



UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

Performance management systems and regulatory compliance in the banking industry

- A case study of a Swedish niche bank

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Abstract

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Background and Problem: The regulations imposed after the financial crisis have created an opportunity for management accounting research. One area within management accounting is performance management which involves; identifying, measuring and developing the performance of individuals, and aligning this performance with organizational goals. To study this area, a framework was created by Ferreira and Otley (2009), called the performance management systems (PMSs) framework. According to researchers there is a gap in studying the design and use of PMSs in banks and financial institutions. However, a recent study about PMSs in Swedish banks was conducted by Lundberg (2013). It showed that banks only to a limited extent adapted their PMSs in response to the regulatory changes, and the author suggests that more research is needed.

Aim of study: This study investigates how PMSs change due to three banking regulations. Also, what banks can do to increase performance by embracing the regulations is studied.

Methodology: This study is based on a case study of a Swedish niche bank, which was chosen because niche banks were prior to Basel II not believed to be able to use their own risk models, something that the case company does. Interviews with key employees were the primary source of information for the empirical findings.

Analysis and Conclusion: This study shows that banking regulations do have an effect on PMSs. However, a lack of coherence has limited the spread of the effect. This limited effect depends on poor coherence between the PMSs, which results in that the PMSs will not be utilized to their full capacity. The limited effect also depends on decoupling of performance management from risk management.

Keywords: Banking regulations, Performance Management Systems, Management accounting change

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Definitions

Management accounting can either be a collection of practices for internal reporting, planning and decision making purposes (e.g. budgeting, scorecards, product costing), or an overarching term for the research area in which the following terms are included.

Management control involves the use of management accounting tools and actions for controlling and motivating employees in order to facilitate organizational goals.

Performance management is a similar term to management control but involves all actions for measuring and managing organizational performance.

Alphabetical list of abbreviations

BIS	Bank for International Settlements
BSC	Balanced Scorecard
CBDO	Chief Business Development Officer
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIO	Chief Information Officer
CRO	Chief Risk and compliance Officer
DW	Data Warehouse
FI	Finansinspektionen (Swedish Financial Supervisory Authority)
IRB	Internal Ratings-Based
KPM	Key Performance Measures
KSF	Key Success Factor
LCR	Liquidity Coverage Ratio
MAS	Management Accounting Systems
MCS	Management Control Systems
NIS	New Institutional Sociology
NPAP	New Product Approval Process
OIE	Old Institutional Economics
PMS	Performance Management System
R&C	Risk and Compliance

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1. Introduction

The regulations introduced following the financial crisis in 2008 have created an opportunity for management accounting research (Van der Stede, 2011). The business environment has changed all over the world and new regulations create a pressure for change (Cobb, Helliard & Innes 1995; Van der Stede, 2011). This is particularly true for the financial industry which has become heavily regulated in the last couple of years due to the crisis, and there are still more regulations to come (Bank for International Settlements (BIS), 2010). The crisis raised issues about the financial companies' operations, especially about their poor corporate governance and risk management (Van der Stede, 2011). The regulators believed this had to be better covered in regulations (BIS, 2009). As a result of more regulations, risk management has emerged as a tool for taming uncertainty (Mikes, 2011; Soin & Scheytt, 2009).

Regulations in the banking industry are not a new phenomenon. In 1988 the Basel Committee of Banking Supervision released the Basel Capital Accord (Basel I), and in 2004 they released a revised framework, Basel II, to keep better track of banks (BIS, 2009). Through the European Union's Capital Requirement Directives, Basel II has come into action as legislation in the European countries (European Commission, 2012). By monitoring the domestic financial market, the Swedish Financial Supervisory Authority, Finansinspektionen (FI), makes sure the regulations are followed. They ensure that the banks regularly collect data and provide them with information about their financial situation and their risks (Finansinspektionen (FI), 2013a).

Risk management is not only a tool for taming uncertainty; it also works as a tool for increasing firm performance (Gordon, Loeb & Tseng, 2009). Performance measures and Performance Management Systems (PMSs) are receiving increased attention in management accounting research (Hussain & Hoque, 2002; Taticchi, Tonelli & Cagnazzo, 2010). But the PMS field has had difficulties making progress due to different approaches in empirical research (Ferreira & Otley, 2009). Researchers' approaches have been too narrow, only taking into account some components of the PMS, e.g. the balanced scorecard (Broadbent & Laughlin 2009; Ferreira & Otley, 2009). To make the area more coherent, researchers have developed a framework, called the PMSs framework (see Broadbent & Laughlin, 2009; Ferreira & Otley, 2009). PMSs involves planning and managing organizational goals and outcomes as well as the means used to achieve them (Broadbent & Laughlin, 2009), i.e. a process for accomplishing organizational objectives. It can be used to manage the performance of employees by encouraging, enabling or forcing them to act in the organization's best interest (Broadbent & Laughlin, 2009; Merchant & Van der Stede, 2012). The purpose with regulations is without doubt to achieve/prevent some type of behavior (e.g. risk awareness/risk taking) from the part being regulated. Thus, there is a common denominator between regulations and PMSs. If the regulations aim to change the behavior of a company, and the company in question wants to meet the requirements, then surely they will try to alter their PMSs to steer their employees in the right direction.

Cobb, Helliard & Innes (1995) found that a mismatch between management accounting systems (MAS) and the environment resulted in a pressure for change. Their study is applicable in this situation as well, and therefore banks should react to the new regulations by changing their PMSs before they discover this mismatch. This view is supported by a recently published report which states that business-model alignment is the most important action to take in reaction to the regulations (McKinsey, 2012).

Researchers point out that there is a gap in the research studying the design and the use of PMSs in banks and financial institutions (Hussain & Hoque, 2002; Soin & Scheytt, 2009; Van der Stede, 2011). However, a recent longitudinal study about PMSs change in Swedish banks was conducted by Lundberg (2013). He found that large commercial banks in Sweden have only adapted their PMSs in response to regulatory change to a limited extent. Lundberg suggests that more research is needed on the effect of regulatory change on the PMSs of banks, and this stresses the importance of our study. This study will focus on niche banks, because the view during the Basel II implementation was that they would have a disadvantage compared to larger banks in that they would not have the resources to collect data and create their own risk-models (Wahlström, 2009). The study is based on interview data from a niche bank with Internal Ratings-Based (IRB) approval, i.e. approval to use their own risk-models. Information was also acquired from both external material (e.g. annual reports, academic journals) and internal material provided by respondents from the case company.

The objective of this study is to investigate the effect of regulatory change on PMSs. Also, what banks can do to increase performance by embracing the regulations is studied. *Figure 1* illustrates the objective by showing the area of investigation.

This study contributes to the field of performance management as a part of management accounting. Through an empirical study using the PMSs framework, this study will contribute to previous knowledge about PMSs. The study focuses on some of the regulations concerning risk imposed by FI, due to Basel II and the financial crisis. Risk management has a strong connection to PMSs since risk and performance can be seen as two sides of the same coin (Gordon, Loeb & Tseng, 2009; Van der Stede, 2011).

Due to the objective of the study the following questions remain to be answered:

- *How do PMSs change due to legislative banking regulations?*
- *How can banks embrace regulations in their PMSs to achieve performance?*

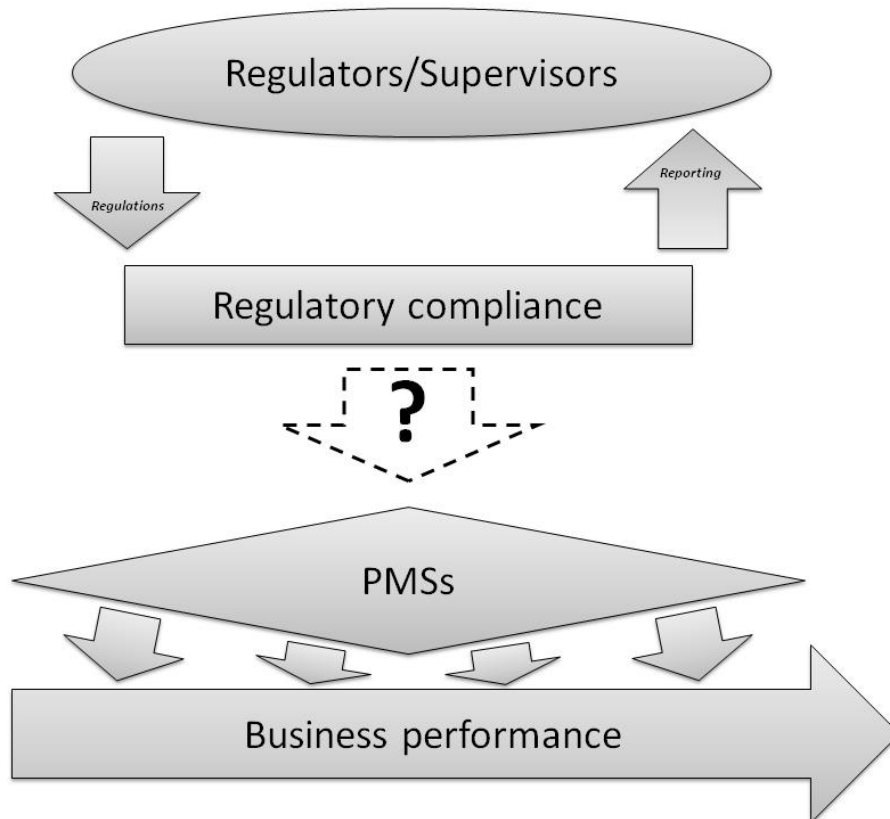


Figure 1. Area of investigation.

The rest of this study is structured as followed. Chapter two presents previous research, consisting of performance management, the PMSs framework and management accounting change. Chapter three explains the method used and how the data was collected and analyzed. After this, chapter four reveals the empirical findings and the next chapter analyzes the results using the previous research in chapter two. Chapter six ends this study with a conclusion of the findings.

2. Previous research

This section starts with a review about performance management in management accounting as a research area. Then the PMSs framework is presented, which is used when conducting our study. This is followed by the PMS connection to risk management. Finally, management accounting change theory and its applicability to our case are discussed.

2.1 Performance management and the PMSs framework

Performance management is a vital process that exists, either explicitly or implicitly, in every organization. It involves identifying, measuring and developing the performance of individuals and aligning this performance with organizational goals (Aguinis, Joo & Gottfredson, 2011).

The entrance of performance management in the management accounting research area gained momentum with innovations like the balanced scorecard (BSC) which draws from the theory of performance measurement and management (Hussain & Hoque, 2002; Taticchi, Tonelli & Cagnazzo, 2010). The performance management connection to both management accounting and management control is obvious, yet in theory they are to some extent separated (Hussain & Hoque, 2002). As early as in 1965 Robert Anthony defined management control as "the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives." (Anthony, 1965, p.17). This definition has similarities to the above description of performance management, i.e. a process for accomplishing organizational objectives. However, Anthony's definition was originally presented along with strategic control and technical (operational) control, and the three systems together would form a framework for studying management accounting (Ferreira & Otley, 2009). Ferreira and Otley (2009) point out that definitions of management control systems (MCSs) stemming from Anthony's original definition have become too narrow to sufficiently capture issues and relationships that exist in the MCSs' use and design. They used the term "Performance Management Systems" (PMSs) to create a more comprehensive framework (The PMSs framework) for studying MCSs.

Ferreira and Otley's (2009) framework consists of twelve questions in which the answers collectively paint the picture of how the PMSs are designed and used in the organization being studied. The PMSs framework draws from previously created frameworks by Otley (1999) and Simons (1995). Otley's (1999) framework consists of five questions important for understanding MCSs in organizations. Ferreira and Otley (2009) then expand these five questions into twelve by integrating Simons (1995) levers of control framework. Simons' framework is one for implementing strategy and has been used in both explanatory and exploratory studies (Ferreira & Otley, 2009). The framework is divided into four so called levers: Beliefs Systems, which controls core values; Boundary Systems, which controls risks to be avoided and sets the rules of the game; Diagnostic Control Systems, which controls critical performance variables; and Interactive Control Systems, which controls strategic uncertainties (Simons, 1995, 2000). When

the levers are used together complementarily, a manager should be able to control the business strategy and thus the performance of the organization (Simons, 2000). Whether a control system is interactive or diagnostic depends on how it is being used. A diagnostic control system can be made interactive by showing employees that managers constantly pay attention to the system and find it important. PMSs used through management by exception are seen as diagnostically used systems (Ferreira & Otley, 2009; Simons 2000).

The study uses a conceptualization of PMSs drawing from MCSs with the view that PMSs encompass more than the definition of MCSs does, which in several cases seems to be either outdated or misused (Broadbent & Laughlin, 2009; Ferreira & Otley, 2009; Otley, 1999). *Figure 2* illustrates what components are included in the PMSs framework by Ferreira and Otley (2009) and the accompanying questions can be found in Appendix 1.

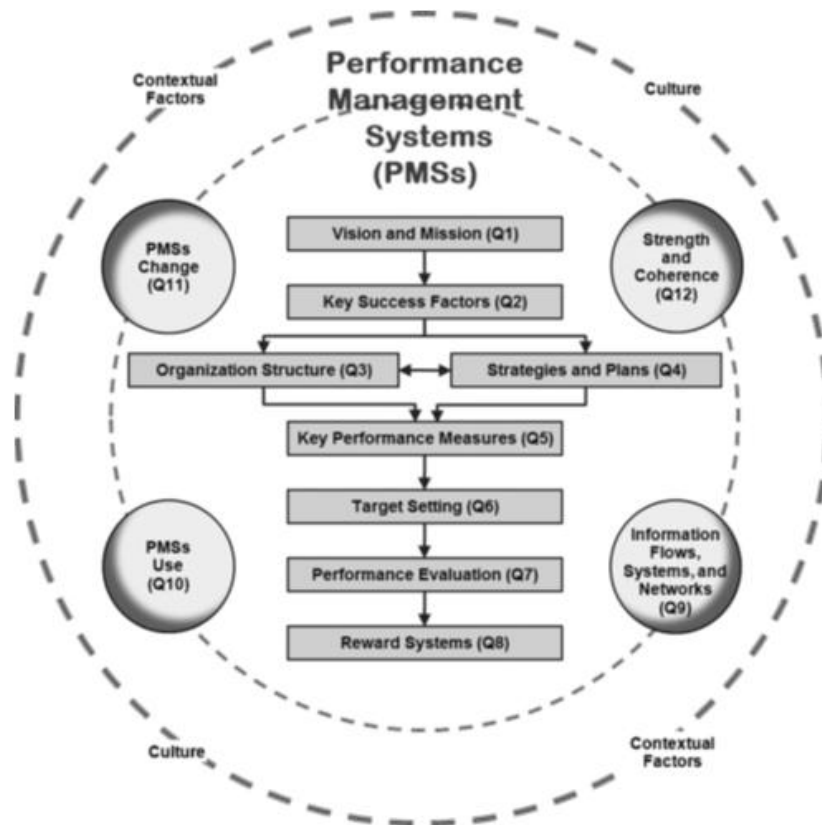


Figure 2. The PMSs framework (Ferreira and Otley, 2009).

The first eight questions are about the different PMS components whereas the ninth question is about finding the information flows, or the glue, that keep the system together. Q9 may refer to an IT information system or an invisible information stream. The tenth question (Q10) addresses the use of the different PMSs. For determining how separate PMSs are being used, Simons' (1995) terms diagnostic and interactive are appropriate. PMSs change (Q11) is one of the

describing parts of the framework, and the question aims to answer the causes and outcomes of the observed change. For this, management accounting change theory is suggested as a proper tool. The other describing question (Q12) addresses the issue of strength and coherence of the PMSs. Ferreira and Otley (2009, p. 275) concludes: "Like any other system, a PMS is greater than the sum of its parts and there is a need for alignment and coordination between the different components for the whole to deliver efficient and effective outcomes." It is not enough for a PMS to be well-designed without fitting together with other components in the PMSs framework since that could result in control failures. A central issue to study is the connection between key performance measures and strategies (Van der Stede, Chow & Lin, 2006) along with the strategy connection to key success factors (KSFs) (Ferreira & Otley, 2009). This is supported by Adler (2011), who states that the PMSs of an organization should depend on and be a function of the organization's strategy. Ferreira and Otley (2009) suggest however that a complete coherence through all PMS components is rare since there are often different people who have implemented the different PMSs.

2.2 Risk management

Studies show there is a strong correlation between firm performance and enterprise risk management, i.e. looking at risk management in a holistic manner (Gordon, Loeb and Tseng, 2009). Despite this correlation, today there is little integration between management accounting and risk management (Soin & Scheytt, 2009). That is, if not inept, ineffective since there is profit to gain through using risk management as a part of management accounting (Bhimani, 2009; Soin & Scheytt, 2009). One explanation to this lack of understanding, of what management accounting can contribute with, is that there is a widespread view that the role of management accountants is limited to the traditional one as budgeting and cost control (Soin & Scheytt, 2009). Bhimani (2009) states that the control process (i.e. a diagnostic use of a PMS) is the intent to monitor alignment between organizational activities and desirable managerial outcomes. He suggests that risk management, with boundaries for risk taking and organizational functioning, is part of that definition. Including risk management as a part of PMSs is not only important in terms of effectiveness, it is today also important for legitimacy towards the public (Bhimani, 2009).

2.3 Management accounting change

Numerous theories and frameworks have emerged in the management accounting change area (Burns & Vaivio, 2001). During the 1990s, new techniques, such as balanced scorecard and activity-based costing, emerged and the implementation of these received a lot of attention in the management accounting change research (Modell, 2007). Thus, some researchers have tried to explain change by only studying one technique of management accounting. Others have tried to understand the subject from a wider perspective (e.g. Burns & Scapens, 2000; Cobb, Helliar &

Innes, 1995). The management accounting change area consists of two broad areas: factors studies and studies using a process-oriented approach (Modell 2007).

2.3.1 Factors studies

The first area, factors studies, focuses on identifying factors that impact the decision to implement change, and the success of that implementation (Zoni, Dossi & Morelli, 2012). Hence, they try to understand and explain management accounting change based on contingency theory (Zoni, Dossi & Morelli, 2012). Within factors studies a management accounting change framework has been developed. The framework was originally made by Innes and Mitchell (1990) and it was revised by Cobb, Helliard and Innes (1995) in their case study of a bank (for a later revision see Kasurinen, 2002). Factors studies are useful when trying to explain which factors influence change but the approach has some limitations. It does not quite explain why change is *not* happening when there is a mismatch between a MAS design and the environment (Zoni, Dossi & Morelli, 2012). Another limitation is that it emphasizes managerial considerations and misses out the political and social factors associated with change (Modell, 2007).

2.3.2 Process-oriented approaches and institutional theories

The second area is comprised of the process-oriented approaches, which try to understand change by emphasizing managerial considerations along with political and social factors (Modell, 2007). Within this approach, institutional theories have been very influential, especially the two branches Old Institutional Economics (OIE) and New Institutional Sociology (NIS) (Arroyo, 2012; Modell, 2007).

The objective with the first branch, OIE, is to focus on the process of change and how management accounting change happens (Zoni, Dossi & Morelli, 2012). The OIE approach views management accounting as organizational rules and routines (Burns & Scapens, 2000; Scapens, 1994) and tries to explain the institutionalization of these along with how and why institutions evolve over time (Burns & Scapens, 2000; Modell, 2007; Scapens, 1994). An OIE-framework was developed by Burns and Scapens (2000) and their framework describes the institutionalization process within individual organizations (Zoni, Dossi & Morelli, 2012) by encoding, enacting and reproducing rules and routines (see Burns & Scapens, 2000). OIE is internally focused, which is also the limitation with the approach, i.e. it does not consider the external environments effect on change (Zoni, Dossi & Morelli, 2012).

In the second branch, NIS, external legitimation drives the change of management accounting (Modell, 2007), and according to Hussain and Hoque (2002), this view has given a better perspective and understanding of the relation between an organization and the environment surrounding it. Change can according to NIS, occur through institutional isomorphism (Meyer &

Rowan, 1977). DiMaggio and Powell (1983) divides the institutional isomorphism in three different types; coercive, mimetic and normative. Coercive isomorphism is created by pressures from other organizations, e.g. from authorities due to the implementation of new regulations. The legal environment and the following requirements shape organizations and make them more homogenous (DiMaggio & Powell, 1983). When organizations formally implement rules, without them influencing the everyday business, decoupling arises (Modell, 2007). Decoupling, or to a lesser degree called loose coupling, is a way of handling external legitimization demands without compromising with efficiency (Arroyo, 2012). It is a process of resistance which may be a passive reaction to external pressures as well as an active strategy (Arroyo, 2012). Mimetic isomorphism often occurs because of uncertainty. When uncertainty rules, either inside or outside the organization, organizations may imitate other organizations. According to DiMaggio and Powell (1983), organizations often imitate similar organizations operating in the same field. This does not have to be intentional, but when doing so organizations become more homogenous. To prevent organizations from becoming too similar Hussain and Hoque (2002, p. 177) suggest: “The greater the established link between strategy, management activities and accounting control systems, the less the tendency of the organization to copy organizational systems such as a PMS from other organizations.” The last type of institutional isomorphism, normative, stems from professionalization (DiMaggio & Powell, 1983), i.e. that individuals with the same profession often have many similarities. This makes organizations more similar when the same professions exist in the different organizations.

2.4 Institutional pressures on banks

Cobb, Helliard and Innes (1995) case study of a bank’s management accounting system (MAS), shows that different pressures influenced the MAS to change. The changes were mainly driven by environmental pressures (globalization, advances in technology, increasing pace of new product innovation) but internal factors (financial pressure, individuals) were also important for the change. At first, the MAS did not respond to the changing environment, but when the company realized that the changes caused a different information need, i.e. a mismatch between the MAS and the environment, a pressure for change was created which resulted in a changed MAS. Today, financial institutions are operating in a changing environment due to the crisis (Van der Stede, 2011) and the regulations create an additional pressure for change in PMSs. Without adaptation the PMSs will lose their relevance and usefulness (Ferreira & Otley, 2009). Several studies shows that regulatory change has caused management accounting to change. In their case study of a bank, Helliard, Cobb and Innes (2002) found that regulatory change was one of the factors influencing the profitability reporting to change. Euske & Riccaboni (1999) also found that PMSs change in a bank was affected by regulatory changes. A recent study about PMSs in the four largest banks in Sweden was made by Lundberg (2013). He found that in contrast to the former two studies, the regulations did not have any substantial effect on the banks’ PMSs. The studied showed that banks moved towards centralization and that they had an increased focus on risk management, although these changes were not mainly driven by the regulations. Hence, it is not obvious that the regulations have an effect on the banks’ PMSs.

3. Methodology

This study is based on a case study of a Swedish bank. With regards to the objective of the study, the PMSs of the case company were identified and how the PMSs were impacted by three different regulatory changes was investigated. For this, six interviews were conducted with key employees in the case company.

3.1 Research approach

The research questions aim to decrease the previously described knowledge gap and are constructed out of theory. This facilitates a deductive approach where empirical findings is used to complement existing theory (Blumberg, Cooper & Schindler, 2010). This research could be done using a quantitative method to get a sort of common perception by banks of how their performance management systems are affected by regulations. But that method does not quite capture the uniqueness of every organization. Instead we have chosen a qualitative method, the case study, to be able to conduct an in-depth analysis (Yin, 2011).

A case study can be done either as a single case study or a multiple case study, both of which have their own advantages and disadvantages (Yin, 2009). Results following a multiple case study are often seen as more convincing than if done as a single case study (Blumberg, Cooper & Schindler, 2010). But there are cases where a single case study can be preferred (Blumberg, Cooper & Schindler, 2010; Yin 2009). One of these cases is the revelatory case, which exists when few researchers have had the opportunity to study a phenomenon (Yin, 2009). The crisis has provided opportunities to study management accounting practices in their contemporaneous context (Van der Stede, 2011), and as more regulations are coming, researchers have an opportunity to study how this phenomenon affects companies' management accounting.

3.2 Empirical selection

The case company is a Swedish niche bank, henceforth referred to anonymously as simply The Bank, which operates only on the Swedish market. The company does not have a long history as a bank and, uses the IRB approach. It was chosen primarily because other banks believed this kind of bank would have a disadvantage using their own risk models (i.e. IRB approach) (Wahlström, 2009). We are aware that the anonymity of the case takes away some of the important background information (Yin, 2009), but we want to emphasize the point that the case as such is chosen for an explanatory reason. Any subsequent studies will build on the area of regulations and performance management rather than the case itself.

3.3 Data collection

The data used in section 2 ("Previous research") was collected through searching the databases Web of Knowledge and Scopus. To find research in areas relevant to the study, different

keywords were used, e.g. management accounting, management control, performance management, management accounting change, banks and risk management. Articles were then selected based on factors such as relevance and citation frequency.

The empirical data provided is mainly collected from interviews with employees at The Bank. All interviews were conducted at The Bank and a total of six visits/interviews were made during a 4 month period. Among the respondents were a project manager and one of the subproject managers of the Basel II-project. *Table 1* shows an overview of the interviews and respondents.

<i>Interview</i>	<i>Time of interview</i>	<i>Respondents</i>	<i>Duration</i>
1	January 2013	CIO ¹ , CBDO ²	1 hour
2	February 2013	CIO, statistician	0.5 hours
3	February 2013	CRO ³ , risk analyst, compliance administrator	1 hour
4	April 2013	Business controller	2 hours
5	April 2013	Risk analyst	1 hour
6	April 2013	CBDO	2 hours

Table 1. All interviews with respondents and time of interview

For the first three interviews the employees were free to talk about their view of the company and how the regulations affected them. After these interviews a better knowledge was gained of the company and their view of the regulations. The information gathered from those interviews worked as a starting point for the rest of the interviews. Attention is directed to three regulatory changes at The Bank for studying change on the PMSs framework. These are the Basel II implementation, the IRB approval (Lag 2006:1371, FFFS 2007:1) and the 2010 new regulations in liquidity risk management (FFFS 2010:7, FFFS 2011:37). The Basel II implementation was chosen because it was considered to be a major change for The Bank. The Bank got their IRB approval after the Basel II came into action and for that reason they are studied separately. As described in the introduction, smaller banks were believed to have a disadvantage in using their own risk models and this made the IRB approval of The Bank an interesting regulation to study. The liquidity risks were mainly chosen due to the fact that the upcoming Basel III regulations will deal with these issues (FI, 2013b). This made the current liquidity risk regulations important to investigate, since this study might serve as a reference to how the new regulations should be tackled.

The last three interviews were done using a semi-structured interview guide (Blumberg, Cooper & Schindler, 2010). Prior to the interviews, tasks were divided between the authors; one took particular care of the interview while the other focused on taking notes. Both were involved in

¹ Chief Information Officer

² Chief Business Development Officer

³ Chief Risk and compliance Officer

the follow-up questions. The tasks were switched before each new interview. The interviews were recorded in case something would be missed during the note taking, and all interviewees were informed about the recordings beforehand.

In addition to the interviews, the empirical findings are based on internal documents received from the respondents at The Bank. Internal documents can be selected in a biased way (Yin, 2009), but at the same time they are important for confirming what the respondents stated during the interviews. Note that everything stated in the interviews was not obtained in document form as well. Further, public documents, such as The Bank's annual reports, have been collected and used in the study. The aim is to strengthen the findings by using different sources, i.e. by triangulation (Blumberg, Cooper & Schindler, 2010). The documents collected can be seen in *Table 2*.

<i>Type of document</i>	<i>Internal or External document, Issued by</i>
Strategy map with belonging goals	Internal, CEO ⁴
Internal Capital Adequacy Assessment Report	Internal, CRO
Finance manual - guidelines per dept.	Internal, CRO+ Respective dept. executive
Compensation policy	Internal, CHRO ⁵
Regulatory demands on new Banking IT system	Internal, R&C ⁶ dept.
Monthly issued Target Feedback Report	Internal, CFO ⁷
Quarterly financial statement and goals (Board decision support)	Internal, CFO
Risk & Compliance for new employees	Internal, CRO
Annual report 2011	External
Financial report of Q4 2012	External
Annual report 2012	External

Table 2. Documents used for triangulation

⁴ Chief Executive Officer

⁵ Chief Human Resources Officer

⁶ Risk and Compliance

⁷ Chief Financial Officer

3.4 Data analysis

After each interview was conducted, a transcript was made out of the recordings and notes taken. Within a day after the interview, the information was then divided into main areas following the components of the PMSs framework, regulations or other major events. When all information was structured, a copy of the transcript was sent to the respondents to ensure the information was rightly understood.

When analyzing the data, a deductive approach was used. With the chosen theory, the objective was to analyze the empirical findings by building an explanation of the case (Yin, 2009). Difficulties can arise when using explanation building as an analytic technique. Yin (2009) mentions that it is easy to lose the original purpose when doing this kind of research. However, the PMSs framework is used to diminish this risk. The framework helps the study in identifying the design of the PMSs but it is not expected that the framework can explain the effects of the regulations (i.e. external/contextual factors), since this did not seem to be the intention of the creators. In this area management accounting change theory provides answers.

The central issue of our study of the PMSs framework is the question regarding PMSs change (Q11), and more specifically our focus is directed at regulatory change. The use of different PMSs (Q10) has been studied, although our analysis of the effects of regulations is on the design rather than the use of PMSs. Strength and coherence (Q12) is a central part of our analysis and is important for understanding the contingent relations of the different components and their change. For this a mapping of how the PMSs are built up at The Bank today is important. By using the PMSs framework to identify which components are included as PMSs, and then comparing their change to the specific regulations, the study presents a table which summarizes which components in the PMS framework (Q1-Q9) are prone to change due to regulatory compliance.

4. Empirical findings

The empirical findings are mainly a result of the gathered information from The Bank. Information about the regulations is taken from FI. The section starts with a presentation of the components of the PMSs framework in The Bank today. The organization of the risk management function follows and this section ends with the effects of regulations.

4.1 The PMSs framework components in The Bank

Below follows a mapping of the PMSs in The Bank along with supporting information flows/networks.

4.1.1 Vision and Mission

The vision of The Bank is to be perceived as the market leader in their specific niche. This is common knowledge for employees since day one, where an introduction is presented of what the overarching purpose of the operation is. The same goes for the mission, which is to profitably provide financial support to the niche in which they operate.

4.1.2 Key Success factors

The Bank has two main KSFs. The first one is to have access to cheap funding in order to have a competitive lending function. The second one is to have access to their present service distribution channel. A business controller expresses: “Without our service distributors [The Bank] would not function.” These KSFs are not explicitly communicated to employees but the means of achieving them are. For instance, the credit rating, important for cheap funding, is communicated through their intranet as well as by managers. The current amount of deposits is also communicated because The Bank believes it to be important to diversify their funding sources. This creates a mix of funding from both the market and individual households.

4.1.3 Organization Structure

The Bank is organized into four business units along with five support functions, as illustrated in *figure 3*. Each of these nine departments has a senior executive who reports directly to the CEO. Managers’ responsibility lines are clearly defined by internal documents and organizational maps. Much work is carried out in projects which demand cross-boundary work between the different departments, e.g. when new products are developed people are gathered from administration, accounting, sales etc. Conflicts over (budget) resources exist, although personnel resources are not the major problem since every employee has time reserved for project work in order to avoid territorial thinking.

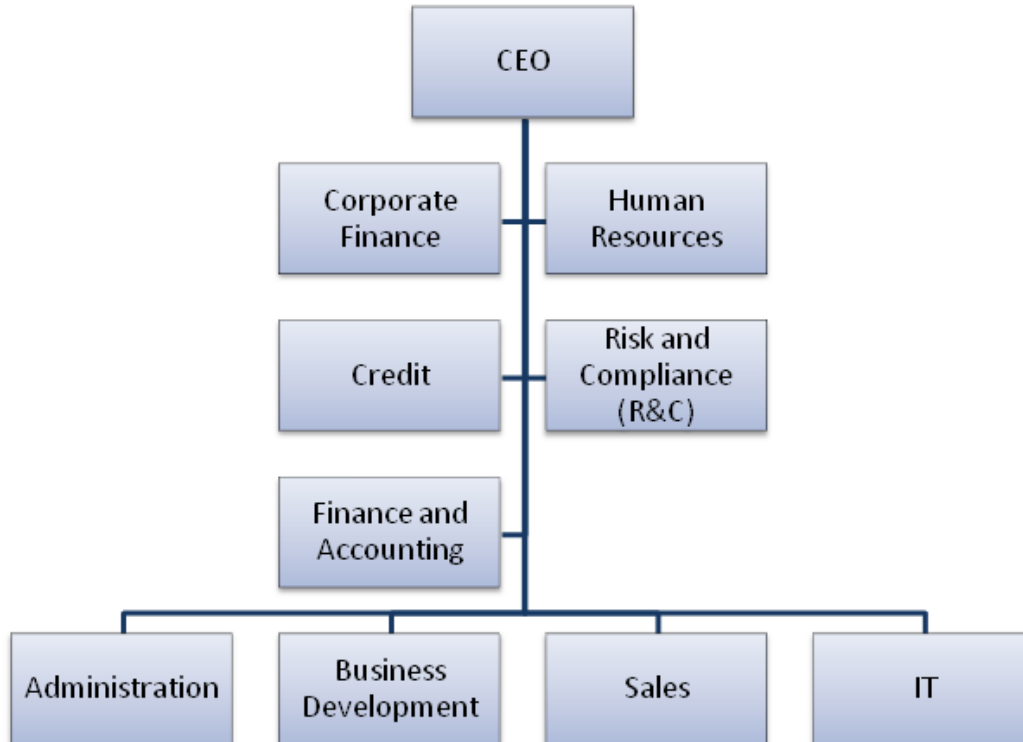


Figure 3. Organizational chart over The Bank

4.1.4 Strategies and Plans

The strategic orientation is defined by the board of directors. A strategy map has been developed with four perspectives (Financial, Customer, Internal process and Culture) based on important strategies. This map works as a tool for reaching prioritized goals. The different goals listed in the strategy map are broken down into what, why and how these tasks should be done. These questions are sometimes solved in project form.

The Bank has a 1-year plan in the form of a budget. Sales is the department with most influence over the budgetary process. The Finance and Accounting department is involved in the process as support along with Corporate Finance for handling funding. Naturally, the CEO has a great influence over the final budget. The Basel II regulations require that The Bank makes a 3-year plan as well. This involves a forecast stress test of both the balance sheet and the income statement. A business controller at The Bank believes this to be an important process in identifying possible risks but that this, had it been voluntary, would probably not have been on the agenda.

4.1.5 Key Performance Measures and Target Setting

There are no key performance measures directly linked to the strategy map. Instead, absolute goals are derived from the strategy map and integrated in the budgetary process. The goals are then broken down to unit level to each regional manager through budget work.

Target setting is an annual process where goals are most often set on a one-year basis and are to remain constant no matter what happens in the market. As the business controller expressed: “We had a set target of [X] billion in deposits and we reached it in March, then we kept that goal the rest of the year.” At the same time the business controller explains that it is easier to continue working and ignore the target rather than starting a revising process of a new target. There is no expressed policy of how challenging the targets should be: this depends on the preferences of the manager setting the different targets.

4.1.6 Performance Evaluation and Reward Systems

Evaluation of goals is done annually, most often on an organizational level but there are some goals at group level in the Sales department. Sales is also today the only department that is part of the reward system, but according to the compensation policy a few other departments/positions are eligible as well, even though they do not receive rewards today. Except for that, no other employees are entitled to rewards, either financial or non-financial. This is a remnant from the latest financial crises where no executives were allowed bonuses in order for The Bank to be part of a governmental guarantee program. At the same time it was decided to remove rewards at all levels. The current rewards are financial incentives linked to specific goals set in the department. These are volume based goals without adjustment to risk. However, a policy governed by regulations state that a risk analysis of the reward system must be conducted every year.

4.1.7 Information flows, Systems, and Networks

The intranet of The Bank is an important communication channel where all important information directed to all employees is published. Information not intended for all employees goes via separate channels like mail or department staff meetings.

Every month a report of the outcome (Target Feedback Report) is presented and available to, but not forced on, all employees through the intranet. The report includes both diagrams and ratios with a comparison to the previous year. For senior management staff there is also a monthly financial statement available comparing budgetary goals with actual outcome and forecasts for the remaining months of the year. This report also includes other important parameters such as interest rate trends. The income statement along with ratios (e.g. cost-to-income), is regularly communicated to employees.

Another important source of information is the multiple data warehouses that exist in The Bank. Although these are a more direct source of information, they contain raw data which require some manual work to generate desired information. The information in data warehouses is not as graspable as the information presented in reports, and the onerous task of constantly browsing through databases for daily decisions is no easy way to work.

4.2 Risk management

The risk management is categorized along with compliance into three levels of defense. The first line of defense are all the separate departments which in some way are involved with risk taking. Their responsibilities involve establishing their own risk policies, instructions and guidelines, as well as conducting risk workshops. The second line of defense is the R&C department which independently conducts risk and compliance supervision of the separate departments. R&C also supports the first line of defense with education and consultation. The third line of defense consists of both internal and external auditors which independently monitor the work in both the first and the second line of defense. The audit committee of the board is responsible for the third line of defense. Both the second and the third line of defense report directly to the board.

The R&C department's responsibility is to frequently monitor compliance with regulations and internal policies and report to the board of Directors before the board meeting every quarter. The R&C department may assist in questions but is not allowed to make decisions regarding risk management. The risk reporting involves follow-up on set compliance goals, such as Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR), the size of the liquidity reserve, customer migration, the largest exposures, customers who do not pay, project supervision and flaws in internal risk control. The complete risk report is not presented to lower level staff.

The R&C department seeks to work proactively. Their primary task is to be compliant with existing regulations, but to take advantage of the regulations and profit of it is also on their agenda.

4.3 The effect of regulations

The regulations are something that The Bank has to comply with and the CBDO believes that the best thing to do when new regulations arrive is to try to see the business opportunity. With some regulations The Bank can identify new business opportunities but they believe this strategy to be a great challenge.

4.3.1 New regulation process

When new regulations arrive, the compliance administrator ensures that the responsible manager connected to the specific regulation gets the information. Regulations regarding liquidity risk is the responsibility of the Chief Investment Officer, regulations regarding financial reporting is the

responsibility of the Chief Financial Officer etc. The responsible manager may take the help of R&C or consultants to map the changes needed if the knowledge does not exist in the concerned department. When it comes to major regulations, projects are created to carry out the tasks needed (e.g. Basel II). The responsible manager makes sure that the project specification is correct and when the project is carried through, the manager makes sure that it is implemented in the business. The project is led by a project manager from the business development department that is responsible for the project process.

The Bank always tries to combine the regulatory project with other developments that are needed, e.g. in new IT systems, to be able to gain as many benefits as possible. Sometimes a new IT system can be an investment wished for by employees but not prioritized by the board. In that case a regulation can function as a catalyst for making a project that might not have been done otherwise, and at the same time contribute to a more efficient working environment.

The regulatory projects are believed to take a lot of time, which hampers other kinds of development. The Bank is small with limited resources, and the CBDO says that it is frustrating that the regulatory projects take almost all the resources. Since The Bank has limited resources, the CBDO admits that thoughts have arisen sometimes about how the company can continue in a way that puts them “out of scope” of the regulations.

4.3.2 Basel II⁸

The Basel II regulations consist of three pillars (FI, 2013c). The first pillar contains requirements for calculating market risk, credit risk and operational risk, and from which the necessary capital adequacy is calculated. The second pillar requires the company to have a sufficient risk assessment which is done through an Internal Capital Adequacy Assessment Process (ICAAP) by the regulated company. One requirement is that the capital adequacy assessment should be an integrated part of banks decision making processes and control processes (FI, 2005). FI also conducts their own thorough capital assessment to ensure that the company is compliant with the regulations. The third pillar states that the regulated company must disclose information about risks and regulatory compliance work in, e.g., annual reports.

4.3.2.1 The Basel II implementation

The Basel II project was The Bank’s largest project, involving more people and more money than any before. The project had a holistic perspective from the outset and CBDO believed this was something that differed from some banks; “many banks started with the risk models while we took a more holistic perspective and tried to look at the whole business.” The reason for this was probably that none of the people in the project management team had a background specializing in risk control or credit risk. The project was divided into three parallel parts: the

⁸ As defined by FI

creation of risk models, the creation of a data warehouse (DW) and the ICAAP. The use of internal models required a lot of internal data, and hence the data needed to be stored in a DW. Prior to the project data was organized in separate systems dependent on the business area, but the new corporate DW made a complete customer profile available. The models are based on the factors Probability of Default (PD), Loss Given Default (LGD) and Exposure At Default (EAD). These models resulted in a credit approval system based on the scoring of customers. The DW made the scoring of every single customer possible on monthly basis, which FI required as a part of the Basel II package. After the Basel II project the systems were used in a new way. The creation of a DW which stored historical data led to increased knowledge about customers and thus more control. Targeted campaigns to profitable customers and more interest to “better” customers are new ways of using the systems. In addition to a new DW, The Bank created an IT system for calculating capital adequacy.

The Bank did have functions for handling both risk and compliance even before the project, but the Basel II regulations led to the creation of the R&C department. With this new department, new capabilities were required: The Bank had to hire statisticians and risk analysts to be able to create the risk models necessary and to monitor the overall risks in The Bank.

Due to Basel II, The Bank now has a policy called New Product Approval Process (NPAP), which controls how The Bank develops new products with regards to all risks. This policy enables the company to identify costs early for capital adequacy and liquidity. “If you enter a project, and you know the risks involved beforehand, then it is easier to relate to a decision”, according to the risk analyst. If the project team, for instance, learns that a product in development will cost more capital, the opportunity exists to change either the product or the price early.

Before Basel II, The Bank used a BSC with a strategy map to handle The Bank’s strategies and goals. The process involved the whole company and key performance measures based on the strategies were set on departmental level. When the Basel II project started, this process was phased out and The Bank stopped using the BSC. Prior to the project, the project manager was responsible for the development of the BSC and when the manager received other responsibilities due to the project, no one else took over the responsibility of the BSC.

4.3.3 IRB approval⁹

FI allows two ways of measuring the credit risk banks are exposed to, and thereby determining the required capital adequacy (FI, 2013d). The standardized approach involves classifying risk-weighted assets into different categories predefined by FI. The IRB approach is a way of calculating risk using in-house developed methods, and for this an approval from FI is required.

⁹ As defined by FI in *Lag 2006:1371 and FFFS 2007:1*

The approval is an onerous process which involves an application document of more than 130 pages (FI, 2007). For a model to be approved, several years' worth of data is needed. When the first approval is received, FI demands that IRB must be applied to all portfolios within three years.

4.3.3.1 The IRB approval

When the Basel II project began, The Bank had decided they wanted to try to get an IRB approval and thus create their own risk models. The reason for that was that a business case was done prior to the project and it showed that The Bank would have a great advantage if they chose an IRB approach instead of the standardized approach. The advantage was based on the low risk of The Bank, which would make the IRB approach profitable. Another reason for becoming an IRB bank was, according to the analyst at R&C and the business controller, that it signals quality to the market. The IRB approval took a few years to get since the risk models needed historical data and the process of data collection started during the Basel II project. At the same time a new data mining system was implemented for the building of risk models

The IRB approval has affected one specific strategy of The Bank. One of the goals in the financial perspective in the strategy map, regarding differentiated offerings, has been expanded as an effect of the IRB approval. The goal existed before but is now based on risk taking. The IRB approval also affects decision making in that The Bank is strictly bound to use the models that have been approved. According to the CBDO, it was hard in the beginning to know what kind of decisions that would affect the IRB system. If a decision has an effect on the IRB system, The Bank needs to adjust their risk models and then apply for new approval by FI. This takes time and the CBDO believes this could be very inhibitory. For that reason decisions are often steered in the direction so they fit the IRB system and this also forces The Bank to stick to the decisions made because it takes a long time and is costly to change. Therefore, it is very important for the decision makers to know how the decisions they make affect the IRB system. The analyst of R&C does not think that this is something that inhibits change as long as the decision makers are familiar with what the regulations mean. Rather, the analyst expresses that The Bank benefits from these regulations since minimum risk is taken while they continue making money.

When talking about the issuing of new credit cards the CBDO mentions effects of the IRB approval: "We have changed some key performance measures because of this. Where we previously rather wanted to increase the volume and now we want to reduce, it is the exact opposite." This is a result of the credit card limit being expensive in terms of capital adequacy, and The Bank is working towards having smaller limits.

4.3.4 Liquidity risk management¹⁰

Due to the financial crisis, regulations have been added regarding liquidity risk to facilitate a well-functioning financial system (FI, 2013e). These regulations require a certain level of liquidity to ensure that banks do not default on their payments (FI, 2010). Further, they contain strict rules over what assets are allowed to be included in the liquidity reserve. Other requirements are that the banks should decide a risk tolerance level, as well as strategies and policies for handling liquidity risk. It is up to the banks to decide an appropriate level with regards to, e.g., the size and the complexity of the business. The measuring of liquidity risk, for determining the size of the liquidity reserve, involves conducting stress tests on a monthly basis where the outcome of different extreme scenarios is tested.

4.3.4.1 Liquidity regulations

The FFFS 2010:7 regulation about liquidity risks has affected The Bank considerably. According to the regulation, The Bank must decide how many months they should survive without external borrowing in certain scenarios (risk tolerance level), a decision that has been made by the board of The Bank. The most important aspect is not the number of months decided; instead it is the process behind the decision that matters. This regulation, along with others has significantly changed both the size and composition of the liquidity buffer. The upcoming Basel III regulation package contains a LCR which (if no changes are made) The Bank is already compliant with. In fact, The Bank's current ratio is well above the upcoming requirement even though the regulations do not apply until 2015. According to both the analyst at R&C and the CBDO, most other Swedish banks are over compliant as well. The over compliance goal of the board is a conscious choice that involves an increased cost in exchange for showing the market risk awareness. However, today, The Bank's liquidity buffer is above the goal the board put up and for that reason is under revision. The CBDO states that it is hard to know when you are over compliant since that is not something that FI points out: "They only tell you when you are not compliant with the regulation." This insecurity has resulted in over compliance, which the CBDO believes can hamper the business.

The regulations have influenced change in The Bank's strategies. The funding strategy has been shifted towards deposits instead of market funding. Another strategic question the board deals with is about what to do with the excess of liquidity and this is something that that needs constant revision. Due to the regulations, the company had to hire new staff to take care of the placement of the excess liquidity since this sort of competence did not exist in the company.

The liquidity risk regulations have not resulted in a new IT system yet: The Bank compiles figures from different systems. This is because the requirements here are not yet clear, for instance the upcoming LCR regulations where FI may still make adjustments. In the future there will be a complete software solution for liquidity risk.

¹⁰ As defined by FI in *FFFS 2010:7 and FFFS 2011:37*

5. Discussion

The discussion is divided in two parts after respective research question. The first part addresses PMSs change (Q11) where a cross comparison is made between the first nine questions of the PMSs framework and the studied regulations. The remaining parts of the PMSs framework (Q10 & Q12) are further discussed in the second part.

5.1 Regulatory change in PMSs

As illustrated in *Table 3*, neither of the studied regulations has affected the PMSs on an overarching level like the vision and mission or the KSFs. However, the organizational structure has been affected by the Basel II package. It forced The Bank to create a dedicated risk and compliance function: the R&C department. Strategies were to some extent affected by the Basel II implementation in that the use of the BSC declined because of the shift in personnel resources to the Basel II project. This reprioritization can be seen as an indirect effect of the regulations, and is therefore not included in *Table 3*. Naturally, this also affected the function of key performance measures as a PMS since the BSC was no longer updated. The NPAP is another simultaneous change affecting the planning process of new products, by taking aspects of regulations into considerations, it is however a direct effect of Basel II. The monthly stress test is another Basel II driven change which is part of the planning process. The strategy map used today has influences both from the IRB approval and liquidity risk regulations. The IRB approval has introduced risk awareness in the financial perspective and the liquidity regulations have shifted the funding strategy towards deposits. Besides this, the IRB approval has also resulted in new key performance measures.

Both the Basel II implementation and the IRB approval have led to new ways of handling information. The most apparent changes are the ones in the IT infrastructure. New systems have been implemented, all of which affect the way of receiving and sharing information. Another effect, not attributable to any specific regulation, is the increased information flows between R&C and the Board/management.

PMS/ Regulation	Basel II	Credit risk (IRB)	Liquidity risk
Q1 Vision/Mission			
Q2 KSF			
Q3 Org.structure	<ul style="list-style-type: none"> • New department, R&C 		
Q4 Strategies/Plans	<ul style="list-style-type: none"> • NPAP • Stress test 	<ul style="list-style-type: none"> • Risk awareness in strategy map 	<ul style="list-style-type: none"> • New funding strategy
Q5 KPM		<ul style="list-style-type: none"> • New KPMs 	
Q6 Target setting			
Q7 Evaluation			
Q8 Rewards			
Q9 Inform. Flows	<ul style="list-style-type: none"> • New DW • IT system for calculating capital adequacy • Credit assessment system 	<ul style="list-style-type: none"> • Data mining system for creating models 	

Table 3. PMS & Regulation comparison

Notably, some PMSs have changed due to the regulations. Thus, regulatory change seems to be a factor that influences management accounting change in The Bank, just as Helliard, Cobb and Innes (2002) found in their case study. If the components of the PMSs did not change, there would be a mismatch between the environment and the PMSs. These environmental pressures, as the regulations are, would eventually cause a pressure for change (Cobb, Helliard and Innes, 1995). But the fact that only some PMSs have changed in The Bank indicates that there is still a mismatch that needs to be managed. Lundberg’s (2013) study could not show any substantial effect on the banks PMSs; the changes that occurred were not considered to be driven by the regulations. Unlike his study, this study presents changes in The Bank’s PMSs directly affected by the regulations, although to a limited extent.

With regards to the fact that The Bank wants to profit from the regulations, it might seem strange that they are over compliant when coming to the LCR requirement (liquidity risk), since this results in higher costs for The Bank. Uncertainty remains about the requirement and this, along with an awareness that other banks also are over compliant, may be the reason for why The Bank is it. When uncertainty surrounds an organization, it tends to imitate similar organizations, which results in mimetic isomorphism (DiMaggio & Powell, 1983). The awareness of the over compliance of other banks seems to work as an excuse for The Bank’s response to the requirement.

Since the regulations are something that all banks have to follow there is a risk that banks become more homogenous due to institutional isomorphism. According to NIS, coercive

isomorphism is created from pressures by other organizations, and the legal environment makes the banks more alike. The Bank tries to see the business opportunity with new regulations and profit out of them instead of just implementing the required changes. This is an action which counters the effects of institutional isomorphism as this decision and the way of profiting from regulations is optional. Since this study is only based on one bank it cannot say anything about other banks, but to believe other banks also have these thoughts in mind would not be a wild guess. Even though the regulations pressure banks to become more alike, The Bank will still differ from the others since it is a niche bank. Banks without a niche should therefore be more worried about this problem.

The risk management of The Bank is primarily coupled with compliance rather than performance management. This is natural since the R&C department was created as a result of regulations. The creation of this department is a true sign of coercive isomorphism; Basel II forced all banks to implement this department. However, the department does have an expressed goal to take advantage and make profit from the regulatory framework. But the fact that the R&C department is not legally allowed to make any decisions regarding risk may pose a problem in integrating risk management as a part of performance management. Hence, this study may contribute to the research with an example of risk management separated from performance management, contrary to what the research advocate (see Bhimani, 2009; Soin & Scheytt, 2009). This decoupling can, to some extent, also explain the limited effect of risk regulations on the PMS components. The above relationship is very disturbing since regulations force risk management into compliance instead of performance management. Should this be the case in other banks as well, the regulations have then not only restricted risk taking, but also efficiency.

5.2 Embracement of regulations

Ferreira and Otley (2009) stress the importance of the coherence between different PMSs. Yet, as Table 3 shows, a change in strategy and plans does not always implicate a change in key performance measures. This lack of coherence is dangerous and could as mentioned lead to control failures. This case indicates, as Ferreira and Otley (2009) suggest, a consequence of different people implementing different PMSs. As the BSC faded out, the link between the strategy map and key performance measures disappeared. When risk awareness became part of The Bank's financial strategy, the coherence between PMSs should have implicated a change of the key performance measures as well. However, the decoupling ensured this change was absent. If risk management had been closely coupled with performance management, it would have been a natural process to modify the key performance measures as well. The PMSs are meant to be connected, and when "the chain" was broken the contingent effects on target setting, evaluation etc. did not happen either. Without coherence, the PMSs in The Bank will not be utilized to their full capacity (Ferreira & Otley, 2009). This emphasizes that better coherence will lead to improved performance. Better coherence will also counter the effect of institutional isomorphism. According to Hussain and Hoque (2002), better coherence between strategy, management activities and accounting control systems will result in less tendency to copy

systems from other organizations. Since this study shows that the coherence between the PMSs seem to have faded out, The Bank should be worried. There is a risk that this loss of coherence will result in that The Bank implement systems influenced by other banks, systems that may not be suited for them. To prevent this from happening banks should increase the coherence between the PMSs. In that way banks will diminish the risk of imitating other banks and at the same time utilize the PMSs at the most. Besides this, coherence will also help banks to better tackle and embrace new regulations. This due to the fact that when the regulations affect one component, changes will automatically follow in the other components.

FI (2005) regulates that the capital adequacy assessment should be an integral part of The Bank's decision making processes and control processes, but as evidenced the regulations do not entirely permeate all PMSs related to these processes, even though The Bank is compliant. Target setting and evaluation for instance are two important control processes without notable effect from any of the Basel II requirements. This is analogue to what in NIS is said about decoupling and loose coupling to handle external legitimization demands without influencing the everyday business (see Arroyo, 2012; Modell, 2007). This case is loose coupling rather than total decoupling since the latter is not applicable in this situation: that would involve not complying with the regulations. The fact that The Bank have voluntarily integrated regulations in at least some of the PMSs indicate that the loose coupling is not an explicit strategy to achieve better efficiency "by sticking to their business", but rather a passive reaction of external pressures (Arroyo, 2012),

The above evidences that in order to integrate regulations in PMSs and thereby the daily operations, coherence is needed. It is then also of great concern to use some of the PMSs interactively, since this tells employees what the managers prioritize (Simons, 1995). The use of control systems at The Bank today indicates a domination of diagnostic use. The budget, for example, seems to only exist for a planning purpose, seeing that budgetary goals are not even adjusted after major events. The fact that the Target Feedback Report is sent out every month through the intranet to every employee indicates that at least the intention exists to use it interactively. However, only a longitudinal study could determine whether that is in fact the case. It is, after all, not mandatory for employees to read the report.

To be able to improve performance, a bridge between risk management and performance management should be created. Since the R&C department is bound by law not to carry out activities for the rest of The Bank, other employees will have to be responsible for this. Also, someone need to monitor and establish coherence between the PMSs at The Bank, to improve performance. For this a management committee, or similar, is suggested since they most often have a comprehensive knowledge in this area.

This reasoning takes banks to a crossroad. Either a bank can choose to comply with regulations and do nothing more, i.e. actively or passively accept loose coupling; or, they can try to profit

from regulations by integrating them in the operations. If they choose the latter, they must ensure that the regulatory change permeates all PMSs and not only in separate components of them. Otherwise the PMSs will lose their coherence and thereby their functioning purpose.

6. Conclusion

This study shows that banking regulations have caused some PMSs to change in The Bank, although to a limited extent. The limited effect depends on two aspects; the first relates to poor coherence between the PMSs and the second relates to decoupling of performance management from risk management.

The PMS component most affected by banking regulations seem to be strategies and plans: the three studied regulations all had an effect on this component. Apart from this, organizational structure and information flows are the only components directly affected by the regulations. There have been changes in other PMSs as well, where the effects of regulations can be seen as indirect. The lack of coherence contributes to the fact that the PMSs will not be utilized to their full capacity. The lack of coherence also stimulates institutional isomorphism, which generate a risk that The Bank will imitate other banks PMSs. With coherence banks can therefore embrace new regulations in a more efficient and effective way.

Performance management could be integrated with risk management in order to create a natural coherence between change in risk management and change in PMSs. However, it is concluded that existing regulations can pose a problem for integrating risk management with performance management, since the dedicated risk function, the R&C department, is bound by law not to interfere with other parts of The Bank. The bridge between these two areas then has to be created by someone else than the R&C department, eg. a management committee.

More research is needed in order to determine how regulations affect the PMSs in banks, and whether they only are a factor affecting the PMSs to a limited extent. Preferably, this research is based on Ferreira and Otley's (2009) framework to be able to create knowledge out of cumulated research. Further, the coherence of PMSs needs to be studied in order to find ways of integrating regulations in PMSs and still maintaining coherence.

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Appendix 1 - The PMSs framework questions

1. What is the **vision and mission** of the organization and how is this brought to the attention of managers and employees? What mechanisms, processes, and networks are used to convey the organization's overarching purposes and objectives to its members?
2. What are the **key factors** that are believed to be central to the organization's overall future **success** and how are they brought to the attention of managers and employees?
3. What is the **organization structure** and what impact does it have on the design and use of performance management systems (PMSs)? How does it influence and how is it influenced by the strategic management process?
4. What **strategies and plans** has the organization adopted and what are the processes and activities that it has decided will be required for it to ensure its success? How are strategies and plans adapted, generated and communicated to managers and employees?
5. What are the organization's **key performance measures** deriving from its objectives, key success factors, and strategies and plans? How are these specified and communicated and what role do they play in performance evaluation? Are there significant omissions?
6. What level of performance does the organization need to achieve for each of its key performance measures (identified in the above question), how does it go about **setting** appropriate performance **targets** for them, and how challenging are those performance targets?
7. What processes, if any, does the organization follow for **evaluating** individual, group, and organizational performance? Are performance evaluations primarily objective, subjective or mixed and how important are formal and informal information and controls in these processes?
8. What **rewards** — financial and/or non-financial — will managers and other employees gain by achieving performance targets or other assessed aspects of performance (or, conversely, what penalties will they suffer by failing to achieve them)?
9. What specific **information flows** — feedback and feedforward —, systems and networks has the organization in place to support the operation of its PMSs?
10. What type of **use** is made of information and of the various control mechanisms in place? Can these uses be characterised in terms of various typologies in the literature? How do controls and their uses differ at different hierarchical levels?

11. How have the PMSs altered in the light of the **change** dynamics of the organization and its environment? Have the changes in PMSs design or use been made in a proactive or reactive manner?

12. How **strong and coherent** are the links between the components of PMSs and the ways in which they are used (as denoted by the above 11 questions)?

Appendix 2 – Interview guide

Interview 4 - Questions regarding management accounting in the company

1. Vision and Mission

What is the vision and mission of the company?

How is this brought to the attention of managers and employees?

2. Key Success Factors

What key factors that central to the organization's future success?

How is this brought to the attention of managers and employees?

3. Organization structure

What does the organization structure look like?

What responsibility do the different units in the organizational chart have?

Is the structure affected by any of the components in the [PMSs framework] model?

4. Strategies and plans

Vilka strategier och planer har företaget skapat för att säkerställa framgång?

Hur tas strategier fram och kommuniceras till chefer och medarbetare?

5. KPM

Which are the most important KPMs of the company?

How is this brought to the attention of employees and what role do they play in evaluating performance?

6. Target setting

How do you go about setting performance targets?

How challenging are the targets being set?

7. Evaluation

How is the evaluation process carried out?

At individual, group, and organizational level?

8. Rewards system

What rewards (financial or non-financial) will managers and other employees gain by achieving performance targets or other aspects of success?

Or conversely, what penalties will those suffer who fails to achieve them?

Interview 5 – Questions about regulations

The regulatory changes being studied are:

- *The Basel II implementation/project (2006-2008)
- *The IRB approval – Credit risk (Lag 2006:1371, FFFS 2007:1)
- *New regulations for handling liquidity risk (FFFS 2010:7)

- * Tell us about your role in The Bank.
- * Tell us about the role of the R&C department in The Bank.
- * What does the process look like when new regulations arrive?
- *How has the company been affected as a result of the mentioned regulations?
- Eg. When it comes strategies goals, targets and evaluation.

The [PMSs framework model] provides support in what parts of The Bank that might have been affected/changed (Focus is on Q1-Q9)

Interview 6 – Questions regarding the regulations effect on management accounting

The regulatory changes being studied are:

- *The Basel II implementation/project (2006-2008)
- *The IRB approval – Credit risk (Lag 2006:1371, FFFS 2007:1)
- *New regulations for handling liquidity risk (FFFS 2010:7)

- * Tell us about your role in The Bank.
- *How has the company been affected as a result of the mentioned regulations?
- On a strategic, tactical and operational level?

The [PMSs framework model] provides support in what parts of The Bank that might have been affected