needed for the application of their own techniques (Armstrong, 1985). Importantly, however, tools that are considered too abstract, technical and unfamiliar by their users are unlikely to create a common ground for communication between users and the experts that develop those tools (Bechky, 2003b).

The positioning of experts in relation to their tools is not controlled fully by the experts, however, as the process by which communication patterns evolve is iterative and necessitates an ongoing negotiation between different groups of actors (Carlile, 2004). This negotiation implies that the experts may need to alter their tools in response to feedback from interactions with managers from other areas of the organization (Carlile, 2002). Therefore, experts who interact with managers through tools may do so by incorporating into the tools elements they believe would be viewed as different and unique (so they can compete effectively with others in the organizational marketplace of management information). However, the experts may also strive to make the tools relevant to the activities of the tools’ intended users. Achieving both uniqueness and relevance, thus, may require the experts to adjust and balance these efforts.

To summarize, we identify the following theory-driven expectations, which informed our research design. As tools are central to processes of risk management in financial institutions, we expect them to be important in understanding how risk managers can become influential. In particular, as part of their struggle for organizational relevance and recognition, we expect tools to form a key part of risk managers’ communication and interactions with



other organizational actors, particularly with senior executives (c.f., Bechky, 2003a, 2003b; Kaplan, 2008; 2011, Carlile, 2002; 2004). Prior literature also indicates that the balance between the uniqueness of the expertise contained in tools and its relevance to the business will influence the interactions between risk managers and other organizational actors. Whether other characteristics of tool use by risk managers influence their interactions with organizational actors is not clear, however. As such, overall, we expect that the use of tools by risk managers is likely to affect how they become influential, but we do not formulate any expectations regarding the specific character or shape of this process.<sup>1</sup> In addition to the tool-based communication, which, we suspect, is of particular importance in the case of risk managers, prior literature indicates that experts, as part of their interactions with managers, are likely to develop and maintain personal involvement in producing analyses and interpretations in important decision-making forums, whereby risk managers “have the ear” of key decision makers. Accordingly, overall, our study examines the following research question: how do risk managers become influential and what role does the use of tools play in this process?

## **Research design**

### *Site selection*

Given the lack of research on how risk managers become influential, our research draws on an exploratory field study (Ahrens and Chapman, 2004; Free, 2007; Wouters and Roijmans, 2011) to collect empirical evidence. Since banks have been at the forefront of using risk management tools (Crouhy et al., 2001), we chose to study financial risk managers in banks. Following a theoretical sampling rationale (Eisenhardt and Graebner, 2007), we chose risk functions in two case study organizations, referred to here as Saxon Bank and Anglo Bank. Each bank focused on two major business lines: corporate lending and consumer lending. The impending regulatory requirements of the Basel II accord and, in particular, the mandated practices of incorporating risk measurements into capital adequacy calculations and the quantification of credit risk (Bank for International Settlements, 2005) motivated the managements of both banks to establish similar high-ranking positions for their most senior risk executive— reporting directly to the CEO – not only to ensure regulatory compliance, but also to influence business decisions. In responding to inquiries from rating agencies and

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<sup>1</sup> We return to the question of how risk managers use tools in interactions with organizational actors in our discussion of ‘toolmaking’ in the final, concluding section.

regulators, financial institutions typically produce aggregate risk reports, various stress tests and economic capital calculations, which may trigger further governance dialogue and feedback to the institution's strategic planning (Deloitte, 2011). The two banks exhibited sufficient similarities to aid comparisons between cases (Free, 2007). In particular, it was the similarity, vagueness and open-endedness of the stated roles of senior risk managers and their respective risk functions that warranted our interest in the pair as a natural testing ground for us to investigate (1) how risk managers can become influential, and (2) what role, if any, toolmaking plays in this process. We shall also describe salient differences in baseline conditions in our setting, for example, the difference in the business models of the two banks (one focused more on consumer lending, the other on corporate lending) and in their apparent proclivity for risk taking (one was seen as more conservative, the other as a more risky proposition to investors).

#### *Data collection*

Given that the organizational dynamics we aimed to observe were likely to evolve over time (Wouters and Roijmans, 2011; Ahrens and Chapman, 2004), we collected data over a six-year period. A longitudinal approach was also important in being able to explore how the development of risk management tools and associated social processes changed over time, particularly as risk managers and others in the organization gained experience (Tekathen and Dechow, 2013). One of the authors undertook an internal study of the risk management practices of Anglo Bank, working for 18 months (over 2006 and 2007) in the risk management function and collecting firsthand data, based on participant observations concerning the organizational contexts in which Anglo Bank's risk management operated and the historical background of these contexts. These data served as background for the author's 34 semi-structured interviews with Anglo Bank's risk officers, senior risk managers and business executives, carried out between 2006 and 2009.

In 2006, we engaged Saxon Bank in a comparative study on risk management. Between 2007 and early 2011, we carried out an additional 26 in-depth interviews, both at Saxon Bank's corporate center and in some of its divisions, matching the range of interviewees to the roles of the risk officers already studied at Anglo Bank (see Appendix 1 for a list of interviewees in both banks). In our interviews we focused primarily on identifying and characterizing the tool-related practices and the particular conditions that led to their emergence and establishment, as well as on the more general conditions that surrounded that institution and the sector at the time.

The interviews ranged in length from one to two-and-a-half hours; all were recorded and transcribed. We also used internal documents such as internal risk reports, internal presentations and risk management guidelines and analyzed both banks' annual reports published between 2000 and 2010. Consistent with the approach of prior research (Ahrens and Chapman, 2004), we decided to end our fieldwork when we had developed a clear sense of the operations of each risk function and how their practices had formed and evolved over time.

### *Data analysis*

We conducted a two-stage analysis. In the first stage, we analyzed each of the cases independently and produced an analytical narrative that depicts how risk managers were engaging in toolmaking and how their patterns of activity and interaction with others changed over time. Our selection of quotes and observations for the analytical narrative was informed by our intention to account for these theoretically-motivated developments, while also preserving in our description the overall context in which the events took place. The design of our within-case analysis also reflects our awareness that the process we describe is a complex, multi-faceted historical narrative, the origins and some of the outcomes of which are likely to be outside our data-collection abilities. Hence, we tried to capture and preserve the actors' accounts of events as they perceived them, and then triangulated these accounts (particularly through publicly available documents, such as annual reports) to produce a more comprehensive picture of the organizational changes (Abbott, 1992). In this way, we identified actor-presented themes in the data (Glaser and Strauss, 1967), highlighting distinct categories such as contextual factors, important organizational processes, risk activities, decision-making incidents and the strategic planning process, while making sure to highlight how these categories changed over time.

In the second stage, we compared and contrasted the two detailed analytical accounts, enriching our picture of the processes we had identified and analyzed with cross-organizational insights. Again, following our analytical framework, the cross-case comparisons focused on comparing and contrasting the way in which the risk managers in the two banks interacted with business managers and the use of, and role for, tools in those processes. We used these comparisons iteratively in our theory building, which we present and discuss in the last section of the paper.

## **Findings**

As indicated earlier, Saxon Bank and Anglo Bank had created similar high-ranking positions for the senior executives in their risk functions. Nevertheless, we found significant differences in the dynamics explaining how the two functions became (or did not become) influential. At Saxon Bank, the risk function designed and developed a series of highly communicable tools that could be used by others, and, at the same time, key risk officers also became more engaged with senior executives in committees and business reviews where the implications arising from those tools were presented and discussed. In Anglo Bank, we identified one group of risk experts that was active in toolmaking but failed to make its tools communicable enough to others. Another group of risk managers utilized its members' individual experience and participation in business-relevant decision making to interact directly with top-level managers, but did not engage in toolmaking to extend their influence beyond this interpersonal involvement.

### ***Saxon Bank***

Saxon Bank is a large, primarily UK-based financial services organization with over 70,000 employees. It is a well-established bank with more than 200 years of history and operates three business lines: corporate banking (responsible for 33% of pre-tax profits in 2007), retail banking (42%), and insurance (25%). Three central functions – Group Finance, Group Corporate Strategy and Group Risk Management – provide support.

Throughout the period of our field research, the same Chief Risk Director (CRD) headed Saxon Bank's risk function. Other important operatives within the function were the Deputy-CRD and the Divisional Risk Officers. At Saxon Bank's headquarters, approximately 75 risk officers were employed directly in Group Risk Management. About 2,500 divisional risk staff (reporting to Divisional Risk Officers) were responsible for risk processes within divisions and business units.

We trace the transformation of the risk function at Saxon Bank as follows. First, we focus on the structural changes and toolmaking activities central to the rise of the risk function beyond its initial (and important) compliance role. Second, we analyze how the risk function aimed to embed risk practices more widely in the bank through the development of planning and reporting tools. Third, we highlight how, during the credit crisis, the risk function came to frame important debates that were being held among decision makers and top executives.

### *Rising beyond compliance*

After a period of poor performance, a new CEO and management team were appointed in 2003-2004. This team recruited a new head for the risk function who was given the title of Chief Risk Director, replacing the previous role of Director of Group Risk Management (Annual Reports 2002 and 2003). The change in title reflected that the CRD reported directly to the CEO, was on par with other group heads, and was a member of the bank's highest decision-making forum, the Group Executive Committee, where strategic decisions were made.<sup>2</sup> The CRD described her role on the Committee as follows:

The Group Executive Committee meets every week, chaired by the Group Chief Executive, and we kind of decide what goes on around here. There are two aspects to that. One, I'm part of the team that runs the business collectively. Two, actually, by doing that, I really do know what's going on around here and nobody can do anything important that I don't know about.

The Risk Modeling and Aggregation Director corroborated this view:

The former Group Risk Director wasn't on the Executive Committee. And it's made a huge difference ... massive ... because she's live in decision-making. So it's absolutely critical if a risk function wants to have teeth. ... If you're not in the gates, you're the guy that just adds up the numbers.

Risk executives saw participation in the Group Executive Committee as crucial for becoming more influential, as it provided the CRD with direct access to decision makers at the highest levels. Without such access, as the Risk Modeling and Aggregation Director implied, risk managers may compile important information, but have little opportunity to use this information in important organizational committees. Indeed, under the previous risk director, the risk function conducted control self-assessment exercises within the business lines, however, these did not gain visibility in front of the Group Executive Committee.

The new risk director set out to change not only the structural position and visibility of the risk function, but also its style of engagement with the business lines. She recalled:

When I came, the risk management function was technically incompetent – so independent as to be totally irrelevant. They wrote histories of risk after the fact, they wrote criticisms of what the business did. My first question to them was, “Where were you, honeybun, when all this happened?”

The CRD appointed new staff to fill key risk function positions and simplified control self-assessment, reducing the number of indicators tracked from a “topsy-turvy” 200 to a “sensible” twelve. Responding to regulatory requirements, the risk function also took on “implementing Basel II” – the capital assessment and reporting requirements coming from international bank regulators, and other specific local compliance projects imposed by the UK

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<sup>2</sup> The 2004 Annual Report describes the role of the Group Executive Committee: “The Committee considers the development and implementation of strategy, operational plans, policies and budgets; the monitoring of operating and financial performance; the assessment and control of risk; the prioritisation and allocation of resources; and the monitoring of competitive forces in each area of operation.”

bank regulator.

In 2004, the CRD initiated a quarterly Consolidated Risk Report (CRR), intended for the members of the Group Executive Committee. About 40 pages long, the CRR reported on trends in six risk areas: market risk, credit risk, insurance risk, operational risk, business risk, and financial soundness (Annual Reports 2004 and 2005). The production of the CRR was a continuous, iterative and consultative process. Two members of the risk function prepared the initial draft with guidance from the Deputy-CRD. The draft was circulated to senior colleagues within the risk function for challenge, debate and comment, in light of which a second draft was prepared. The Deputy-CRD presented the second draft to a committee of the eight most senior risk officers, after which another draft was prepared. The CRD then personally revised the CRR and presented it to the Group Executive Committee for discussion. The CRR was updated yet again before being presented to the Board and then finally to the Risk Oversight Committee.<sup>3</sup>

This cautious consultative approach reflected the risk function's understanding that it was only one part of the central group of support functions and not in a position to directly influence the planning processes of the divisions and businesses – this was the responsibility of divisional managers. The Deputy-CRD summarized the situation as follows:

Our divisional heads view [our involvement in strategy discussions] as very much stepping on their toes. You know [they would say], "How dare they challenge my strategy?" So we have to be very careful what we look at. And certainly there have been a number of discussions with the CEO along the lines of "You can't say what the strategy should be." We are not permitted to say, "Oh, the strategy is rubbish. We should do something different."

This concern not to encroach directly on strategic issues was evident in the labeling of risk categories in the report. As the Deputy-CRD recalled:

As part of the Consolidated Risk Report, our business risk section used to be called "strategic risks," but that really did upset everyone, so when I took over, I said, "Oh, we'll call it "business risks."... It's like the EU treaty;<sup>4</sup> it's exactly the same, we just changed the name.

Along with careful attention to language, the risk function also regularly changed the key features of the CRR. The CRD asserted, "You need to put grit in the system. You need to keep changing things, otherwise people fall asleep." Avoiding the use of technical jargon, the

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<sup>3</sup> The 2005 Annual Report offers additional evidence of this iterative mode of preparation: "At group level a consolidated risk report is produced which is reviewed and debated by group business risk committees, group executive committee, risk oversight committee and board to ensure senior management and the board are satisfied with the overall risk profile ... during the year the Group's consolidated risk report was further enhanced."

<sup>4</sup> The aim of the *Treaty establishing a Constitution for Europe* was to replace the existing European Union treaties with a single text and to enact some institutional reforms. However, the ratification process was brought to a halt in 2005, when French and Dutch voters rejected it. The *Treaty of Lisbon* was then drafted. Virtually identical to the original treaty, the *Treaty of Lisbon* formulated the changes as amendments to the existing treaties. It was signed in December 2007 and entered into force in December 2009.

risk function sought to ensure that members of the top management team unfamiliar with risk analytics could understand the report. Although the CRR contained output from complex risk models, risk officers took great care to ensure that the accompanying explanations were adequate for a non-risk-specialist audience, particularly at the Board level. For example, the first three or four pages of each report were dedicated to a “traffic light” representation of risks, with red signaling the need for immediate attention from executives, and amber and green, less imminent risks. The Deputy-CRD remarked:

I wouldn't last very long if I gave them a spreadsheet and said, “It's all in there, mate. You figure it out.” ... It's the analysis. The numbers are just one part of it. ... We use that as input to write the report. ... We spend a lot of time writing these reports and its analysis for the Board.

The strong focus on translating numbers into qualitative interpretations was coupled with an emphasis on limiting the CRR's length. For example, during 2007, the CRR was reduced from about 40-50 pages to not more than 20 pages, with a maximum of two pages per risk type. The CRD emphasized the positive effect of the CRR on the executives and the Board:

And certainly, you know, for the Board, they always say ... that they learn more about the business – and what's going on in the business and how well it's doing—from the risk report than from anything else they see. And they say that every time.

The risk function also incorporated the business units' views into the CRR. Rather than expecting business units to report key risk trends (through their Divisional Risk Officers) to the central risk management function, central risk officers actively sought out issues in the divisions by talking to business people. In her initial years at the bank, the CRD made a habit of spending one day a week talking to staff that were running various business activities. Many senior officers from the central risk function followed her example and the Deputy-CRD further encouraged his team to act as “the eyes and ears” of the Group Executive Committee and the Board:

[I tell my team], “If you were the Executive Committee and you dug deep down within parts of the organization and found something – ‘Oh my goodness, I didn't know we're doing that’ – you would have to go, ‘We need to do some work on it.’” So we identify [the risk] and do the work and then report it up to the Board.

By taking this approach, the risk function espoused that risk management and business were inseparable; risk managers had to understand the bank's strategy and the businesses' operations in order to understand the risks. As the Risk Modeling and Aggregation Director put it, “You can't actually talk about the risks in the business without actually telling the story of what the business is doing.”

In short, becoming more influential took place in two related areas. On the one hand,

the risk staff incorporated the CRR, and the expertise it conveyed, into Saxon Bank's top-level decision-making forum. On the other hand, the expert views expressed in the report were informed by the insights of the business managers. It is important to note that throughout this time, compliance initiatives continued to occupy a significant element of the risk function's increasing portfolio of activities. For example, in 2008, the CRD estimated she had spent about 40% of her time on overseeing compliance work, while her deputy attended to compliance issues in 60% of his time.

### *Reporting about the future*

Meanwhile, the CRR's growing influence in strategic-level discussions exposed another dimension of that tool. Saxon Bank's risk officers noticed that the report prompted executives to engage in debates that were often forward-looking and related to the strategic plans under consideration. The Director of Risk Aggregation and Modeling explained:

When [the CRR] goes to the Executive Committee, they can look at the overall risks and decide whether the report is fairly representative of the way they think the risks are. Secondly, are they happy with the risk profile? Because you may be in a position where you are happy to be red on change risk, for example when you want to drive a strategic change through. So what you're saying is, "Look, we want to do this, so we're going to run some change risk." Or you might say, "We're not happy with this customer treatment risk" or "We're going to change our strategy, so our strategy risk will go up." So [the CRR] is trying to get those sorts of debates. And we are also getting the risk-reward debate up and going as well. For example, if we wanted to grow our income by this amount over the next five years, what would happen to our risks?

The seemingly spontaneous rise of such forward-looking questions and arguments in the strategic decision-making debates coincided with the risk function's proposal that a formal future-oriented calculative practice, scenario analysis, should become part of Saxon Bank's annual and medium-term planning processes. Scenario analysis involved specifying hypothetical scenarios and examining their financial implications, usually in the form of likely losses (Crouchy et al., 2001; Schwartz, 2001). At Saxon Bank, scenarios typically described economic conditions that were believed to prevail in recessions occurring with a frequency of "one in seven years" or "one in 25 years." In response to the risk function's "what if" questions, the business managers were asked to "stress test" their proposed plans and come up with alternative "Plan B's."

The medium-term planning process had taken place under the umbrella of the Group finance function.<sup>5</sup> This gave the risk function an opportunity to insert the risk view into an

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<sup>5</sup> Each business unit (and subsequently each division) developed strategies and profit-and-loss projections for the forthcoming three years. The central finance staff aggregated the plans and presented them to the Group Executive Committee. Senior executives and the Board approved (or requested changes to) the pro-forma profit-and-loss projections and the requisite capital requirements of each business unit. The medium-term targets then



existing and organizationally significant process with strong accountability mechanisms in place, instead of having to create an entirely new process and convince busy managers to invest in it. Importantly, the risk function had already established a close and collaborative working relationship with the finance function, supported by the CRD being structurally on an equal level with the Group Finance Director. The Deputy-CRD explained:

The best delivery mechanism by far is Group Finance's medium-term planning process, because it's a framework. Everyone has to do it, otherwise the Group Finance Director will have a chat with them. They [business units] all know how it works, so by working with finance people, when we ask for something to be done, then it gets done. So it's not like separate papers coming out from Group [center]. It's the regular planning pack and the guidelines for completing the medium-term planning process. We just dovetail our extra page in and it's seamless.

But timing was a challenge. At first, business plans and scenarios were both developed separately during the third quarter of the year, which did not allow for cross-feeding between the two processes. In 2008, the risk function moved scenario analysis earlier in the planning cycle so that risk considerations, particularly those related to severe economic downturns, could frame the development of plans within the business units.

As scenarios could ultimately affect business plans and subsequent incentive compensation, it was expected that business units would resist running scenarios that were perceived as overly pessimistic or out-of-touch with their own views. The risk function therefore involved the most senior managers of each division in developing the scenarios, giving them “pre-emptive” acquaintance with them. As the Deputy CRD explained:

The draft scenarios will be challenged in each of the divisions ... and only then will they be used in the medium-term planning process, because, on that basis, everybody would have bought into them. So rather than the Group just giving them more work to do, they will say, “Oh, here's my scenario that I report into.”

This was corroborated by a Managing Director from the Commercial Banking business unit, who explained to us that the divisional manager and his senior staff discussed the scenarios, debated the parameters and levels of stress, and then fed this information back to the risk function. The heads of business lines could therefore recognize their own ideas and definitions in the final version of the medium-term planning template. As the risk function worked to involve the business units in scenario development, it also sought to demonstrate its credibility by creating a suite of economic indicators that would provide the basis for each scenario. This tool came to be called the Early Warning System (EWS).

The development of the EWS began after the appointment of the Deputy-CRD in 2007. He was concerned about the inability of the risk function to systematically track the underlying changes in the economy. The tool took a year to develop and included indicators

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formed the benchmarks for divisional performance evaluation and senior management compensation.

such as confidence indices (consumer, business, housing, etc.), swap rates, interbank interest rates and macroeconomic data such as the Eurozone Consumer Price Index. The indicators were categorized as core or non-core. Core indicators were those that had been most highly correlated with past movements in the economy. The risk function hired its own economist to assist the Deputy-CRD in creating the EWS. She drew on input from the Group Economist's team (who had been supplying information on the core indicators), but she explained that from the risk function's point of view, more was required:

These [core indicators] are the ones which have proven in the past to be the most highly correlated with the economy. But we are aware that we can't predict what is going to be the main hit to the economy in the future ... The economy changes structurally all the time and that's why we don't concentrate only on those which have been highly correlated with the economy in the past, but on the much broader range.

Initially, there were about 50 non-core indicators, but that number grew steadily to 160 as the risk function gathered information from the divisions about emerging risks and identified new indicators to represent them (see Figure 1 for an example of the indicators as presented in the EWS).

[Insert Figure 1 about here]

Senior risk officers visited various businesses regularly to review operations and identify emerging risks. The Deputy-CRD described this approach:

We spend most of our time going around the divisions saying, "Right, so what are the risks?" I don't really care if I don't see [the other senior risk officers] the rest of the week, as long as they're over in the divisions. [They should] just get in [a division] on a Monday morning and wander around saying, "If I was the Board, what would I be worried about in this division?"

The risk function welcomed suggestions from the divisions for early warning indicators, which in turn furthered the acceptance of those indicators into routine monitoring.

The EWS helped convince the organization's various functions that the parameters in the risk function's scenarios were worth following. As the Deputy-CRD explained:

As part of the coming up with the scenarios ... they'll [divisions] say, "Well, why have you got this scenario? What's the basis for it?" And we'll say, "Here are the early warning indicators." ... It's trying to ground it [the scenarios] rather than having very touchy-feely, "Oh, group risk are going off on one and being a bit negative." ... We think it's [expected loss] too low for the following reasons. Why do we think that? Because of what we're getting out of our early warning system.

In turn, the scenarios were a useful managerial tool for the business line managers. The Managing Director of the Commercial Banking business unit confirmed:

It's [the scenario] also, I think, a very good leadership tool. Because ... when I arrived, people tended to be very functionally-based. So the finance people sort of did the numbers, but did they understand the business drivers behind the numbers? The HR people sort of did the people

bit, but did they know – did they understand the impacts that we would have – the decisions we would have to take in terms of people in different environments?

As the scenarios were not directly related to any particular area of practice (such as finance or HR), they were not framed according to the knowledge of any specific group in the business unit. They therefore helped the business unit manager to present a wider picture to all his or her managers. The scenarios could also support the business unit manager's preferred method of managing risk. The Managing Director of Commercial Banking explained that, before the inclusion of scenarios in the planning process, stress testing focused primarily on predicting profits (i.e. the income statement). However, the Managing Director felt that there was a "need to look a bit more at the balance sheet" and at the business unit's "liquidity position" (i.e. the cash flow statement) as part of managing the business unit's risk. This desired expansion in attention was achieved over time as the scenarios were gradually implemented into the planning process. Eighteen months after the initial introduction of the scenarios, the Managing Director concluded that his staff now understood the importance of predicting the impacts on the balance sheet and cash flow (as well as on profits).

In 2007 and 2008, when the risk function was still developing and implementing scenario analysis, the Annual Reports stated that the methodology was making "significant progress" (Annual Reports 2007 and 2008). In 2009, however, the Annual Report could say:

Stress testing and scenario analysis are fully embedded in the Group's [Saxon Bank] risk management practice ... [this] includes stress testing the medium-term plan to changes in economic assumptions. The output of this stress testing is used to determine investment decisions.

With the help of tools such as scenarios and the EWS, the risk function increased its influence on decision making in the long-term and medium-term planning process. Scenarios and the EWS served as tools that business managers used to prepare forecasts of profits, balance sheets and cash-flows. At the same time, input from other managers was incorporated into the design of these tools.

### *Reframing key discussions*

In 2007, deteriorating economic conditions drew attention to the tools the risk function had developed. The CRD decided to deploy the scenarios in the Group Executive Committee and directed the attention of top management to the relevance of the tool:

The biggest use of stress tests was actually not in the medium-term planning exercise, but at the Group Executive Committee, during 2007. ... It became a real living tool there. I could go into the meeting and say, "Now we are in a one-in-seven-years downside scenario. What are we going to do?" If we are in a one-in-seven-years recession, a one-in-15-years recession cannot be too far away. So we had to be very action-oriented. There was so much uncertainty; we shifted

between the downside scenarios back and forth. But it gave us a framework to think about what was happening.

Once top management started asking about the implications of the downside scenarios, the answers had to be gathered from the businesses – by the business managers themselves. The subsequent discussions took place in face-to-face meetings, called the Quarterly Business Reviews, in which the CEO and several Group Executive Committee members invited divisional heads to make presentations. They then questioned and challenged them about their business performance, the expected impact of deteriorating business conditions (expressed in scenarios), and their proposed responses. These intense and challenging meetings soon became known in the company folklore as “Star Chambers with the CEO.”<sup>6</sup> Accordingly, divisional managers spent a lot of time preparing their quarterly presentations. The CEO would also raise the pressure on the divisions by sending a follow-up letter starting with the line that divisional heads came to dread: “I am sure you are as disappointed as I am...” At this point, the risk function was able to step in to help divisional heads make their scenarios relevant to the key strategic decision makers and to develop Plan B’s for discussion with the executive team. The CRD emphasized that this was indeed the hallmark of the new business-oriented risk function, which was now partnering with the businesses to help them do a better job at risk management.

The rise of the Quarterly Business Reviews, in turn, prompted the risk function to redesign the CRR to incorporate the implications of the scenarios and early warning indicators that the businesses were now preparing and tracking in earnest. Up to this point, the CRR had been focused on the current status of each risk (red, amber or green) and how this had changed over the preceding three months. Drawing on the results of the EWS, the risk function started to incorporate a forecast of the likely status of each risk type 12 months into the future. This was used by the risk function to direct their horizon risk analyses and their recommendations “as to what the bank should be doing” (Deputy-CRD). Thus, toolmaking by the risk function at Saxon was an ongoing and iterative process, and changes in the business environment and interactions with business managers led to further rounds of tool development.

### *Summary*

At Saxon Bank, *toolmaking* was central in the interactions between risk managers and others, which in turn helped to frame important debates – from the performance evaluation of

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<sup>6</sup> The Star Chamber was an English court of law that sat at the royal Palace of Westminster until 1641. It was originally set up to ensure the fair enforcement of laws against prominent people, though over time it evolved into a political weapon in the hands of the ruling monarchs.

divisional heads to how to deal with the credit crisis. In addition to fulfilling an important compliance role (by taking care of regulatory compliance projects), the risk function took on multiple layers of additional work. Importantly, it designed and promoted a series of reports that helped to position the expert views of the risk function at the focal point of strategic decision making: the Group Executive Committee. Equally important was using the tools to create meaningful communication between the risk function and the business managers. While keeping control over the overall design of these additional tools, the risk function sought out the views and insights of the different “users” of risk management and incorporated these into the reports. The combination of these two processes – allowing others’ views into the reports while maintaining the position of introducing the report to the Group Executive Committee – was characteristic of the risk function’s conduct *vis-à-vis* other units.

### ***Anglo Bank***

Anglo Bank was founded in London in the middle of the 19th century and provided banking services to Asian and African colonial outposts in the days of the British Empire. In the 2000s, after a period of crisis, Anglo Bank gradually resurfaced as a leading international bank. It had two core businesses: corporate banking (focusing mainly on large loans to businesses), responsible for 58% of pre-tax profits and 72% of assets employed in 2007, and consumer banking, responsible for the remaining 42% of after-tax profits and 28% of assets employed.

In 2005, at the beginning of this field study, the risk function in Anglo Bank consisted of two groups of risk officers: a group that had originally been the credit management function (whom we refer to as the “old guard”) and a team whose members specialized in regulatory compliance, risk policies and risk modeling (whom we refer to as the “new guard”). In 2003-2004, both teams had experienced a “clean sweep” as a senior risk management team was recruited from the outside. This reflected top management’s determination to strengthen risk management in the wake of significant growth opportunities in emerging markets, which posed new challenges in the corporate lending area, and in response to the requirements of the Basel II regulatory reform. Both groups were headed by risk officers who reported directly to the head of Anglo Bank’s risk function (the Group Chief Risk Officer, who was a member of the Executive Board) and had similar levels of seniority. However, the old guard represented the traditional ways of performing risk management, while the new guard advocated model-based risk management with a strong emphasis on risk quantification and risk-adjusted performance measurement.

### *Conflicting views of risk management*

Senior old guard risk managers had at least 25 years of experience in various banks in corporate and consumer lending, the bread and butter of traditional banking. Many had advanced through the ranks of the business lines and various levels of risk control. The top tier of these risk officers occupied key governance positions at Anglo Bank, heading centralized risk-control processes such as credit risk management and country risk management at the group center. Two of them sat on (and alternately chaired) the highest decision-making committee in the corporate lending business, the three-member Group Credit Committee. Another two of the old guard acted as senior risk officers in the business lines (corporate and consumer lending), with formal authority to oversee the execution of business strategies from a risk perspective.

These risk managers had accumulated considerable knowledge about the banking business and had developed their own personal heuristics for judging the risk of companies, which included a strong emphasis on the external environment. In their day-to-day operations, members of the old guard did not practice risk silo management (Mikes, 2009) by confining themselves to a single risk type. Rather, their methodology focused primarily on the single loan as the unit of analysis, an approach that can be described as “holistic” or “cross-silo” risk management; they were reluctant to look at risks independently of each other. A prominent member of the old guard, the Head of Country Risk, described his holistic view of risk:

Frankly, when we look at deals from a country risk perspective, I have to tell you, we are thinking about credit risk. At the Group Credit Committee, I look at deals from a credit risk perspective, and I have to tell you, I’m certainly looking at country risk as well. Risk is chemistry, it is not particle physics. You can’t separate the risks.

In contrast, the new guard based its view of risk management on state-of-the-art risk models developed for individual risk categories. It considered Anglo Bank’s ways of managing risk “messy”; that is, lacking standards, formalization and accountability. In the wake of the Basel II regulatory reform, accountability for risk management became a heightened concern in the industry and Anglo Bank’s Executive Board decided to recruit a senior risk officer as Group Head of Risk Reporting. This post, reporting directly to the Group’s Chief Risk Officer, came with the mandate to formalize and standardize the bank’s risk methodologies. The Group Head of Risk Reporting, whose prior position was in another bank that was famed for its cutting-edge, model-based, heavily quantitative risk management, perceived Anglo Bank’s risk management practices as insufficient:

The general point, which I’m not sure how many people get, is that there is nothing in our

accounts about the risk that the bank is running, unless you go through a separate risk analysis process.

This highlights two important points about the new guard's view of risk management. First, the primary unit of analysis was the entire bank's operation, and, second, the new guard advocated the need for a specific process to aggregate and assess the bank's risks. In particular, the new guard was concerned about the lack of a common "risk language" and a consequent inability to aggregate Anglo Bank's risks at the group level. As the Group Head of Risk Reporting saw it:

Can [Group Risk] provide that [aggregate risk] information centrally? The process does not exist, the discussion framework is not there, and the language is not there. So we have to build up that language. We asked the businesses to provide the data, but they could not.

The infrastructure he saw lacking—tools that would have created the "common language" and the "discussion framework"—was something the old guard had not needed. The old guard focused on analyzing and then approving or rejecting the single loan for which they relied on their own proprietary tools and previous experience in the business lines, and on frequent interaction with business managers. The new guard, in contrast, promoted an approach that divided the bank's activities into specific risk categories (rather than loans and other particular investments and products), aggregated these risk categories, and produced bank-wide quantitative risk assessments. In the next section, we describe how the differences were expressed in the development of risk practices.

### *Competing tools and risk practices*

In 2006, the new guard created a governance document—called the Risk Management Framework—in which they sought to standardize risk management across Anglo Bank. They divided risk management activities into different risk types and proposed that risk heads (such as the Head of Credit Risk and the Head of Country Risk) and other executives each take responsibility for a risk type through limit setting and monitoring.

The Group Head of Risk Reporting recruited a 12-member team to advocate the benefits of an independently set, standardized risk management process across the organization. The team requested business unit heads to document all policies and risk standards applied in the management of their operations' credit, market and operational risks. The intention was to highlight common best practices and cut out outdated ones. By imposing a new language for risk processes, they were preparing the ground for the next tool: economic capital, an aggregate measure of risk for each risk type.

The missing risk-analysis piece, according to this view, was a formal calculation of

the risk content of the bank's different business strategies. Such calculation required a business manager to understand the riskiness of his or her balance sheet—loan by loan, asset class by asset class, industry segment by industry segment—and then aggregate these risks across his or her entire asset portfolio. This goal, however, faced considerable challenges in Anglo Bank. The Group Head of Risk Reporting diagnosed the situation in 2006 as follows:

[W]e will need to put more emphasis on the balance sheet in the planning process than we have done before. We are trying a dry-run [of the economic capital calculations] this year. We have encountered great difficulty; it is a nightmare. We cannot do it. When you ask the businesses to forecast their income, there is a well-understood process there. When we ask them to forecast their balance sheet and their capital need, they cannot do it.

Forecasting income was and still is a widely practiced process in banks. In contrast, forecasting economic capital was an emerging practice in the banking sector and had not been practiced at all in Anglo Bank. As such, the economic capital tool was not perceived as relevant by managers because their typical decision-making process was framed by the income statement forecasts of their business units (and not by the balance sheet forecasts).

The Group Head of Risk Reporting recruited a small team of analysts who also had experience with risk-capital allocation methodologies in other banks. They used the Risk Management Framework to determine which risk types they needed to allocate capital against and which risk types were best managed by a process. One of the new guard risk officers from the economic capital team described how earlier attempts at introducing the economic capital methodology in Anglo Bank had failed:

There's been two fairly major initiatives in the past to get economic capital [the methodology] embedded. But the problem is, I'm not sure how much buy-in it's had from senior management. ... I don't think [our Chief Executive] has ever been particularly keen. He's had metrics that he was interested in, and economic profit wasn't one of them. ... When he came in, it got dropped from the senior management profitability packs. As soon as that happened, you can imagine the effect that had on things like data quality and how much attention people were paying to it. It was pretty obvious the management on top was not interested.

Here, the new guard had not built relationships with managers and senior executives to help facilitate the introduction of an “advanced” economic capital methodology. Although regulators allowed (and Anglo Bank had previously adopted) less technically challenging compliance approaches, the new guard positioned economic capital as desirable for the bank in the context of the implementation of the Basel II Capital Accord in 2008. While the economic capital team believed that regulatory compliance had to be a key “selling point” of the methodology, it lamented that Anglo Bank managers resisted adopting a technique that the risk experts viewed as superior to both the previous compliance approach and the existing planning and budgeting practices in any case. One of the team members summed up these concerns:



Unfortunately, we are relying on the regulatory crutch to push [economic capital] through and forward. What our true selling point ought to be—and it's difficult to make that—is that it will improve the bank; it will add value to you as an organization because you will be able to better understand what your capital requirements are. You will be able to link your capital requirements to shareholder value; you can budget and plan much more comprehensively. At the moment, we budget from a P & L [profit and loss] perspective, but we're saying that by doing it differently we decide to also incorporate a balance sheet view.

But the business managers were neither persuaded of the new tools' necessity nor convinced of their superiority. As one senior risk manager commented, "The businesses are coming back and saying, 'Guys, wake up! That's not the way we run the bank.'" The new guard risk officers also struggled to come to terms with the fact that it was not only Anglo Bank's business managers who resisted the Risk Management Framework and the economic capital methodology, but also the old guard risk officers within their own risk management community.

According to the Risk Management Framework, credit risk and country risk were two distinct types of risk, each calling for a different set of responsibilities and expertise. This was antithetical to the old guard approach, voiced by the Head of Country Risk:

Through the Risk Management Framework, we have compartmentalized risk. There is market risk, there is operating risk, there is reputational risk and credit risk. ... The reality is: They all interact.

Other old guard risk officers also resisted the proliferation of documentation that accompanied the formalization of risk policies. The Chief Risk Officer of the corporate banking division highlighted that setting boundaries was the preferable way to manage risks:

There is little point in my mind in having a 4,500-page document setting out your risk policies because nobody's ever going to read it. They can't hold it in memory. What I've been trying to do is move towards what we won't do from a risk [management] perspective, which allows people in the business to have the freedom to do certain things provided they don't breach certain boundaries. If they breach certain boundaries, they've got to come back to me and ask. If you tell somebody what they can't do, it's a lot more succinct than telling somebody what they can do. The question is: How do you guide succinctly and leave plenty of room for common sense, but no room for stupidity? That's what we've been trying to do. Have we got that right in document form? No.

While the new guard risk managers focused on defining guidelines that were then disseminated in documents across the organization, the old guard business line Chief Risk Officers preferred to communicate directly with the business managers via hands-on involvement rather than control by guidelines. This caused tensions between them and their new guard colleagues at headquarters, who advocated the idea of independent risk control from a distance organized along the reporting lines specified in the Risk Management Framework. Sitting in his office in one of Asia's financial capitals, the old guard Chief Risk Officer of the corporate bank explained:

Group Risk's point of view of my position is that I am not independent from the business. ... My colleagues [in London] anticipate that if I am doing my job properly, everybody should hate me here. However, from my perspective, if I develop a relationship with the business such that I can help them see that they should not bring me a piece of business for a decision because it is not right, that is a far better cultural way of doing risk management. Because [salespeople] will know where the boundaries are and they won't bring me business that doesn't get approved. As long as you are supportive of good business, and explain why you turn business down, you should never get any knives. What we try to do is a partnership.

Creating and maintaining a relationship that gave freedom of action to the business lines was important for the old guard. In turn, business managers were obliged to interact directly with the risk manager as situations evolved. Under this arrangement, there was little room for such lengthy documentation as the Risk Management Framework. The tools that old guard risk officers mobilized were not shared with the business lines; these were developed and carefully guarded by the experts. For example, the Chief Risk Officer of the corporate banking division utilized a risk model (that calculated the expected loss of each loan and of the entire loan portfolio) to gauge how much risk his business had taken and had still room to take, "I know where I'm going to come in on losses this year, I'm well below my Expected Loss."

He also relied on his own "mental markers":

I follow what my view is, plus what I'm seeing in the portfolio. ... What I would normally do is when I think about something, I'll put markers, mental markers down, and say, "If the trend is going this way, this will happen, then this will happen, then this will happen." And the moment I see three of those pillars knocked down, I know that we're going in the direction I thought we were. That way I can start taking action.

This highlights the difference between risk managers' use of tools and toolmaking. Although old guard risk officers had tools at their disposal, they did not engage in the dissemination of those tools in the business lines. In order to influence business managers, the old guard developed and mobilized their personal connections and in-depth knowledge of the business managers' worldviews. The Chief Risk Officer of the corporate banking division explained:

[Business generators] never have a short meeting with me! ... [Y]ou need to know the business generators well enough to know when they are likely not to tell you the truth. ... The issue is to understand how they operate within their values. So not only do you understand where they are likely to over-egg it because the rewards are there, but also it will tell you how to approach them when you want to slow them down.

Consistent with this approach, the old guard distanced itself from the economic capital methodology promoted by their new guard colleagues by stating that the alleged technical superiority of the economic capital approach was irrelevant because, according to the old guard, the core test was whether or not economic capital was helpful for running the business,

irrespective of its possible technical advantages.

### *Summary*

The gradual accumulation of knowledge about how business managers operated was one of the hallmarks of Anglo Bank's old guard. This characteristic, along with its dense network of interpersonal connections, led to the development of an interactive risk-control methodology whereby risk management expertise was embedded in proprietary tools and the risk officers themselves. The old guard refrained from disseminating tools to convey their expertise to others, preferring to frame the strategic decision space using their decades of experience and personal interactions with business managers. As a result, the expertise of the old guard was limited to face-to-face interactions with the experts. Once an old guard risk manager leaves or retires, decades' worth of experience and, in effect, that manager's risk management methodology, are lost. Anglo Bank's new guard filled a role that was perceived as meeting a regulatory compliance requirement, but not relevant to "running the business." Their new tools (economic capital and the Risk Management Framework) did not gain traction with business managers or with the old guard. Although the new guard did have the resources to develop such an infrastructure, the striking differences in the two groups' worldviews hampered a potential collaboration combining the old guard's risk expertise and the new guard's toolmaking abilities.

### **Discussion and conclusion**

Using the empirical evidence presented above, we now outline a more general framework to describe how risk managers (and potentially other experts) interact with managers, how they may become influential in organizations and how their patterns of activity change over time. In doing so, we draw on our analyses of the two separate organizations that are similar in important respects, but also note that they have different histories, cultures and strategic orientation. Below we analyze two (potentially related) modes of interaction and possible growth of influence: (1) through interpersonal connections and (2) through toolmaking.

#### *Interpersonal connections*

Consistent with prior literature that discusses the "influence activities" of various organizational actors (Guadalupe et al., 2012; Dutton et al., 1997, 2001; Howard-Grenville, 2007), we find that some risk managers become influential by developing and maintaining

significant personal involvement in producing analysis and interpretation in important decision-making forums. The finding that risk managers may “gain the ear” of important decision makers and thus exert influence directly in personal interactions with those managers resonates with the “business partner” literature in management accounting research (Baldvinsdottir et al., 2009; Byrne and Pierce, 2007; Jarvenpaa, 2007; Mouritsen, 1996; Granlund and Lukka, 1998). In the interactions between risk managers and executives, particularly through the direct provision of advice and counsel, the former have knowledge and expertise that are considered relevant by the executives (and other organizational actors) because of their high level of analysis and interpretation. In our study this is typified by members of the old guard at Anglo Bank, who were greatly valued for their intimate knowledge of the business, gained through years of experience with the bank. Participation in formal meetings was seen as central by Anglo’s old guard risk managers, because this gave them the “the privileged moment” (Morales and Lambert, 2013: 235) to interact with managers. Anglo’s old guard used their intimate, tacit knowledge of the business to make their participation relevant to the business, thus avoiding the fate of other functional experts who end up finding out that just “going to these meetings is pointless” (Morales and Lambert, 2013: 235). However, they only transferred the knowledge provided by their carefully guarded tools and did not share the tools themselves with business managers. Thus, our findings highlight that this mode of interaction has its limits, because the expert knowledge is neither applicable nor replicable without the direct personal involvement of the risk managers themselves. This is a particularly important limitation where banks, such as Saxon and Anglo, operate on a large scale with operations distributed geographically around the world, as the organizational influence of risk managers will be constrained by the extent of their personal interactions with business managers. In contrast, Saxon Bank’s risk managers sought to engage with the business not only during these interpersonal connections or “privileged moments” with the executive board, but also through the development of tools.

### *Toolmaking*

The second aspect of our analysis – and our central contribution – is explaining how risk managers become influential through toolmaking – how risk managers adopt, adjust, and reconfigure tools that embody their (and potentially others’) expertise. Our development of the concept of toolmaking was motivated by the ubiquity of tools in the context of financial risk management, and by prior research highlighting the important role that tools play in the interactions between experts and other organizational actors (c.f., Bechky, 2003a, 2003b;

Kaplan, 2008; 2011, Carlile, 2002; 2004; Jarzabkowski and Kaplan, 2014). Our focus on toolmaking extends prior research by directing attention to three important characteristics regarding how risk managers engage with tools in their interactions with other organizational actors. First, we show that the ways in which experts adjust and reconfigure tools is important, rather than just their ‘use’ of tools per se. Second, we focus attention on the communicability of the tools that experts develop and employ in their interactions with organizational actors. And third, we show that the extent to which experts remain attached to, and involved in the use of, those tools is also important. From our empirical analysis, and in light of our theoretical framework, we now identify three factors that contribute to the success or failure of the toolmaking practices of the experts we observed (see also Table 1).

<insert Table 1 about here>

First, there is a significant difference in the willingness of the risk functions at Saxon Bank and Anglo Bank to allow their tools to change in the process of their development and deployment. Anglo Bank’s new guard risk managers were reluctant to use feedback and data coming from the business lines in developing their tools, viewing it as deficient (for example, not accurate enough). They relied on an external source of authority (the Basel II directives) to legitimize their methodology, and employed a set of pre-defined—rather than internally negotiated—procedures. In contrast, Saxon Bank’s risk function treated feedback and information from business line managers as valuable “raw material” to be incorporated into their tools, absorbing management insights into the CRR and the scenarios, and adding new indicators suggested by management to the EWS. In this way the risk managers at Saxon Bank were able to alter, negotiate and change their tools, which helped to increase the impact of these tools in the interactions between the risk function and business managers (c.f., Carlile, 2002). Thus risk managers at Saxon Bank appeared to act as reflective and responsive actors, willing and able to learn from business managers’ feedback and critique, and adjust their toolmaking efforts accordingly (c.f., Howard-Grenville, 2007). By developing tools that readily incorporated information and knowledge from other managers, the tools of these risk experts were more relevant to the business lines. The tools facilitated knowledge-sharing by establishing a common ground (Bechky, 2003b), and, ultimately, made risk managers more influential.

Saxon Bank’s risk function also managed its relations with potential users by demonstrating to them that important ideas for designing the risk management tools were

theirs. This was achieved by including users' knowledge in the tools and by disclosing working models of the tools to business managers. By making the tool permeable to knowledge from managers, Saxon Bank's risk experts also generated support that helped them to link one of their tools (the scenarios) to the already influential medium-term planning process, and thus gain a foothold in a practice that had been receiving managers' attention across the organization. In comparison, Anglo Bank's new guard, who did not "open up" their tools to potential inputs from other managers, failed to attach their proposed measure of economic capital to existing organizational reporting practices, which contributed to the limited influence of this tool. This resonates with Qu and Cooper's (2011) analysis of the importance of incorporating the views of other organizational actors during the development of tools (in their case, "inscriptions"). Specifically, our analysis enriches the notion of "inscription building" by highlighting the ways in which risk managers at Saxon Bank changed and adjusted their tools through including other actors.

Second, comparing the two cases deepens our understanding of the role that interactions between tools and experts play in forming risk managers' credibility in organizational decision making. In Saxon Bank, credibility was based on the co-constitution of the experts and their tools. "Good" tools—those that provided relevant and helpful information to managers—made the risk function seem more trustworthy, which helped to increase its influence. The "experience-based" credibility of Anglo Bank's old guard, however, was attributed to individuals rather than to the function as a whole. Indeed, their new guard counterparts imported their tools from elsewhere and relied heavily on the "regulatory crutch", an external source of credibility.

Third, the two banks' risk functions differ in the importance they assigned to the communicability of their tools in relation to those outside the risk function. Saxon Bank's risk function tried to shorten their reports, simplified the way data and measures were presented, and, overall, made their message clear to business lines and senior executives. In this way the tools of Saxon Bank's risk function, particularly the CRR and scenarios, were able to stimulate debate and discussion amongst the business lines and senior executives. We do not see this in Anglo Bank, as the tools of the new guard were not readily communicable—they were too abstract, technical and unfamiliar to the business lines (c.f., Bechky, 2003b). It has to be noted, though, that the area of comparison is partial, because the primary audience of Anglo Bank's new guard risk managers were the regulators, and, beyond compliance discussions at internal governance forums, the new guard had limited opportunities to develop authoritative inscriptions (Jordan et al., 2013) to build relations with other control processes

such as planning or performance measurement. It may be, then, that they did not develop communicative tools in part because they had little incentive or limited opportunities to do so.

At a minimum, our discussion of the findings so far raises awareness that there are risks managers who are more communicative, more flexible and more adaptive in their work with tools than others. To sharpen these insights, we next outline two potentially characteristic modes of operation that differentiate “toolmaking experts”, which we term *Compliance Experts* and *Engaged Toolmakers*. We distinguish between these two modes of operation through an analysis of the communicability of the experts’ tools and the extent to which the risk managers were involved in their use, drawing on examples in our two cases.

Risk managers who operate as *Compliance Experts* develop tools that tend to be directed towards their own work and an external audience, and their knowledge is not incorporated into tools that are readily communicable outside their function. In this category, we can find Anglo Bank’s new guard, whose tools served an important organizational function (compliance with regulatory requirements), but whose influence on business activity and strategic decisions was limited. In particular, their tools did not communicate their knowledge in ways that were understood and accepted by the business lines and top managers, who saw a gap between these tools and the way they ran the bank. To stress, the new guard—the *Compliance Experts* in Anglo Bank—did express motivation to increase their influence over managers, but were unsuccessful in doing so. This was because the new guard did not develop tools by using the knowledge of the business managers, neither did they focus on presenting information in clear and accessible formats to decision-makers—only to regulators. More generally, when operating as *Compliance Experts*, risk managers develop tools that depend predominantly on bodies of expert knowledge that they themselves have but other actors in the organization typically lack. As a result, their tools are regarded as too abstract, formalized and/or complex such that the tools themselves do not mediate the communicative process between risk experts and business managers (c.f., Bechky, 2003b). In this way, the expertise of *Compliance Experts* is not disclosed in a way that enables its dissemination to business managers in the organization (c.f., Power, 1992). As such, *Compliance Experts* tend to fulfill an important organizational role, such as meeting regulatory requirements, but do not significantly shape the agendas or actions of other organizational actors.

Risk managers who operate as *Engaged Toolmakers* have developed tools that can effectively communicate their knowledge to other organizational actors, but in such a way that they themselves remain necessary for fully understanding, interpreting and acting upon

the knowledge generated and portrayed by those tools. At Saxon Bank, the Consolidated Risk Report, the Early Warning System, and the scenario analyses were—by the end of our research period—becoming indispensable tools, used by senior executives in important decision-making forums. The tools were effective because they included users’ knowledge in the tools (as the working models of the tools had been disclosed to business managers) and presented knowledge in ways that were accessible and clear to users. The tools were also kept up-to-date through regular revisions. Crucially, the risk managers themselves were still needed to interpret that knowledge to the business lines and in top management committees, and thus both the risk managers *and* their tools were part of the communicative process with business managers. In this way, *Engaged Toolmakers* avoid transferring and fully disclosing their knowledge and expertise to others (Power, 1992; Byrne and Pierce, 2007) and thus maintain sufficient indeterminacy such that they are needed for the application of their tools (c.f., Armstrong, 1985). *Engaged Toolmakers* need to demonstrate not only that their tools are relevant but also that they themselves are necessary in order to “translate” that knowledge into formats that management could digest and turn into actionable items. This can be done by regularly changing the structure and format of their tools and by updating the type of knowledge that these contained, often in consultation with the business managers themselves. In this way, *Engaged Toolmakers* can resist the fate of those experts who fully disclose their expertise, and enable others to use it without them, thereby bringing about their own obsolescence (Burns and Baldvinsdottir, 2007; Power, 1992; Byrne and Pierce, 2007). By way of analogy, it takes an expert watchmaker to make a watch, but no one needs to consult a watchmaker to tell the time. This fate was very deliberately and successfully avoided by Saxon’s *Engaged Toolmakers*.

It is important to note that the use of the terms Compliance Experts and Engaged Toolmakers are proposed as characteristic modes of operation to describe the overall toolmaking practices of a risk function. But risk functions are by no means homogeneous, as they consist of different layers of roles and work modes carried out by different staff (c.f., Morales and Lambert, 2013). For example, at Anglo Bank, we saw how the “new guard” was focused primarily on compliance with external reporting demands, whereas the “old guard” focused on personally advising the business lines. At Saxon, some staff worked on compliance orientated tasks such as control self-assessments, complemented by other staff who were devising additional tools that over time added new layers of discussion that were relevant and meaningful to both business lines and top managers.



### *Implications and future research*

Our study indicates that toolmaking—the process by which experts adopt, adjust and reconfigure tools that embody their (and others’) expertise—plays a vital role in explaining how risk managers may become influential. A central implication of our study is that an understanding of how risk managers interact with other managers and may become influential (or not, as the case may be) must involve an analysis of not only their interpersonal connections with other managers, but also an examination of whether (and how) toolmaking forms part of their activities. Relatedly, our research shows that it is the specific ways in which risk managers develop and deploy tools in their interactions with other business managers that is important for understanding how they can become influential—not the presence or absence of toolmaking *per se*.

Even when risk managers become influential through toolmaking, their influence may not result in better decision making and executives may still end up with excessive risk taking, particularly if they are institutionally incentivized to do so. Instead of providing direct and explicit advice to decision makers, toolmaking, as observed at Saxon Bank, is primarily directed at framing: it shapes assessment procedures, valuation methods and other decision-facilitating practices, but relies, crucially, on managerial input. This insight can contribute to the development of a more nuanced understanding of contemporary risk management in financial institutions (c.f., Huber and Scheyt, 2013). As risk management becomes more tool-driven, toolmaking may become more prevalent, which implies that risk managers are likely to have more influence over the shape of the organizational discourse about risk and the process of decision making. But without important governance and incentive changes, they may still have little effect on the decisions themselves.

The conceptual framework and findings we present complement other explanatory factors related to how risk managers become influential. For example, consistent with studies of changes in corporate control (Fligstein, 1990; Zorn, 2004), we note that the heads of the two risk functions had obtained high-ranking positions as risk management became more important in the corporate world. The settings help us to reject possible alternative structural explanations that the extant risk management literature offers to explain the differential influence of risk management functions; in particular, the presence and formal authority of the chief risk officer and espoused top management support (Beasley et al., 2008). Given that both banks had chief risk officers (and senior risk officers) with espoused top management support and access to the executive board (the most important decision-making forum at each

bank), the differential degrees of influence they came to hold requires an explanation that goes beyond structural arrangements.

Several questions for future research emerge from our analysis. What institutional and organizational contingencies allow the modes of operation adopted by risk managers (along with their influence of differing nature) to develop? The organizational acceptance of particular tool-related practices may resonate with wider concerns over the viability and appropriateness of particular styles or methods of risk management, for example, the extent to which risk management should strive for quantification and accuracy (Mikes, 2009; Mackenzie and Millo, 2009). In particular, our findings show that accuracy of risk information per se was not critical to the process of becoming influential—it was the relevance and communicability of the tools that the risk managers had developed that was of central concern. In fact, this indicates that if attempts to increase the accuracy and sophistication of risk tools (a solution regularly put forth in response to risk management failures, e.g. Stulz, 1996; 2009) come at the expense of communicability, it is likely to reduce the extent to which such tools can influence decision makers.

Future research can further explore the factors that underpin the dimensions of “communicability” and “experts’ personal involvement”, which helped us to distinguish between the characteristic modes of operations evident in the risk management experts we observed. “Communicability” related to experts’ willingness to open up the design of their tools: some may be inflexible, others may be open to the internal negotiation of their tools. Some may try to introduce “off-the-shelf”, ready-made tools, imported (or imposed) by the external environment, while others will champion “home-grown” tools. Sharpening the “involvement” dimension by making further field observations in other settings, it will be important to observe the range of different control settings where experts may (or may not) find the “privileged moments” to interact with business managers, whether in compliance roles, discretionary strategic decisions, or in performance evaluation and planning.

The different modes of operation adopted by risk managers also come with different organizational requirements, suggesting that future research could usefully develop further contingency arguments in order to explain the differential influence of risk managers. For example, developing the tools and actions of *Engaged Toolmakers* may have higher resource requirements, which may be prohibitive in organizational settings where overhead resources are scarce or limited. Here, risk experts may be entirely absent (in order to minimize overhead costs), or if their presence is required by top management or regulatory imperatives, may operate as a small team. In general, we would caution against assuming that the *Engaged*

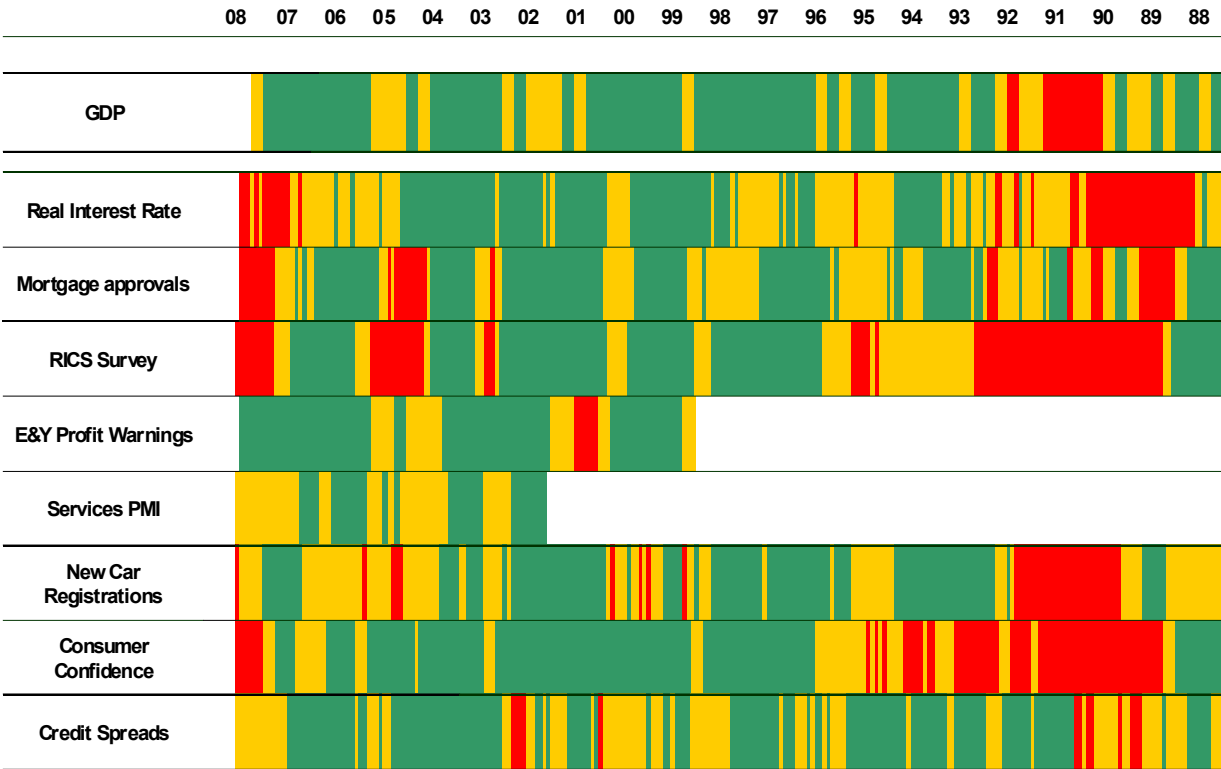
*Toolmaker* is always the most desirable mode of operation from the point of view of the organization. Indeed, although our empirical evidence from the two banks and risk management blueprints indicate that more influence is typically desirable, following the findings of Morales and Lambert (2013), we do not conclude that this mode of operation is necessarily desirable for all risk managers. Instead, we see this as a trait in the more general struggle by experts for professional and personal recognition. Future research is needed to identify conditions under which one or another (or, over time, even a combination) of these modes of operation and tools may be appropriate.

What are the implications of the differential influence of risk managers for the performance of their organizations? This important question is particularly controversial as deductive research is likely to be premature (Kaplan, 2011) and evidence on the value added of risk management functions is mixed (Beasley et al., 2008; Lin et al., 2010; McShane et al., 2011). The performance implications of toolmaking and the level of influence exerted by risk managers constitutes a complex and elusive phenomenon—future research is needed to establish the causal links (if any) between the nature of influence exerted by risk experts, the effectiveness of risk experts and the performance of their organizations in the risk management domain.

During the recent financial crisis, the risk functions of many failed institutions were criticized for their lack of participation in important decision making (see Mikes et al., 2011 on Lehman Brothers and Palepu et al., 2009 on New Century Financial Corporation), while commentators praised the “strength” of the risk functions at other organizations that fared better (Croft, 2009; *The Economist*, 2009). Still, influence alone is no guarantee for sound risk management as even organizations guided by influential groups of risk managers could fail to contain risk with potentially disastrous consequences. A recent example is provided by the multi-billion dollar losses announced by J.P. Morgan in May 2012, which were largely attributed to the failure of the otherwise visible and well-connected risk management function itself (Rose, 2012). While corporate governance advocates tend to consider the benefit of risk management as self-evident, it has been observed that risk management itself may introduce risk into the organization (Power, 2004; 2007). Our study shows that risk management functions themselves (like the organizations they operate in) are essentially dynamic entities, steeped in the politics of influence activities and competition for visibility and relevance. They do not operate in a vacuum—their actions are responsive to perceived organizational needs and opportunities, and correspond to their relative position and status in the organization (Morales and Lambert, 2013). Consequently, it will be important to

conceptualize and analyze not only the influence activities of risk managers, but also the expectations placed on them, and their perceived effectiveness, if we are to fully understand the intended and unintended consequences of formalized, organizational risk management.

**Figure 1: Early Warning Indicators at Saxon Bank**



Note: the risk function, having involved the business units in scenario planning, created a suite of economic indicators that would provide the basis for each scenario. This tool came to be known as the Early Warning System (EWS). It included economic indicators such as confidence indices, interest rates and other macroeconomic data. By tracking these metrics over time, and coding them using a three-colour traffic-light system, the risk function directed business managers’ attention to improving or worsening trends that formed the basis of divergent scenarios in the medium-term planning process.

**Table 1. Differentiating factors in the practices of the toolmaking experts at Anglo and Saxon banks**

|                                  | <b>Anglo Bank</b>   | <b>Saxon Bank</b>  |
|----------------------------------|---|--|
| Nature of tools and tool design  | New guard: off-the-shelf, imported tools (economic capital models); tool design is not open for discussion by potential users.<br>Old guard: “proprietary”, home-grown, closely guarded tools; design is not open for discussion by others. | All tools are home-grown, but design is open for discussion by potential users.  |
| Source of the tools’ credibility | New guard: the regulatory imperative (“regulatory crutch”).<br>Old guard: the respect they commanded from others due to their experience.   | How the tools help the risk managers and the business to perform their work.   |
| Communicability of tools         | New guard’s tools (economic capital): abstract, technical and unfamiliar to the business lines.<br>Old guard’s tools: not shared with business lines.   | Revisions focus on tailoring, simplifying, and clarifying tools and information to the perceived (and constantly discussed) needs of the business. |

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## Appendix 1: List of interviewees and interviews

### *Saxon Bank—Summary of interviewees*

| Title  | Number of interviews |
|--|----------------------|
| Chief Risk Director                                    | 5                    |
| Deputy-Chief Risk Director (also Chief Credit Officer) | 10                   |
| Risk Economist   | 1                    |
| Risk Modeling and Aggregation Director                 | 4                    |
| Risk Architecture Director                             | 2                    |
| Executive Assistant to Chief Risk Officer              | 1                    |
| Divisional Risk Director, Wholesale Banking            | 1                    |
| Managing Director, Commercial Banking Division         | 1                    |
| Managing Director, Consumer Banking Division           | <u>1</u>             |
|  | <b><u>26</u></b>     |

### *Saxon Bank—List of interviews by date*

Risk Modeling and Aggregation Director (2006-08-18)  
 Chief Risk Director (2006-11-15)  
 Chief Risk Director (2006-12-07)  
 Risk Modeling and Aggregation Director (2007-03-27)  
 Chief Risk Director and Risk Modeling and Aggregation Director (2007-03-28)  
 Risk Architecture Director (2007-08-16)  
 Risk Architecture Director (2007-10-02)  
 Deputy-Chief Risk Director (2007-10-08)  
 Deputy-Chief Risk Director (2007-11-22)  
 Deputy-Chief Risk Director (2008-01-07)  
 Risk Economist (2008-02-29)  
 Executive Assistant to Chief Risk Officer (2008-04-01)  
 Deputy-Chief Risk Director (2009-03-04)  
 Risk Modeling and Aggregation Director (2009-04-14)  
 Deputy-Chief Risk Director (2009-05-11)  
 Deputy-Chief Risk Director (2010-03-31)  
 Divisional Risk Director, Wholesale Banking (2010-04-30)  
 Managing Director, Commercial Banking Division (2010-04-30)  
 Managing Director, Consumer Banking Division (2010-04-30)  
 Deputy-Chief Risk Director (2010-04-30)  
 Deputy-Chief Risk Director (2010-06-16)

Deputy-Chief Risk Director (2010-09-27)  
 Deputy-Chief Risk Director (2010-11-26)  
 Chief Risk Director (2010-11-26)  
 Chief Risk Director (2011-01-19)

*Anglo Bank—Summary of interviewees*

| <b>Title</b>   | <b>Number of interviews</b> |
|--|-----------------------------|
| Group Risk Director                                    | 1                           |
| Group Director of Risk Reporting                       | 3                           |
| Group Head, Basel II Implementation                    | 2                           |
| Chief Executive, UK Division                           | 1                           |
| Chief Operating Officer, Corporate Bank                | 1                           |
| Relationship Manager, Corporate Bank                   | 1                           |
| Head of Country Risk / Chair of Group Credit Committee | 1                           |
| Head of Market Risk                                    | 1                           |
| Head of Operational Risk                               | 1                           |
| Chief Risk Officer, Corporate Bank                     | 10                          |
| Chief Risk Officer, Consumer Bank                      | 1                           |
| Chief Operating Officer, Group Risk                    |                             |
| Senior Risk Officer, Economic Capital Project          | 2                           |
| Senior Risk Officer, Risk Management Framework         | 1                           |
| Senior Risk Officer, Risk Reporting                    | 1                           |
| Risk Officer 1, Economic Capital Project               | 1                           |
| Risk Officer 2, Economic Capital Project               | 1                           |
| Risk Officer, Risk Reporting                           | 1                           |
| Risk Officer, Country Risk                             | <u>2</u>                    |
| Risk analysts, Corporate Bank                          | <u>2</u>                    |
|  | <b><u>34</u></b>            |

*Anglo Bank—List of interviews by date*

Group Director of Risk Reporting (2005-11-04)

Risk Officer 1, Economic Capital Project (2006-07-04)  
Senior Risk Officer, Risk Reporting (2006-07-19)  
Risk Officer 2, Economic Capital Project (2006-08-04)  
Senior Risk Officer, Risk Management Framework (2006-08-04)  
Risk Officer, Risk Reporting (2006-08-10)  
Senior Risk Officer, Economic Capital Project (2006-08-10)  
Senior Risk Officer, Economic Capital Project (2006-08-14)  
Chief Operating Officer, Group Risk (2006-08-16)  
Head of Country Risk (2006-08-17)  
Group Director of Risk Reporting (2006-08-22)  
Group Head, Basel II Implementation (2006-08-23)  
Relationship Manager, Corporate Bank (2006-08-23)  
Risk Officer, Country Risk (2006-08-23)  
Head of Operational Risk (2006-08-31)  
Chief Executive, UK Division (2006-09-01)  
Group Risk Director (2006-09-01)  
Head of Market Risk (2006-09-01)  
Chief Risk Officer, Consumer Bank (2006-09-05)  
Chief Operating Officer, Corporate Bank (2006-09-06)  
Chief Risk Officer, Corporate Bank (2006-09-08)  
Chief Risk Officer, Corporate Bank (2006-09-15)  
Chief Risk Officer, Corporate Bank (2007-06-07)  
Chief Risk Officer, Corporate Bank (2007-11-22)  
Group Head, Basel II Implementation (2008-05-21)  
Chief Risk Officer, Corporate Bank (2008-05-30)  
Chief Risk Officer, Corporate Bank (2008-09-30)  
Group Director of Risk Reporting (2008-11-17)  
Risk Officer, Country Risk (2008-12-03)  
Risk analyst 1, Corporate Bank (2008-12-03)  
Risk analyst 2, Corporate Bank (2008-12-03)  
Chief Risk Officer, Corporate Bank (2009-01-30)  
Chief Risk Officer, Corporate Bank (2009-03-06)  
Chief Risk Officer, Corporate Bank (2009-06-22)