Shaping Risk Management in Banks

Vikash Kumar Sinha

Doctoral Thesis 2019
KTH Royal Institute of Technology
Department of Industrial Economics and Management
Stockholm, Sweden
This research was conducted within the framework of the “European Doctorate in Industrial Management (EDIM).” The Education, Audiovisual and Culture Executive Agency (EACEA) of the European Commission funded the EDIM project under Erasmus Mundus Action 1 programs.

This research was jointly conducted at KTH Royal Institute of Technology and Politecnico Di Milano
Abstract

The recent financial crisis of 2007-08 was a watershed moment in the history of banking. The unprecedented event led to severe scrutiny by standard setters and regulators on how the business of banking is run. As a result of this strict scrutiny, a wide variety of reforms aimed at the second line of defense (risk management) ensued globally. These reforms stirred debate among the five actors (regulators, standard setters, normalizers, consultants, and implementers – banks and their interest organizations) that affected not only the shaping of risk management standards but also their implementation in banks. Motivated by these contemporary events, this thesis examines the shaping of risk management in the banking sector.

Through the three exploratory field studies in Sweden and Italy, the thesis posits two important contributions. First, the thesis posits a framework, demonstrating how the dynamic shaping of risk management is changing the conceptions of risk management in the banking sector. More specifically, the thesis (in Paper I) demonstrates how the definition of liquidity was changed from its traditional notion of a match between cash inflow and outflow to managing net cash outflow demands by keeping high-quality liquid assets. Furthermore, the thesis (in Paper II) shows how non-convergence of operational risk practices forced regulators to change their activity and detail-oriented advanced approach of risk measurement that (unintentionally) allowed the variation of practices to flourish. In a similar vein, the thesis (in Paper IV) demonstrates how the extension of internal audit to the non-tangible domain of “risk culture” raises doubts about the notion of “verification” and “control” attached to the practices of internal audit in lending credibility to risk management practices.

Second, the findings indicate the different participation approaches of various interested actors in the shaping of risk management practices. Here, the thesis (in Paper IV) demonstrates how the five actors (regulators, standard setters, normalizers, consultants, and implementers – banks and their interest organizations) influenced the conception of internal audit of risk culture. On the issue of internal audit of the Basel risk models (in Paper III), the thesis
demonstrates the filtering approaches of multiple institutional demands via the internal organizational conditions that enable full or partial agency of low-level internal auditors in shaping their practices of lending credibility to risk management.

Given the findings, the thesis explicates two important implications for practitioners. First, the findings of the thesis indicate that reformulations of risk measurement and internal audit would require standard setters, regulators, normalizers, consultants, and implementers to understand a balance between what to control and whom to empower. Second, banks would need to carefully design the level of freedom to be given to internal audit and risk control teams in managing the complex institutional demands through organizational structure and skilling initiatives.

**Keywords:** internal audit, risk management, risk culture, Basel models, operational risk, liquidity risk
Sammanfattning


Avhandlingen består av tre explorativa fältstudier i Sverige och Italien och bidrar med två viktiga punkter. För det första upprättar den ett ramverk som visar hur den dynamiska utformningen av riskhantering förändrar uppfattningar om riskhantering i bankväsendet. Mer konkret visar avhandlingen (i artikel I) hur definitionen av likviditet ändrades från att traditionellt beteckna matchning mellan kassainflöde och kassautflöde till att inbegripa hantering av kassautflödeefterfrågan genom att behålla likvida tillgångar av hög kvalitet. Avhandlingen visar även (i artikel II) hur icke-konvergerande operativ rikspraxis tvingade regleringsorgan att förändra sin aktivitet och sitt detaljorienterade förhållningssätt till riskhantering, som (oavsiktligt) ledde till att variationer i praxis kunde uppstå. Vidare framgår (i artikel IV) hur internrevisionens utvidgning till det immateriella (non-tangible) området ”riskkultur” väcker tvivel om begreppen ”verification” och ”control” som är knutna till praxis för internrevision med avseende på att skapa tilltro till riskhanteringspraxis.

För det andra visar resultaten de olika aktiviteternas förhållningssätt till att delta i utformningen av praxis för riskhantering. Här framgår (i artikel IV) på vilka sätt de fem aktörerna (regleringsorgan, standardiseringsorgan, professionella organ, konsulter och implementerare) var med och påverkade uppfattningen om internrevision av riskkultur. Vad beträffar frågan om internrevision av Baselmodellerna visar avhandlingen (i artikel III) förhållningssättet att filtrera
institutionella krav av interna organisatoriska villkor som ger internrevisorer på lägre nivå total eller partiell makt att utforma praxis för att skapa tilltro till riskhantering.

Resultaten framhåver två viktiga följer för aktörer. För det första tyder resultaten på att omformuleringen av riskbedömning och internrevision kräver att standardiseringsorgan, regleringsorgan, professionella organisationer, konsulter och implementerare förstår balansen mellan vad som ska kontrolleras och vem som ska stärkas. För det andra behöver banker försiktigt utforma nivån av frihet som ska ges till internrevisorer och riskkontrollanter för att hantera de komplexa institutionella kraven genom organisatorisk struktur och initiativ till upplärande.

**Nyckelord:** internrevision, riskhantering, riskkultur, Baselmodellerna, operativ risk, likviditetsrisk
Acknowledgments

I want to acknowledge many people for their support during the writing of this thesis. First of all, I would like to acknowledge my supervisors at KTH (Prof. Mats Engwall, Prof. Håkan Kullvén (Uppsala University), and Prof. Torkel Strömsten(SSE)) and POLIMI (Prof. Marika Arena) for their patience and kind support in transforming my vague, ill-formed and sometimes poetic ideas to unambiguous, well-articulated and scientifically rational presentations on paper. Though the current versions may not be the epitome of perfections, I will have to accept that the first versions were a disaster (I would have to acknowledge here that my academic thinking sometimes goes to the hyper-critical state).

I would also like to thank Prof. Tomas Sörensson (KTH), Prof. Torkel Strömsten (SSE), and Prof. Anna-Karin Stockenstrand (Uppsala University) for being helpful at the three different tollgates at KTH. Prof. Torkel Strömsten (SSE) and Prof. Peter Öhman (Mid Sweden University) helped a lot in improving the quality of this thesis by providing very helpful and insightful feedback during the last stages of this thesis. I would also thank Prof. Kent Eriksson (KTH) for reading the manuscript and assessing its preparedness for final defense. Prof. Cali Nuur (KTH) and Prof. Torkel Strömsten (SSE) also motivated me to finalize the manuscript at a time when I felt completely demotivated to finish this Ph.D.

I am indebted to many other mentors who challenged me formally or informally and contributed to the betterment of this thesis. Thank you Prof. Michela Arnaboldi (POLIMI), Prof. Cali Nuur (KTH), Prof. Paolo Trucco (POLIMI), Prof. Niklas Arvidsson (KTH), and Prof. Jannis Angelis (KTH), for devoting time to read my manuscripts and provide feedback during various EDIM seminars, or POLIMI annual evaluations.

A lot of my work also received feedback at various courses, workshops, and conferences during these four and a half years. I want to thank my department managers at KTH, Prof. Pernilla Ulfvengren and Prof. Anna Jerbrant for funding many of the trips for these useful courses, workshops, and conferences. Also, Ms. Martina Sani and Ms. Kristin Lohse - Thank you for
your help in arranging all the essential matters of VISA, accommodation and many other personal bits of help during my Ph.D. Journey. Sebastien Gustin, and Caroline Ahlstedt – Thank you for smoothening the IT and administrative procedures.

I would also like to thank all other colleagues at the Department of Industrial Economics and Management at KTH as well as the Department of Management, Economics and Industrial Engineering at POLIMI for their formal and informal interaction as well as their support. Ali Mohammad (KTH) and Mohammad Akhbari (KTH) – Thank you for all the professional and personal advice as well as the opportunity to teach accounting related topics in your courses. Interaction with students was a great way to learn new things. Serdar Temiz (KTH) – thank you for allowing me to role-play as an investor in your classes (It not only made me feel rich!! it also made me learn a lot about negotiations and groundbreaking ideas from some of the most ambitious students I have ever met).

I want to thank several of my fellow PhDs at KTH and POLIMI for enlightening discussions, emotional support and bearing with my irrational and absent-minded behavior. First of all, thank you - Marin, Richard, Enes, Jing, and Shoaib - for being close aides and my partner in crime for all the escapades from the miseries of this “real” world. Not to forget that the endless discussions I had with you guys on the scientific and non-scientific matters were also of great help. Thank you, Ed and Matthew, for investing time in supercritical and supercharged discussions on philosophy, science, and numerous research ideas. Thank you- Simon, Yuri, Maxim, Emrah, Ebru, Claudia, Andra, Isaac, Hakan, and Stefan T. for your great advice and discussion on all matters – academic to personal. Thank you, Milan, Ahmed S., Elias, Felix, Anna D., Frano, Roya D., Yulia, Linda D., Maria M., Caroline I., Anna S., Charlotta, Ermal, Hossein, Kundu, Fadi, Keivan, Sarah, Sina, Rami, Seyoum, Andres R., Vartan H., Swarnava, Yasmin A., Yasmin S., Artha, Rosella and many others for helping me along the way.

Finally, I would like to acknowledge my close family members without whom; this journey would not have been possible. I cannot express my gratitude in words to my mother (Asha), my Father (Bimal), My elder sister (Vrinti), my
uncle (Ramji), my aunt (Sheela) and my younger cousin (Prithvi) for their encouragement, and unconditional support.

Helsinki, January 2019

Vikash
(Talcott) Parsons walked down the hall in Harvard’s Littauer Center to his colleagues in the Economics Department, alerting them to his ambitious plans and assuring them that he had no designs on their terrain. Thus, Parsons made a pact. In my gloss: You, economists, study value; we, the sociologists, will study values. You will have a claim on the economy; we will stake our claim on the social relations in which economies are embedded.


The modern divide between the natural world and the social world has the same constitutional character, with one difference: up to now, no one has taken on the task of studying scientists and politicians in tandem, since no central vantage point has seemed to exist.

Bruno Latour in the book “We Have Never Been Modern.”
List of appended papers

This thesis is based on four papers that are appended at the end.

Paper I


Paper II

Paper presented at the *Nordic Accounting Conference 2018*, Copenhagen Business School, Copenhagen, 16-17 November 2018

Paper III

(Under review in Accounting and Business Research)

Paper IV
Contents

1. INTRODUCTION ............................................................................................................. 1
   1.1. REFORMS SHAPING RISK MANAGEMENT IN BANKING .................................... 1
   1.1. THEORETICAL MOTIVATION AND PERSPECTIVES ............................................ 3
   1.2. PRACTICAL AREA OF INTEREST ......................................................................... 5
   1.3. PURPOSE, EMPIRICAL SETTINGS, AND CONTRIBUTION .................................... 11
   1.4. STRUCTURE OF THE THESIS ............................................................................. 13

2. EMPIRICAL FRAME OF REFERENCE .............................................................................. 15
   2.1. BACKGROUND ......................................................................................................... 15
   2.2. THE RISE OF THE BASEL RISK STANDARDS .................................................... 17
   2.3. THE RISE OF THE COSO FRAMEWORKS ............................................................. 19
   2.4. THE ACTORS AND THEIR INTENTIONS ............................................................... 21

3. THEORETICAL BACKGROUND AND PERSPECTIVE .................................................... 28
   3.1. THE THEORETICAL CONCEPTS OF RISK AND RISK MANAGEMENT ............... 28
   3.2. THE SHAPING OF RISK MANAGEMENT PRACTICES IN THE EXTANT LITERATURE . 30
   3.3. PROBLEMATIZING ASSUMPTIONS OF THE THREE APPROACHES ................... 37
   3.4. THEORETICAL PERSPECTIVE APPLIED IN THE THESIS ................................... 43

4. METHODOLOGY ............................................................................................................. 46
   4.1. OVERALL RESEARCH DESIGN ............................................................................. 46
   4.2. DATA COLLECTION, ANALYSIS, AND REPORTING STRATEGY ............................. 49
   4.3. STUDY A: SHAPING RISK MANAGEMENT BY LIQUIDITY AND OPERATIONAL RISK MEASUREMENTS .......................................................................................... 51
   4.4. STUDY B: SHAPING RISK MANAGEMENT BY INTERNAL AUDIT OF RISK MODELS AND PROCESSES ......................................................................................... 56
   4.5. STUDY C: SHAPING RISK MANAGEMENT BY INTERNAL AUDIT OF RISK CULTURE .. 58
   4.6. LIMITATIONS ......................................................................................................... 61
   4.7. QUALITY CONCERNS AND MITIGATION ............................................................. 62

5. SUMMARY OF THE APPENDED PAPERS ................................................................ 64
   5.1. PAPER I: CARTOGRAPHY OF LIQUIDITY RISK CALCULATIONS ....................... 65
   5.2. PAPER II: REINVENTING OPERATIONAL RISK: DISTANCING OPERATIONAL RISK FROM OPERATIONS ......................................................................................... 67
5.3. PAPER III: UNFOLDING BASEL INTERNAL AUDIT PRACTICES IN INTERNATIONAL FINANCIAL ORGANIZATIONS
5.4. PAPER IV: MANIFOLD CONCEPTIONS OF THE INTERNAL AUDITING OF RISK CULTURE IN THE FINANCIAL SECTOR

6. DISCUSSION AND SYNTHESIS OF RESULTS
6.1. SHAPING RISK MANAGEMENT THROUGH MEASUREMENT
6.2. SHAPING RISK MANAGEMENT BY INTERNAL AUDIT
6.3. SYNTHESIS OF RESULTS

7. IMPLICATIONS
7.1. THEORETICAL IMPLICATIONS
7.2. PRACTICAL IMPLICATIONS
7.3. FURTHER STUDIES

8. CONCLUSIONS
8.1. CONTRIBUTIONS
8.2. CONCLUSION

REFERENCES
1. Introduction

1.1. Reforms Shaping Risk Management in Banking

Public trust in the banking sector receded to an alarmingly low level in the aftermath of the financial crisis of 2007-08 (Roth 2009, Stevenson and Wolfers 2011). In this regard, the financial crisis of 2007-08 represents the tipping point in recent history that brought about a sharp decline in public trust not only in the banking sector but also in the institutions of governments and regulating bodies (Roth 2009, Stevenson and Wolfers 2011, Sapienza and Zingales 2012). The receding trust in banks, banking regulators and governments resulted in the establishment of various committees, national as well as international, to investigate the problems with the banking sector (Hodson and Quaglia 2009, Eubanks 2010). Many of these committees (such as the influential Turner Committee), as well as academic reports, highlighted the persistent problems with the issues of control systems in the banking sector (Humphrey et al. 2009, Sikka 2009, Turner 2009). The rush to strengthen the control system in the banking business translated explicitly into the (re-)shaping of risk management1 systems by regulators and standard setters (Reinhart and Rogoff 2008). The reforms were especially intended to shape risk management through two practices, risk measurement and internal audit. First, with the help of risk measurement, the regulators embarked on tightening and homogenizing the calculable component of risk management (Acharya 2009, Wilson et al. 2010, Langley 2013, Marti and Scherer 2016, Palermo et al. 2016, Carretta et al. 2017). Second, with the use of internal audit2-driven reforms, the regulators and the standard setters embarked on enhancing the governance component of risk management (Ashby et al. 2012, Chambers 2014, Chambers and Odar 2015).

---

1 The concept of risk management employed in this thesis means a collection of calculative and governance practices aimed at managing an organization’s risk. More details in this regard appear on page 28-29.
2 The use of the term audit in this thesis solely refers to internal audit unless explicitly mentioned otherwise. The concept of internal audit employed in this thesis means a collection of assurance practices deployed by organizations to ascertain faith to all governance practices, including that of risk management.
Since modern risk regulation and standard-setting processes are public in nature and have moved away from “what is appropriate” to “what is acceptable” (Lindahl 1987, Fogarty 1994, Fogarty et al. 1994, Richardson 2008, Herring 2018), the widespread reforms on the (re)shaping of risk management initiated by the regulators and the standard setters on exerting more control fueled a cacophonous debate among several actors with their vested interests (Palermo et al. 2016, Baud and Chiapello 2017).

The reason for the interest of several actors in the shaping of risk management practices in banks could be traced to the fact that these practices are of economic and political interest to many of them (de Goede 2004, Power 2004a, 2009, Huber and Scheytt 2013). Standard setters (such as the Basel Committee on Banking Supervision, BCBS) promote the shaping of risk management reactively after every financial crisis to reduce economic damages (Wahlström 2006, 2009, Baud and Chiapello 2017). Regulators (such as the European Banking Authority and the national regulators such as the Swedish Financial Supervisory Authority or the Central Bank of Italy) propose adaptations of the standards of the BCBS to suit their regulatory regimes (Bouwen 2004). Normalizers, (professional bodies such as the Institute of Internal Auditors, IIA and the Committee of Sponsoring Organizations of the Treadway Commission, COSO) include risk management within their thought leadership to ride on the rising importance of risk management in the industry (cf. Hayne and Free 2014, Chambers and Odar 2015). Consultants promote risk theorization and its extensions to sell value-added solutions amalgamated with new risk archetypes (Christensen and Skærbæk 2010). Implementers (such as banks and their interest organizations3) promote risk management for enhancing profitability by the exploitation of risks through identifying, calculating, pricing and packaging new archetypes of risks for commercial purposes (de Goede 2004, Nilsson 2017).

The five key actors, mentioned above, have been investigated in this thesis since they play significant roles in the contemporary debates of the shaping of risk management due to their vested political and economic interests

---

3 Interest organizations are trade associations, such as the Swedish Bankers Association, that work as information sources, discussion forums and lobbying channels for their members.
The vested political and economic interests of the five key actors in the reforms stirred controversial debates on the shaping of risk management. These controversial debates and their settlement on the shaping of risk management form the empirical motivation behind this thesis.

1.1. Theoretical Motivation and Perspectives
The extant literature on the shaping of risk management could be categorized into three dominant theoretical perspectives. First, actor-centric explanations that put political human actors at the center stage of the heterogeneous shaping of risk management. Second, structure-centric explanations that explain the shaping of risk management by focusing on the political legitimacy and the heterogeneous adaptations of the pre-existing system. Third, phenomenal explanations putting forward context-specific, mostly political, explanations and ignoring any hidden theorizations.

In the first category of actor-centric explanations, scholars such as Mikes (2009, 2011) and Hall et al. (2015) focus on the influence and intention of actors, such as risk experts, in the diverse shaping of risk management. In contrast, some other actor-centric theorists argue that processes such as risk management are shaped in diverse ways due to ignorance, myopia or bounded rationality of managers and employees (Alvesson and Spicer 2012). This bounded rationality is linked to the restriction of cognitive capacity (Danielsson 2002, Szegó 2002, Danielsson 2008, Alvesson and Spicer 2012).

In the second category, institutional explanations, focusing on the political legitimization on the heterogeneous shaping of risk management through the adaptation of pre-existing ideas and practices of risk management, are emphasized (Arena et al. 2010). For example, Soin and Collier (2013) and Bromiley et al. (2015) focus on the heterogeneous institutionalization of risk management in different industries and contexts. Hayne and Free (2014) show the institutional work by the standard-setting body, the Committee of Sponsoring Organizations of the Treadway Commission (COSO), in shaping risk management. Some others, like Beck (2006) and Douglas and Wildavsky
(1982), blame the shaping of risk management on the contemporary social
culture as well as the psyche of individuals.

In the third category, phenomenal explanations, relying on contextual factors
and focusing on the benefits of different actors, are offered. At one end, these
explanations recognize banks as the sole beneficiary of the risk phenomenon.
For example, calculated risk exploitation (de Goede 2004, Marron 2007) or
reckless risk-taking (Williams 2013, Morales et al. 2014, Alvesson and
Robertson 2016, Marti and Scherer 2016) by banks is demonstrated as
shaping risk management where banks economize and financialize risks for
their own benefit. At the other end, phenomenal explanations blame the
regulators and standard setters for the shaping of risk management. For
example, incentives of free capital from regulators such as the Basel
Committee through their Basel Accords are cited as a prominent reason for
the shaping of risk management in the financial sector where banks invest in
non-transparent complex models for reporting lower risk and lower risk-
bound capital (Wahlström 2006, 2009, Baud and Chiapello 2017). In between
the above-mentioned two extremes, some theorists such as Curran (2015),
Langley (2013) and Power (2004, 2009) blame the shaping of risk
management on the collective ignorance of alternative approaches by all the
stakeholders – regulators, standard setters, normalizers, consultants and
implementers (banks and their banking associations). Huber and Scheytt
(2013) go one step further in blaming this not on ignorance but on the
deliberate positioning of risk management as “alternativeless” by all the
stakeholders.

In summary, the shaping of risk management has been explored in three
prominent ways in the extant literature: First, actor-centric explanations
where the shaping of risk management practices are shown to be dependent
on the cognitive and mental ability of agents (cf. Mikes 2009, 2011, Hall et al.
2015). Second, structure-centric explanations where the shaping of risk
management is shown to be dependent on institutionally embedded actors
and political legitimacy is shown to be the dominant driver for the shaping
explanations that put perceived benefits as the dominant driving force for the

Departing from these dominant streams of literature, this thesis uses an emerging approach of network-centric techno-political perspective to explore the shaping of risk management\(^4\) (Callon et al. 2009, Vinnari and Skærbæk 2014, Themsen and Skærbæk 2018). The network-centric approach provides two advantages over the previously mentioned three dominant literature streams. First, since risk management in practice involves so many different actors (as shown in the introductory section of this thesis), the network-centric perspective allows the viewpoints of the different interested actors to be taken into account. Second, the involvement of different actors suggests that risk management cannot be shaped solely by perceived benefits or political legitimations of certain specific actors (Latour 1993, Callon et al. 2009). Again, choosing the network-centric techno-political perspective allows accounting for the shaping of risk management as a techno-political ensemble consisting of technical benefits and political legitimations of different interested actors (Hilgartner 1992, Callon et al. 2009, Arena et al. 2017, Themsen and Skærbæk 2018).

1.2. Practical Area of Interest

The practical areas of interest on the shaping of risk management are diversifying in the accounting literature. The academic interest has moved from measurement related issues in the 1990s (e.g., McGoun 1995) to capturing organizational practices (Mikes 2009, Arena et al. 2010) in the last decade. In the contemporary field studies of risk management in accounting, the debate is moving toward various specific frameworks, such as the risk map (e.g., Jordan et al. 2013, 2016), the Project Management Body of Knowledge framework (e.g., Themsen and Skærbæk 2018), the Basel Standards (e.g., Herring 2016, 2018), and the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework (e.g., Hayne and Free 2014), as well as specific actors, such as risk professionals (e.g., Hall

\(^4\) More details and arguments on the theoretical motivation are discussed on pages 37-44.
et al. 2015), internal auditors (e.g., de Zwaan et al. 2011) and operational staff (e.g., Arena et al. 2017, Themsen and Skærøe 2018). These diversifications represent the growing reach of the concept of risk management not only in the business (Power 2004a, 2016) but also in the cultural context (Beck 1992, Beck and Holzer 2007).

However, despite the growing academic interest in the ever-expanding business and cultural reach of risk management, some areas remain underexplored in the literature. Scholars have specifically pointed to field-based studies of risk management in the banking sector (e.g., Mikes 2009, 2011), as well as a field-based understanding of banking risk management regulations and standards (e.g., Herring 2016, 2018). In this section, I first enumerate and then develop four such underexplored practical areas that motivated the formulation of the research questions of this thesis:

(1) The regulatory level in banking
(2) The contemporary shaping of banking risk management at the regulatory level where regulatory definitions of risk management are becoming stringent post the financial crisis and include intangible objects such as operational risk and risk culture
(3) The role of actors other than regulators in regulatory formulations
(4) How allied practices, such as risk measurement and internal audit, shape risk management

The Regulatory Level in Banking
Risk management is shaped at several levels, at organizational sites as well as at the individual level (Black 2005, Cooper and Robson 2006, Giovannoni et al. 2016, Herring 2016, 2018). One stream explores the shaping of risk management by individual actors and their vested interests (Woods 2009, Baud and Chiapello 2017). For example, Mikes (2009, 2011) and Hall et al. (2015) focus on how risk experts influence organizational practices concerning risk management. De Zwaan et al. (2011) and Vinnari and Skærøe (2014) explore the quest of internal auditors in gaining influence and power when it comes to shaping risk management. Brivot, Himick, et al. (2017) demonstrate how consultants shape risk management practices. Sarens et al. (2009) demonstrate how board members, executive officers or audit committee members focus on feeling comfortable while directing risk
management policies in organizations. The famous Turner (2009) report and
the Basel Committee on Banking Supervision initiatives (see Balthazar 2006,
Herring 2016, 2018) demonstrate the quest of central bankers and the
standard setters respectively in trying to bring forth a new perspective and
initiative on risk management. While these individual actors use their
professional knowledge to make the processes smooth for banks, at the same
time they are driven by their professional interests and propound their own
approaches and philosophies (Bromiley et al. 2015, Roussy and Brivot 2016).

Another stream of studies has put the prime onus on organizational actors
and their interests. For example, the onus is placed on the normalizers such
as the Institute of Internal Auditors and the Committee of Sponsoring
Organizations of the Treadway Commission, for maintaining the relevance of
their internal control and internal audit frameworks by including risk
management within their preview to ride on the rising importance of risk
management in the industry (e.g., Hayne and Free 2014, Chambers and Odar
2015); on the external consulting service providers utilizing risk management
as a revenue-generating service to complement loss-making services such as
external audit (e.g., Knechel 2007, Robson et al. 2007); and on the banks and
their vested interests in risk exploitations (e.g., de Goede 2004). Some
scholars in this stream have also theorized on the collective collusion or
collective ignorance of all these actors. For example, Curran (2015) questions
the collective ignorance of all these organizations during the shaping of risk
management. Huber and Scheytt (2013), using Agamben’s theory of “state of
exception,” theorize that the elites of the banking sector (governments,
standard setters, regulators, big banks and large consulting firms) have
reinvented risk management as an “alternativeless” practice for their
collective vested interests, where they keep on fueling financial crisis after
financial crisis and use public money in the name of rescuing the economy.

In summary, while previous studies have provided significant insights into the
individual (Mikes 2009, Hall et al. 2015) and the organizational levels in detail
(Arena et al. 2010, Mikes 2011, Tekathen and Dechow 2013), there is dearth
of field studies at the regulatory level except for a few studies that mainly
study regulatory developments by scrutinizing regulatory artifacts (cf. Baud
The “Contemporary” Shaping of Banking Risk Management at the Regulatory Level

According to Danielson (2003) and Black and Baldwin (2010), an important aspect concerning risk management adoption in banks by regulation and standards is the liberal social culture of the western world, which allows individuals or entities to have a certain degree of freedom through the promotion of democratic means and consensus building. As a result, the liberal social culture promotes due processes by the regulators and standard setters, which allows different interested actors, including implementers (banks and their interest organizations), as well as consultants, to have a say when regulations and standards are enacted (Richardson 2008, Richardson and Eberlein 2011).

In fact, the banking regulations were in the self-regulation regime before 2000\(^5\), where the regulated were allowed to determine what should be regulated and how (Black 2005, Balthazar 2006, Black and Baldwin 2010, Herring 2018). However, the financial crises and frauds of the last decade promoted tighter regulation\(^6\) (Wahlström 2009, Palermo et al. 2016, Baud and Chiapello 2017). Consequently, studying contemporary banking cases on the shaping of risk management could teach us about how financial actors react to and cope with a business environment that becomes less flexible and more disciplinary (Foucault 1988, Mennicken and Miller 2012, Raffnsoe et al. 2019).

In addition, banking risk management in the aftermath of the financial crisis of 2007-08 has been revised paradigmatically to include “ambiguous” (Wahlström 2009, Herring 2018) and “intangible” (Palermo et al. 2016, Carretta et al. 2017) elements as opposed to the previous focus on concrete processes. For example, “ambiguous” and “intangible” ideas such as operational risk (Wahlström 2006, 2009) and risk culture (Ashby et al. 2012,

---

\(^5\) As detailed in Chapter 2, the trend of self-regulation saw a decline starting in 2000 and post Basel III, in Basel IV regulations are becoming even more stringent. However, participation and resistance from actors such as banks and the banking interest organizations still continue during the regulation enactment processes (Herring 2016, 2018).

\(^6\) Some scholars point out that tight regulation has also been a response of financial crises from governments and regulatory institutions in many cases in the past (Kaminsky and Reinhart 1999).
Palermo et al. (2016) are included in the ambit of risk management. The inclusion of “ambiguous” and “intangible” ideas requires a fresh look at the shifting notions in the risk measurement (Callon 1998, Callon and Muniesa 2005, Callon et al. 2009) and the internal audit approaches (Arena and Sarens 2015, Ring et al. 2016) that heavily affect risk management practices (Hayne and Free 2014, Chambers and Odar 2015, Arena et al. 2017).

The Role of Actors Other than Regulators in the Banking Regulations

Several studies in accounting have looked at factors shaping risk management within organizations using quantitative studies (Kleffner et al. 2003, Beasley et al. 2005, Paape and Speklé 2012). For example, encouraging organizational policies, the presence of Chief Risk Officers, board encouragement, Chief Executive Officer’s and Chief Finance Officer’s support for risk management, the presence of the big four external auditors, the deployment of advanced information and communication technologies, the influence of risk managers, listing requirements on stock exchanges and the size of companies are shown to positively influence the shaping of risk management (Kleffner et al. 2003, Beasley et al. 2005, Woods 2009).

In doing so, such approaches have considered risk management as a homogeneous practice. In contrast to quantitative studies, several emerging field studies have demonstrated the fluid and heterogeneous nature of risk management (Vinnari and Skærbæk 2014, Bromiley et al. 2015). In this regard, some studies have demonstrated the heterogeneous practices by comparing different organizational (for example, Mikes 2011, Palermo et al. 2016) or industry-specific (for example, Hardy and Maguire 2016) approaches in a given specified period. Some other studies have demonstrated the fluid nature of risk management practices over a period of time in single (Brivot, Gendron, et al. 2017, Themsen and Skærbæk 2018) or multiple organizations (for example, Arena et al. 2010, 2017, Arena and Jeppesen 2015).

When it comes to the industries that are prominent in the adoption of risk management, the banking sector is at the forefront. Several studies, such as that carried out by Beasley et al. (2005), find that the companies in the banking sector have a high adoption rate of risk management within their organizational processes. This could be explained by the fact that banks need to deal with and manage many complex risk factors (Gordon et al. 2009).
Another significant factor driving this adoption is the coercive and normative forces of regulations and standards (Wahlström 2006, 2009, Baud and Chiapello 2017).

Despite the high adoption rate of risk management in banks, there are only a small number of studies dealing with the field-based understanding of the shaping of risk management in banks (e.g., Wahlström 2006, 2009, Mikes 2009, 2011, Herring 2018). This low number of field studies is linked to the significant difficulty in getting empirical access since banks consider risk exploitation as one of their core strategies and are not willing to share information on the same (Crawford 2017). In fact, those that exist focus primarily on organizational implementations (Kalthoff 2005, Mikes 2007, Hall et al. 2015) and organization adaptations of regulations (Wahlström 2006, 2009), instead of the shaping of risk management involving several actors at the regulatory level.

Two notable exceptions are Hayne and Free (2014) and Herring (2016), who addressed the enterprise risk management framework of the Committee of Sponsoring Organizations of the Treadway Commission and the credit risk measurement standards of the Basel Committee respectively. However, both these studies mainly interviewed members of the standard setting and regulatory bodies or accorded significant importance to the views of the standard setters. Consequently, there is still a limited understanding of the role of the other actors, such as the consultants and implementers (banks and their interest organizations), in understanding their role in the shaping of banking risk management standards.

How Allied Practices Shape Risk Management
A number of studies address how risk management shapes practices of internal audit (Spira and Page 2003, IIA 2009, Hayne and Free 2014, Nuijten et al. 2015) and risk measurements (Mikes 2011, Arena et al. 2017). For example, there are a number of studies that explicate how risk management as a concept gave rise to risk-based internal auditing practices in the 1980s (Castanheira et al. 2009, Hayne and Free 2014, Parker and Johnson 2017) or how enterprise-wide complex risk management practices are shaping the complexity-based models of internal audit (Vinnari and Skærøe 2014, Arena and Jeppesen 2015, Nuijten et al. 2015). Similarly, there are a number of
studies that explore how existing practices of risk management become a source of inertia for changes in risk measurement (Themsen and Skærbæk 2018), how the fashion of risk-reward thinking about risk management in banks gave rise to risk measurements as exploitation packages (de Goede 2004, Kurunmäki and Miller 2013), and how distributed risk management practices gave rise to distributed and multi-site calculation of credit risk in banks (Callon and Muniesa 2005, Kalthoff 2005). While these studies sufficiently explore the influence of risk management on allied practices of internal audit and risk management, they tend to downplay the fact that not only are these practices shaped by risk management, they in turn also shape risk management practices.

1.3. Purpose, Empirical Settings, and Contribution
Considering the theoretical motivation and the underexplored areas in the literature highlighted above, this thesis aims to investigate the contemporary shaping of banking risk management in a network-centric context involving a multitude of actors. In doing so, this thesis focuses on two central research questions (RQs) executed in the context of contemporary banking practices:

RQ1: How is risk management shaped through risk measurement in a network-centric context?

RQ2: How is risk management shaped through internal audit in a network-centric context?

There are three main reasons for addressing these aspects. First, risk measurement and internal auditing have grown intertwined and have become a part of what is called the “three lines of defense” mechanisms (Spira and

---

7 Three lines of defense is a model of governance propounded by the Institute of Internal Auditors and accepted by the regulators such as the Basel Committee and the European Banking Authority (Chambers and Odar 2015, Roussy and Rodrigue 2016). The model presents a governance framework organized around three lines of defense. The operational and managerial functions are depicted as the first line of defense. Risk management and other control functions are depicted as the second line of defense. Internal audit is depicted as the third line of defense.
Consequently, any debate excluding either of the two would make the thesis incomplete.

Second, both risk measurement and internal audit represent the most dominant contemporary approaches to the shaping of risk management in the financial domain (Roussy 2013, Herring 2016, 2018, Roussy and Rodrigue 2016). Exploring the history of financial risk measurements in shaping risk practices, McGoun (1995), and Dionne (2013) explicate the quest of calculation enthusiasts to be motivated by the “scientific” quality of measurements. Similarly, exploring the historical transformation of the internal auditing frameworks, Hayne and Free (2014) demonstrate the aspirations of internal auditing professional organizations in capitalizing on the popular phenomenon of risk management.

Third, in many aspects, risk measurement and internal audit represent what many scholars claim to be the two modernistic ideas of “quantitative spirit” and “reflexive monitoring” (Giddens 1986, Latour 1993, Power 1999). While the quantitative spirit of risk measurement helps establish objectivity (Latour 1993, Callon and Muniesa 2005, Callon et al. 2009, Vollmer et al. 2009), assurance of the processes through internal auditing gives credibility and trust during the shaping of risk management practices (de Zwaan et al. 2011, Lenz and Sarens 2012, Arena and Jeppesen 2015). Thus, on a broader level, the thesis aims to understand the shaping of risk management by linking it to the two significant aspects of the idea of modernity.

Empirical Setting

Empirically, the thesis explores the research questions in the context of Sweden and Italy. The context of Sweden and Italy was chosen since both countries represent typical cases of network-centric shaping of banking risk management where international standard setters, the European regulators, the national regulators, along with the implementers and the consultants, provide their input on risk management standards and regulations.

The Swedish and Italian banking sectors follow a multilevel regulatory regime and are similar in principle (Bouwen 2002). Under the multilevel regulatory regime, at the international level, the Basel Committee on Banking Supervision (BCBS), an international standard setter, guides the banking laws
and regulations. The recommendations of the BCBS are adapted for the European level by the European Banking Authority (EBA). Finally, the national regulators, the Swedish Financial Supervisory Authority (FSA) and the Central bank of Italy adapt the international and the European standards for the national level.

The structures of the banking industries in the two countries are, however, significantly different. The Swedish banking sector is a highly concentrated banking system where the four major banks cover 80% of the assets. Apart from the four major banks, there are roughly 2000 smaller banks with specialized services and niche customer bases (Elliot 2015, Crawford 2017). Compared to the Swedish banking sector, the Italian banking sector is fragmented in nature, where the top four banks only cover 20% of the assets. At the end of 2017, there were 113 banks belonging to 60 banking groups, 347 stand-alone banks and 78 subsidiaries of foreign banks operating in Italy (Bank of Italy 2017). The Italian banking system, however, is also going through a consolidation phase, and many banks are growing inorganically through mergers and acquisitions.

Contribution
By employing a historical understanding, the thesis posits a novel framework on the dynamic shaping of risk management. In addition, by applying the network-centric perspective, the findings of this thesis not only explore differences in the conceptions of risk management of the five interested actors8 but also explicate mechanisms of involvement of these actors in the shaping of risk management.

1.4. Structure of the Thesis
Following the introductory chapter, Chapter 2 elaborates on the empirical frame of reference. Chapter 3 then digs deeper into the theoretical survey and the proposed approach of the thesis. This chapter starts by clarifying the definition of risk management adopted in this thesis. Afterwards, this chapter elucidates the state-of-the-art research on the shaping of risk management.

---

8 The five interested actors are regulators, standard setters, normalizers, consultants, and implementers – banks and the interest organizations (for details, see page 21-27)
and the underlying assumptions of the extant literature. Chapter 4 discusses the research strategy, data collection, and analysis of the overall thesis as well as the three studies (four papers) that are part of this thesis. Chapter 5 summarizes the four appended papers and their contribution to the overall thesis. Chapter 6 links the results of all four papers to the two research questions. This chapter ends by synthesizing the results of the four papers in a general framework on the shaping of risk management. In the following Chapter 7, the thesis results are discussed in a more general context by elaborating on the theoretical and practical implications of the findings. Chapter 8 concludes the thesis and paraphrases its contribution. Finally, the appended papers comprise an integral part of the compilation thesis.
2. Empirical Frame of Reference

In this chapter, I provide an empirical frame of reference for this study. First, I briefly explain the different perspectives and frameworks of risk in the background section. I then focus on the rise of two important frameworks that form the empirical frame of reference for this thesis: the Basel risk framework and the Committee of Sponsoring Organizations of the Treadway Commission’s (COSO) framework. Finally, the five interested actors (standard setters, regulators, normalizers, consultants, and implementers – banks and their interest organizations) and their intentions are discussed.

2.1. Background

Risk management has become an all-encompassing phenomenon (Power 2004a, 2016). It has become such an important aspect that it is reflected in various perspectives on risk management: mathematical (Bernoulli 1738/1954), psychological (Hardy and Maguire 2016), financial (Markowitz 1991), accounting (Mikes 2009, Arena et al. 2010), organizational (Gephart et al. 2009, Power 2016) and cultural (Douglas and Wildavsky. 1982, Beck 1992, Douglas 1992). This omnipresence of risk has also given rise to various types of standards and frameworks, such as the International Organization for Standardization’s (ISO) risk standards – ISO 31000, the Institute of Risk Managers’ (IRM) professional standards, and the Committee of Sponsoring Organizations of the Treadway Commission’s (COSO) Enterprise Risk Management (ERM) framework. There are also industry-specific frameworks, such as the Solvency framework for insurance companies (Doff 2008) and the Basel standards for banks (Balthazar 2006). Of these numerous frameworks, the Basel standards and the COSO framework are the most dominant frameworks in use in the banking sector (Wahlström 2006, Hayne and Free 2014, Herring 2016, 2018). Hence, these two frameworks form the empirical context of this study and are discussed in this chapter in their historical context (see Fig. 1 for a summary and the following sub-sections for historical details).
Figure 1: The Rise of the Basel Risk Standards and the COSO* frameworks

*COSO stands for the Committee of Sponsoring Organizations of the Treadway Commission
2.2. The Rise of the Basel Risk Standards

The Basel standards are the de facto risk measurement standards for the banks today (Herring 2018). As explained in detail in the final sub-section of this chapter, this framework is adopted by the European Banking Authority and the national regulators such as the Swedish Supervisory Authority and the Central Bank of Italy (Bouwen 2002, 2004, Wahlström 2009). The Basel Committee on Banking Supervision (BCBS) has developed the Basel standards on risk measurement over many years since its inception. The BCBS was instituted in 1974 after the international currency crisis (the breakdown of the Bretton Wood system) and banking failures (notably the failure of the Bankhaus Herstatt in West Germany) (Goodhart 2011a). Like its establishment, various reforms of the Basel Committee have mainly been driven by the onslaught of recurring banking failures and scandals (Dewatripoint and Tirole 2012, Rad 2017, Herring 2018). In this subsection, I briefly describe the prominent financial crises and the four phases of the Basel risk measurement approaches that were initiated as a reaction to curtail problems due to the ensuing financial crises. The four phases do not necessarily begin or end on a specific date. However, they do represent changing approaches to risk management (see Fig. 1 above for summary).

The first phase of the Basel risk measurement approach starts with the formation of the BCBS in 1974 and ends with the consultative initiation of the first Basel Accord by the BCBS in 1987 (Goodhart 2011b, Crawford 2017). This era, which I would call the era of minimal intervention, mainly represents the desire of the BCBS to understand the various practices of risk measurement and management in banks. The main aim of this era was to establish a dialogue between various banking regulators on supervisory issues and find common ground to understand various risk measurement and management practices of banks (Balthazar 2006).

The second phase of the Basel risk measurement approach starts with overtures towards the initiation of the Basel Accord I in 1987 and ends with overtures towards the establishment of the Basel Accord II in 1999 (Balthazar 2006, Herring 2018). This era, which I would call the era of standardization of credit and market risk measurements, represents a tighter approach from the BCBS towards achieving uniformity in the credit and market risk
measurement and management in banks (Goodhart 2011c, Rad 2017). The credit reforms were motivated by the 1980s debt crisis of Latin America to strengthen the stability of the international banking system and to standardize the national capital requirements (Laeven and Valencia 2012, Crawford 2017). Following comments on a consultative paper published in December 1987, a capital measurement system commonly referred to as the Basel Capital Accord I was released in July 1988. The 1988 Accord called for a minimum ratio of capital to risk-weighted assets of 8% to be implemented by the end of 1992 (The Basel Committee on Banking Supervision 2018).

The third phase of the Basel risk measurement approach starts with overtures towards the establishment of the Basel Accord II in 1999 and ends with the public initiation of the Basel Accord III in 2009. Basel II was mainly motivated by the Asian crisis of the 1990s (Crawford 2017, The Basel Committee on Banking Supervision 2018). This era, which I would call the era of standardization of credit, market, and operational risk measurement approaches to credit, market and operational risk (Balthazar 2006, Wahlström 2009, Baud and Chiapello 2017). Apart from the measurement standardization, Basel II recommended a supervisory review of an institution’s capital adequacy and internal assessment process along with effective use of disclosure as a lever to strengthen market discipline and encourage sound banking practices (The Basel Committee on Banking Supervision 2018). The framework was the result of six years of intensive consultation and work by the BCBS that started in 1999 with an intention to replace the Basel I Accord (Wahlström 2006, Baud and Chiapello 2017).

The fourth phase of the Basel risk measurement approach starts with the public initiation of the Basel Accord III in 2009 and continues today with post-Basel III reforms that some scholars have dubbed the Basel IV era (Crawford 2017, Rad 2017, Herring 2018). This era was prompted by the failure of Lehman Brothers and the global financial crisis of 2007-08 (Turner 2009, Marti and Scherer 2016). This era represents what I would call reregulation and tight measurement of liquidity, operational and market risk. The liquidity risk reregulation started in 2009, the operational risk in 2014 and the market risk in 2017. This era demonstrates BCBS’s desire to strengthen
the risk measurement frameworks further through more stringent and robust calculation approaches (see the appended Papers I and II for details).

2.3. The Rise of the COSO frameworks

The Committee of Sponsoring Organizations of the Treadway Commission’s (COSO) framework of internal audit and internal control is among the most prominent frameworks of internal audit (Covaleski et al. 2003, Hayne and Free 2014, Parker and Johnson 2017). This framework is even recommended and promoted by the Institute of Internal Auditors (IIA), the Basel Committee on Banking Supervision (BCBS), the European Banking Authority (EBA) and several pieces of national government legislation, as well as the corporate governance codes promoted by the stock exchanges in Sweden and Italy (see appended Papers III and IV for details). Like the risk measurement framework of the BCBS, the COSO framework also evolved as a reaction to the organizational scandals and failures (Hayne and Free 2014, Parker and Johnson 2017). In this subsection, I briefly define the four different phases of the COSO framework (see Fig. 1 for a summary). Again, the four phases do not necessarily begin or end on a specified date. However, they do represent changing approaches to risk management.

The first phase, which I call the pre-COSO phase, starts with the establishment of the IIA in the 1940s and continues with a first formal definition of internal control in 1949 by the American Institute of Certified Public Accountants (AICPA). This phase ends with the establishment of the COSO in the United States in 1985 (Spira and Page 2003). This phase is driven by the establishment of internal audit departments in large corporations to carry out a check of accounting books and records before these are verified by external auditors (Parker and Johnson 2017). Consequently, at the beginning of this phase, no autonomy and independence of the internal audit function are established. However, by the end of this period, internal audit has evolved as an autonomous practice that assures the management on the quality of accounting practices (Parker and Johnson 2017).
The second phase, which I call the COSO internal control and corporate governance phase, starts with the establishment of the COSO in 1985 and ends with the establishment of the COSO internal control framework of 1992 (Hayne and Free 2014, Parker and Johnson 2017). This phase was driven by the financial reporting scandals of the 1980s in the USA and many financial scandals in the UK (Spira and Page 2003). As a result, in this phase, a concrete framework of internal control accords an important role to internal audit in managing fraud risks (Spira and Page 2003, Hayne and Free 2014).

The third phase, which I call the risk management casting phase, starts with the establishment of the COSO internal control framework of 1992 and ends with the establishment of the COSO Enterprise Risk Management (ERM) framework of 2004 (Hayne and Free 2014, Parker and Johnson 2017). The emphasis on risk-based internal auditing and internal audit’s involvement in enterprise risk management intensified after a series of significant corporate and accounting scandals such as Enron, Tyco International, and WorldCom in 2001 and 2002 (Anderson et al. 2012, Hayne and Free 2014). The involvement of internal audit in risk management also led to internal audit being considered an integral part of corporate governance (Collier and Zaman 2005, Chambers 2014). Here, while countries such as the USA promote strict compliance through the Sarbanes Oxley Act of 2002 (Huber and Scheytt 2013), countries such as the UK and Italy rely on the “comply or explain” principle (Brown et al. 2014). The Italian internal audit code of conduct following “comply or explain” was mainly instituted in this phase - the Preda Code (1998), the Draghi Code (1999 and 2002), and the Reformed Company Law of Italy (2004) (Enriques and Volpin 2007, Arena and Jeppesen 2015). The internal audit and corporate governance frameworks of the BCBS and the EBA also tried to align their recommendations to that of the IIA in this phase (see appended Paper III for details).

The fourth phase, which I call the beyond corporate governance phase, starts with the establishment of the COSO ERM framework of 2004 and continues today (see appended Papers III and IV for details). In the initial stages of this phase, internal audit became established as a corporate governance tool (Chambers and Odar 2015). However, despite internal audit’s involvement with corporate governance, many field studies explicated the non-
independence and non-objectivity of internal audit in practice (Christopher et al. 2009). This failure of internal audit to ensure its independence and objectivity resulted in further internal audit reforms. The internal audit reforms were further driven by the financial crisis of 2007-08, where the failure of internal auditors was highlighted as an important contributing factor (Turner 2009). The financial crisis of 2007-08, also precipitated calls for the involvement of internal audit in assurance of non-tangible objects such as ‘risk culture’ and ‘organizational culture’ from the Financial Stability Board (FSB), which is a sister organization of the Basel Committee (Ashby et al. 2012, Palermo et al. 2016, The Financial Stability Board (FSB) 2017). As a result, the Basel Committee, the EBA, and the COSO also included risk culture in their risk management and internal audit frameworks (see appended Paper IV for details).

Driven by a regulatory and normative push, in the latter part of the fourth phase, internal audit is moving to include non-tangible objects such as risk culture, organizational culture, and ethics (IIA 2010, Ring et al. 2016, Carretta et al. 2017). The Swedish “comply and explain” principle of corporate governance, which attributes an important governance role to internal audit in assuring and consulting on risk management and culture in companies, was developed primarily in this phase (see new corporate governance codes 2008, 2010, 2015 and 2016 in Sweden (The Swedish Corporate Governance Board 2015). The Italian “comply and explain” corporate governance code was also reformulated in 2015 to include elements of risk culture (Commissione Nazionale per le Società e la Borsa (CONSOB) 2017)). The global IIA starting in 2010 and the Italian IIA starting in 2015 also released guidelines on the inclusion of risk culture in the ambit of internal audit (see appended Paper IV for details).

2.4. The Actors and their Intentions
Promoted by the complexity of banking business and liberal regulatory regimes, risk management in banks became a crowded field at the end of the last century, where the coexistence of many different interested actors influenced the shaping of risk management adopted by banks in everyday operations (Mikes 2007, 2009, Wahlström 2009, Hayne and Free 2014, Curran
Even though Basel and COSO standards have become less liberal and more stringent of late (Hayne and Free 2014, Baud and Chiapello 2017), the due processes initiated as a part of the neo-liberal regulation continues today that allows different interested actors to participate in the shaping of risk management at the regulatory level. In addition, despite stringent regulations and standards, the regulatory inscriptions or standards are always incomplete, and this allows different interested actors to use the incompleteness of regulations and standards to exercise their agency in the shaping of risk management (Robson and Bottausci 2017, Busco and Quattrone 2018, Themsen and Skærbak 2018). In this subsection, we explore the interested actors, their modus operandi, their roles and their intentions in framing the risk management standards in the Swedish and Italian contexts (summarized in Fig. 2).

Regulators and Standard Setters: Multi-level European Regulatory Environments

The Swedish and Italian banking sectors are regulated under a multi-layered system of regulation and standards (Bouwen 2002, 2004, Crawford 2017):- the Basel Committee on Banking Supervision (BCBS) at international level, the European Banking Authority (EBA) at European Union level, and the national authorities at national level (Crawford 2017). In terms of national-level authorities, the Financial Supervisory Authority (FSA) in Sweden and the Central Bank of Italy take the lead in establishing the standards and regulations that guide the banks and their behavior. In this subsection, we detail the intentions of these regulators and standard setters and the roles played by them in establishing the risk management standards.

The most important player at the international level is the BCBS. The BCBS was established in 1974 in the aftermath of the international currency and banking crisis and was initially named the Committee of Banking Regulations and Supervisory Practices. The committee first issued its concordat in 1975 (Crawford 2017, The Basel Committee on Banking Supervision 2018). Its other most notable international banking standards are the Basel I (initiated December 1987, finalized July 1988), the Basel II (initiated June 1999, finalized June 2004) and the Basel III (initiated July 2009, finalization ongoing) accords (see the previous subsection for more details). The
publications of the BCBS are not legally binding. However, the members of the BCBS have signed up to a charter that stipulates its members to implement the standards issued by the BCBS (Herring 2016, Rad 2017). It is important to note here that the member countries are bound to implement the standards. Other than these standards, the BCBS also issues non-mandatory guidelines that elaborate on standards and non-mandatory sound practice documents elaborating on practices of the banking sector. The main intention of the BCBS is to assume center stage in information sharing among regulators, practitioners, banks, and the general public on the issue of international banking standards and guidelines (Goodhart 2011a).

After the BCBS, the most important player for banks in the European Union (EU) is the European Banking Authority (EBA). The EBA was established on 1 January 2011 and replaced the Committee of European Banking Supervisors (CEBS) that was formed in 2004 (Crawford 2017). The EBA and its predecessor the CEBS had representation from the supervisory authorities and central banks of the EU. While the EBA issues mandatory regulations and directives, the CEBS only had an advisory role and power among member states. The most important objectives of the EBA are to produce and administer a single set of harmonized prudential rules for financial institutions throughout the EU and to improve the functioning of the internal market by ensuring appropriate, efficient and harmonized European regulation (Rad 2017). The EBA categorizes documents into two broad categories. The first category comprises final documents relating to technical standards, guidelines, and recommendations. The second category comprises work-in-progress documents related to opinions, reports and other publications. The main intention of the EBA is to assume center stage in information sharing among regulators, practitioners, banks, and the general public on the issue of European banking standards and guidelines. Apart from the EBA and the CEBS, the European Commission (EC), the European Parliament (EP) and their various committees are also directly involved in enacting regulations and directives as legally binding laws within the EU (Bouwen 2002, Crawford 2017).

Within the jurisdiction of Sweden, the Swedish Financial Supervisory Authority (FSA) assumes a central role. The FSA was established in 1991 with
the aim of creating a single integrated regulator covering banking, securities, and insurance. Within the jurisdiction of Italy, the Central Bank of Italy assumes the central role (Bank of Italy 2017). According to my research, the Swedish FSA and the Central Bank of Italy mainly categorize their documents in three categories: regulation, memorandum, and others (Bank of Italy 2017). Other documents are further classified related to supervision, authorization, and other news and report items. Apart from the FSA, the Swedish Central Bank, the Ministry of Finance, and the Swedish Parliament are also involved in enacting regulations and directives as legally binding laws within the Swedish jurisdiction. Similarly, in Italy, in addition to the Central Bank of Italy, the Italian Parliament and its various ministries are also involved in enacting regulations and directives as legally binding laws within the Italian jurisdiction. The FSA and the Central Bank of Italy aim to assume center stage in information sharing among government authorities, practitioners, banks, and the general public on the issue of Swedish and Italian banking standards and guidelines respectively (Crawford 2017, Rad 2017).

To fulfill their respective aims of enacting regulations, directives, and standards, all the authorities mentioned above follow due processes of public consultation. These due processes ensure early conflict mitigation, information sharing (Richardson 2008, Richardson and Eberlein 2011), acceptance of the standards by the regulated parties and their legitimization in the eyes of all the stakeholders (Richardson and Eberlein 2011). In the due processes of the regulatory and standard-setting bodies mentioned above, the case of the BCBS is peculiar in that the BCBS is not a public authority. Consequently, publication of responses from respondents and reasons for acceptance or rejection of their suggestions during the BCBS consultation processes are not always publicly disclosed (The Basel Committee on Banking Supervision 2018).

Normalizers

Regarding normalizers of risk management, the most interesting is the Institute of Internal Auditors (IIA) (Roussy and Brivot 2016). The IIA was established in 1941 and today, through its hundreds of chapters and thousands of members in many countries, the IIA has become the de facto normalizer of internal audits involvement in risk management (Roussy and
Brivot 2016, Parker and Johnson 2017). The main intention of the IIA is to promote the professionalization and standardization of internal audit’s involvement in risk management (Spira and Page 2003, Arena and Jeppesen 2009) (for more details on IIA involvement see the previous subsection).

Implementers (Banks and their Interest Organizations)
The Swedish banking sector is a highly concentrated banking system where four major banks cover 80% of the assets. Apart from these four major banks, there are roughly 2000 smaller banks with specialized services and niche customer bases (Elliot 2015, Crawford 2017). Compared to the Swedish banking sector, the Italian banking sector is fragmented with the top four banks covering roughly 20 percent of the assets. The Italian banking system is going through a consolidation phase, and banks are growing inorganically through mergers and acquisitions. At the end of 2017, there were 113 banks belonging to 60 banking groups, 347 stand-alone banks and 78 subsidiaries of foreign banks operating in Italy (Bank of Italy 2017).

Regarding lobbying, the smaller banks in both Italy and Sweden rely on the local interest organizations since it is less costly and more convenient to participate, whereas the large banks participate in several interest organizations (Bouwen 2002). Apart from lobbying on national issues on behalf of their members, the national interest organizations also work as sources of information and discussion centers for the smaller banks on new regulatory issues. The interest organizations possess a minimal structure where a small number of full-time employees coordinate between various parties (banks, regulators, and ministries) and utilize experts mostly from the large banks on a voluntary basis for drafting the lobbying documents.

Since banking regulations are affected by multi-layered standards (national, European and international), the large banks and most of the local interest organizations participate in many interest organizations at multiple levels both directly and indirectly, including European and international levels, in order to influence regulations and standards at various levels. These associations also allow the organizations to use their resources wisely by limiting their expertise, and by pooling resources through collaboration. These associations are mostly mired in the “political rationales” that support specific changes to
technicalities in favor of the parties they represented. With issues where collaborations do not work, the actors endeavor on their own (Bouwen 2004).

Apart from lobbying, the banks and the interest organizations also want to get information on standards as early as possible, since the banks need to prepare in advance for the changes (Dahm and Porteiro 2008). To understand the required changes, the banks and the interested parties are actively pursuing “forewarning” listening mechanisms to understand proposed changes that might become mandatory in future (Fogarty et al. 1994). This listening is achieved by public or private contact with regulators/standard setters through multiple channels: direct contact, through lobbying organizations or by monitoring the websites of the relevant authorities (Reuter and Messner 2015). To optimize resource usage, organizations prioritize issues as they arise.

**Consultants**

The consultants mostly intervene on topics that could be potentially economically beneficial for their companies or their core areas of expertise, where standard setters or regulators explicitly seek information. To achieve this objective, the consultants are also interested in following regulatory debates (Christensen and Skærbæk 2010). The consultants use the websites of standard setters and regulators, as well as their membership of banking interest organizations and even their own direct lobbying wings to understand and influence future changes in standards and regulations.

While intervening in regulatory matters, the consultants prefer selective involvement (such as specific standards, or technical advice), that mostly fall within the ambit of their core professional strengths, skill sets, and expertise.
Figure 2: Different Actors and their Intentions in the Shaping of Risk Management
3. Theoretical Background and Perspective

In this chapter, I first provide an understanding of what risk management means for this thesis. After defining risk management, mechanisms and assumptions of the existing literature on the shaping of risk management are discussed. Finally, a theoretical survey on the mechanisms and assumptions of the existing literature is elaborated, along with the rationales of the theoretical perspective of choice for this thesis.

3.1. The Theoretical Concepts of Risk and Risk Management

Risk as a concept, in the pre-modern era, has been associated with natural events that were beyond the control of human agency and were put in the realms of fate and gods (Bernstein 1998). This philosophical understanding of risk meant that humans were inherently unable to manage risk (Spira and Page 2003).

With the development of rationalism in the seventeenth century, when natural and social worlds could be subject to scientific analysis and discovery, risk as a concept became associated with the unanticipated outcome of human action (Spira and Page 2003). This philosophical change in the concept of risk meant that risk could be managed by human action. This philosophical change, together with the early breakthroughs of the enlightenment era on mathematics, paved the way for the industrial exploitation of risk (Beck 1992, Rad 2017). Key mathematical concepts that helped the revival of risk in the nineteenth century include statistical distributions (independently developed by Laplace and Abraham de Moivre in the 18th century; and by Gauss and Adrain in the early 19th century) (Stigler 1990, Rad 2017), the utility theory of Bernoulli (Bernoulli 1738/1954), and the marginal theory of Marshall (Marshall 1890).

At the beginning of the twentieth century, the progress in mathematics made by these earlier discoveries provided a sound foundation for identifying risk as measurable. The most notable figures in this era were Fisher, Pigou, and Knight, whose efforts led to the determination of risk measurement by
multiplying the probability of a risk event by its severity (Watkins and Knight 1922, Knight 1964, McGoun 1995). Later, the probabilistic definition of risk measurement was developed by Markowitz (Markowitz 1991, McGoun 1995, Dionne 2013) and his portfolio theory became the backbone of risk measurement of the modern financial industry. By the mid-twentieth century, risk and reward had become synonymous in thought, where banks embarked on risk-taking to gain rewards (McGoun 1995, Gephart et al. 2009, Dionne 2013).

The late 20th century was highly dynamic in terms of risk management and measurement. Progress in different forms of organizing and business in this era gave rise to a new philosophical understanding of risk, where risk became a fashion statement applied and disseminated in every aspect of organizing (March and Shapira 1987, Beck 1992, 2006, Beck and Holzer 2007). A number of bank failures and currency crises gave rise to the Basel Committee on Banking Supervision in 1974 and the Committee of Sponsoring Organizations of the Treadway Commission in 1985, with both organizations assuming prominent role aimed at promoting risk management practices (Goodhart 2011b, Hayne and Free 2014, Crawford 2017). Meanwhile, the banks themselves were playing with the idea to calculate better for managing risks (Danielsson 2002, Szegö 2002). These developments intertwined the concept of risk with the idea of organizational governance (Spira and Page 2003, Collier and Zaman 2005).

In summary, at the beginning of the twentieth century, risk management started as a calculative practice in the financial domain (Power 2004a, Hayne and Free 2014, Baud and Chiapello 2017). Later, because of several organizational failures and reactive reformulations by the standard setters and the regulators, risk management was transformed as a governance tool starting around the 1980s (Spira and Page 2003, Hayne and Free 2014, Bromiley et al. 2015). Currently, scholars argue that risk management is a collection of calculative practices as well as governance approaches (Callon et al. 2009, Arena et al. 2010, 2017, Bromiley et al. 2015). Based on this understanding, in this thesis, I also define risk management as a collection of calculative and governance practices. This is reflected in exploring both
modes of the shaping of risk management in this thesis: measurement as well as governance (in terms of internal audit).

3.2. The Shaping of Risk Management Practices in the Extant Literature
As highlighted in the introductory section, there are many studies in the extant literature on the shaping of risk management (Hardy and Maguire 2016, Power 2016). Since risk management is a heavily crowded field, many of these studies on the shaping of risk management practices focus on agency, structure, or both. Based on the analysis of the extant literature, I categorize the existing literature on the shaping of risk management into three main categories: First, actor-centric explanations that put human actors and their political intentions at center stage of the heterogeneous shaping of risk management. Second, structure-centric explanations that explicate the shaping of risk management by focusing on political legitimacy, as well as the heterogeneous adaptations of the pre-existing systems. Third, phenomenal explanations that explicate political contexts, posit history-specific explanations, and ignore complex theorizations. In the following sections, I discuss the mechanisms and assumptions of the three identified categories of literature separately.

Actor-centric Explanations
Mechanisms in Actor-centric Explanations
In the first category, actor-centric explanations put human actors and their political intentions at center stage of the heterogeneous shaping of risk management. For example, without questioning the effectiveness of risk management, Mikes (2009, 2011) and Hall et al. (2015) argue that risk professionals politically establish the usefulness of their tools to make risk management influential and persist in the organizations. In this regard, Mikes (2009) looked at internal actors in the banking sector to understand the heterogeneous shaping of risk management that is propounded by a narrow group of professionals called risk professionals in making their presence known within organizations. In this study, Mikes (2009) identified two types of risk management practices prevalent in financial institutions. First, where
numbers play a very important role and calculations are used to shape risk management, which she refers to as risk management by numbers. Second, where numbers and quantifications, along with qualitative considerations, play an important role, which she refers to as risk management by envisioning. In further elaboration of her research, Mikes (2011) applied the concept of boundary work developed by Gieryn (1983) to show how risk experts used the concept of boundary sometimes to expand and sometimes to delimit areas of activity, legitimacy, authority, and responsibility of risk management.

Winch and Maytorena (2009, p. 181) demonstrate the varying agency of managers by showing “that some managers perform better than others at this type of (risky) decision-making due to the differences in the ways in which they tackle the problem.” Hall et al. (2015) also link the diversity of risk management practices to the contextualized communicable tools and the agency of risk professionals in making it indispensable for decision-making. Arjaliès and Bansal (2018) demonstrate the differing agency of equity managers in including environmental risk factors in different ways (direct inclusion in calculation or indirect inclusion through emotional icons) when making investment decisions. Brivot, Himick, et al. (2017) demonstrate the varying agency of risk consultants and organizational managers who buy risk solutions from the consultants. They demonstrate that “consultants engage in specific framing strategies to persuade clients by rhetorically weaving a series of financial risk objects, financial de-risking strategies, and calls for action.” They “also find that current and prospective clients sometimes contest consultants’ prescriptions, despite the pervasiveness of risk management as the ultimate ratio of organizational governance.”

In contrast to these descriptive accounts, some other actor-centric theorists question the effectiveness of risk management while acknowledging its diversity (Alvesson and Spicer 2012, McCabe 2014, Alvesson and Robertson 2016, Power 2016). They argue that the ineffectiveness of risk management systems results due to the ignorance, myopia or bounded rationality of managers and employees who shape and readjust risk management practices in organizations. These scholars hypothesize that the ignorance, myopia and bounded rationality of managers and employees arise due to the restriction of the human cognitive capacity in understanding complex concepts such as risk
Some other scholars turn the cognitive restriction logic upside down. These scholars suggest that the dark, problematic, and unethical behavior has become so entrenched in modern capitalistic organizations that the enormous amount of risks emanating from such dark aspects cannot be detected and mitigated in time considering the limitations of human capacity (Vaughan 1999, McCabe 2014).

**Assumptions in Actor-centric Explanations**

In summary, this literature stream makes three assumptions concerning the shaping of risk management. First, risk management is shown to be shaped as a collection of calculative as well as governance practice (Mikes 2009, 2011, Hall *et al.* 2015). Second, there is a significant contradiction regarding the shaping of risk management by actors and whether this shaping was achieved deliberately (for their own benefit) or ignorantly (not understanding the problematics of risk management). For example, while Mikes (2009, 2011) and Hall *et al.* (2015) show deliberate attempts from experts at shaping risk management to enhance their influence within organizations, McCabe (2014) and Alvesson & Robertson (2016) show ignorance due to mechanistic promulgations within modern organizations as well as deliberate attempts from managers to shape practices within banks. Third, there is a significant contradiction in the benefits or problematics of the (re-)shaping of risk management. Some actor-centric explanations (cf. Mikes 2009, 2011) completely ignore this debate. Some other actor-centric explanations (cf. Danielsson 2002, Szegö 2002, Danielsson 2008, Alvesson and Spicer 2012) position problems of risk management, comparing it to any organizational system. These explanations based on the cognitive restriction of the experts also posit experts’ ignorance in understanding the benefits or problematics of risk management practices.

**Structure-centric Explanations**

**Mechanisms in Structure-centric Explanations**

In the second category, neo-institutional sociology offers political legitimization resulting in the shaping of risk management through heterogeneous adaptation of pre-existing ideas and practices of risk management in organizations (Arena *et al.* 2010, Tekathen and Dechow 2013,
Hayne and Free 2014, Hardy and Maguire 2016). These studies emphasize the political processes of legitimization rather than the technical merits of risk management (Caldarelli et al. 2016, Giovannoni et al. 2016, Meidell and Kaarboe 2017). For example, Palermo et al. (2016) utilize the institutional complexity to show how the multiple logic of risk management allows it to be shaped fluidly within different companies. Power et al. (2009) demonstrate how the growing institutionalization of ranking and continuous evaluation of organization gives rise to reputational risk management and specific practices.

Beck (2006), Beck and Holzer (2007), Hanlon et al. (2006), Gephart et al. (2009), and Douglas and Wildavsky (1982) argue that the entanglement of risk in the social-cultural institution has led to the widespread shaping of risk management as well as its widespread impact on the psyche of individuals on risks as threats. Similarly, Lane and Quack (1999) demonstrate how risk management is shaped differently in Britain and Germany based on different cultural institutions. They demonstrate that the German culture of risk aversion makes it difficult for new small firms to get loans from banks whereas in Britain the market allows new small firms to get loans at higher rates irrespective of their risk.

Arena et al. (2010) focus on three elements that result in heterogeneous practices of risk management based on the framework suggested by Rose and Miller (1992): risk rationalities, uncertainty experts, and technologies. These three elements are shown to evolve dependent and contingent on each other. In the three companies studied, they show that compliance, corporate governance, and performance were three different risk rationalities used within companies for shaping risk management. This conception of risk rationality resulted in different intentions and actions by the uncertainty experts in three companies. The compliance risk rationality resulted in risk falling in the ambit of the internal controller who was already present in the organization and resulted in an extreme decoupling of technology and existing practices, where existing practices remain unaffected by the introduction of risk management. The corporate governance risk rationality resulted in an external auditor being hired as the chief risk officer to show legitimacy in the eyes of external investors. This also resulted in embeddedness of risk management technologies and existing practices only at the executive level. The third risk rationality of performance resulted in a chief risk officer being
appointed and put under the controller. This resulted in a high level of pervasive embeddedness of risk technologies and existing practices. In their words, “(…) findings also show how the organizational meaning attributed to risk management differs depending on the technologies that are adopted, which are in turn determined by the experts’ embedded process of translation.”

Hayne and Free (2014) show institutional political work by the standard setters such as the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in entangling risk management with internal control and governance. They look at the COSO and its diaspora of actors and their mechanisms in shaping risk management by transformation of the traditional concept of internal control and governance. The COSO as an institution used different strategies of creator, disruptor, and maintainer to transform the internal control integrated framework (IC-IF) into the enterprise risk management integrated framework (ERM-IF) (Lawrence and Suddaby 2006). As a disruptor, the COSO dissociated moral foundations by posting the IC-IF as insufficient and then undermined assumptions and beliefs of perceived risk of transforming to the new framework by keeping the same template for the ERM-IF. As a creator, the COSO and its associates used the failure of companies to advocate and define the new framework. The COSO assumed its identity as a thought leader and pushed the normative practices of internal control to enterprise risk management by leveraging its normative networks of consultants and accountants. It also leveraged by mimicking its original IC-IF framework for ease of use by companies and used theorizing and education to create and posit the new ERM-IF framework as legitimate and useful for companies. The COSO used mythologizing by propagating successful case studies and routinizing through its network of actors enabling approaches to maintain its leadership position in ERM space.

They propound five mechanisms through which different actors shape risk governance practices – the external context of regulation, the internal practice context, a multiplicity of technologies, ways of manifestation of expertise, and the nature of rationalization. In the same vein, Soin and Collier (2013) and Bromiley et al. (2015) accept the institutionalization of risk management but argue to further explicate its fluid and heterogeneous nature due to influence from different actors.

Jordan et al. (2013) look at a Norwegian petrochemical case and find how the tool of risk maps was used as a means to shape risk management. In doing so, the paper argues for understanding the role of inscriptions as mediating instruments, particularly in inter-organizational encounters. The inscriptions such as risk maps are shown to create decipherable boundaries of authority and ownership between different departments or organizations, thereby facilitating the shaping of risk management by promoting aligned management practices (Jordan et al. 2016). Since risk maps, as inscriptions, are jointly drafted by different actors, they are shown to align actors and make them confident in their usability (Jordan et al. 2016).

Assumptions in Structure-centric Explanations

In summary, as evident in the section above, one of the most important assumptions of this literature stream is that risk management gained ground not as a homogeneous, monolithic practice, but as a fluid and heterogeneous set of practices (cf. Arena et al. 2010, Soin and Collier 2013, Tekathen and Dechow 2013, Bromiley et al. 2015). Another important assumption of this stream is the presence of both calculative (Jordan et al. 2013) and governance practices (cf. Tekathen and Dechow 2013, Hayne and Free 2014, Jordan et al. 2016) continuously being extended and reinvented. Because of these assumptions, risk management shaping in this literature stream is shown to evolve as a collection of calculative as well as governance approaches. Moreover, although neo-institutional sociology as a whole is evolving to accept some form of agency (cf. Hardy and Maguire 2008, Battilana et al. 2009, Martin et al. 2017), this risk management literature stream has shown contradictions in the degree of actor intentionality and institutional context in shaping risk management practices (Hanlon 2010, Moerman and van der Laan 2012, Hardy and Maguire 2016). For example, on the one hand, Beck
(2006), Beck and Holzer (2007), Gephart et al. (2009), and Douglas and Wildavsky (1982) demonstrate the prime role of culture as an institution that shapes risk management. On the other hand, Hanlon (2010) and Moerman and van der Laan (2012) question the non-importance of the agency of experts and knowledge in these cultural institution-based studies. Hardy and Maguire (2016) and Arena et al. (2010) produce a concrete model to show that experts, technologies, and institutional rationalities interact with each other in shaping risk management practices, implying a certain degree of the agency of risk experts while at the same time being restricted by the technological and rationalities-based contexts.

Phenomenal Explanations
Mechanisms in Phenomenal Explanations
In the third category, empirical phenomenon-based political explanations are offered. In this stream, contextual factors are recognized as the prime factors for the shaping of risk management (Woods 2009). At one end, these explanations recognize banks as the sole beneficiary of the risk phenomenon. For example, calculated risk exploitation (de Goede 2004, Marron 2007) or opportunity for reckless risk-taking (Williams 2013, Morales et al. 2014, Alvesson and Robertson 2016, Marti and Scherer 2016) is blamed for leading to the shaping of risk management through new measurement and classification techniques that allow banks to economize and financialize risks for their benefit. At the other end, phenomenal explanations blame the regulators and standard setters for incentivizing the pervasiveness of risk management (Young 2001). For example, incentives of free capital from regulators such as the Basel Committee through their Basel Accords are cited as another prominent reason for the persistence of risk management in the financial sector, where banks invest in complex models for reporting lower risk and lower risk-bound capital (Wahlström 2006, 2009, Baud and Chiapello 2017). Spira and Page (2003) and Chambers and Odar (2015) show how successive expert committees instituted to deal with corporate frauds reinvented internal control by linking it to risk management and corporate governance. In between the above-mentioned two extremes, some critical theorists such as Curran (2015), Langley (2013), and Power (2004, 2009) blame the (re-)shaping of risk management on the collective ignorance of alternative approaches by all the interested actors – banks and banking
associations (implementers), standard setters, regulators, and consultants. Huber and Scheytt (2013) go one step further in blaming the (re-)shaping of failing risk management not on ignorance but the deliberate positioning of risk management as “alternativeless” by all the interested actors.

Assumptions of Phenomenal Explanations
In summary, three assumptions emerge within the phenomenal literature stream that highlight the contextual and historical shaping of risk management practices. First, risk management initiated as a calculative practice in the banking domain but developed to become a governance approach (Spira and Page 2003, Chambers and Odar 2015).

Second, there is a significant contradiction on the shaping of risk management by actors and whether this shaping is achieved deliberately (for their own benefit) or ignorantly (not understanding the problematics of risk management). While some phenomenal explanations (cf. de Goede 2004, Marron 2007, Power 2009, Langley 2013) argue for the ignorance of actors, others such as that offered by Huber and Scheytt (2013) blame actors for deliberately ignoring the problems. Some phenomenal studies also propose that technical benefits or perceived benefits provide an incentive for actors to shape risk management practices (cf. Spira and Page 2003, Chambers and Odar 2015).

Third, there is also a significant contradiction in the benefits or problems of the (re-)shaping of risk management. For example, scholars such as Power (2009), Huber and Scheytt (2013), and Marti and Scherer (2016) propound risk management as problematic for banks or society or both. Other phenomenal scholars, such as de Goede (2004) and Marron (2007), posit risk management to be beneficial mostly to the banks.

3.3. Problematizing Assumptions of the Three Approaches
As highlighted in the previous section, three field assumptions on the shaping of risk management were identified in the three literature streams. According to Alvesson and Sandberg (2011), “field assumptions are a broader set of assumptions about a specific subject matter [in our case risk management] that are shared by several
different schools of thought within a paradigm, and sometimes even across paradigms and disciplines."

The first assumption (1) concerns the fluid and heterogeneous nature of the risk management practice. Scholars conducting field studies using any of the three literature streams implicitly or explicitly agree\(^9\) to the assumption that risk management is a fluid or heterogeneous practice. However, scholars disagree on the nature of the heterogeneity or fluidity of risk management practices. Some of them explore the heterogeneity in different organizations (e.g., Mikes 2009, 2011, Arena et al. 2010) and different industries (e.g., Jordan et al. 2016), whereas others explore the fluidity of risk management practices over a period of time in single (e.g., Jordan et al. 2013) or multiple organizations (e.g., Wahlström 2006).

The second assumption (2) on the shaping of risk management concerns the intentionality of actors. In contrast to the first assumption, there is a significant contradiction in actor intentionality in the three literature streams. The actor-centric explanations present contrasting viewpoints. For example, Mikes (2009, 2011) and Hall et al. (2015) show deliberate and intentional attempts from experts to shape risk management, whereas McCabe (2014) and Alvesson & Robertson (2016) attribute the shaping of risk management to the ignorance of experts arising from their cognitive limitations. The structure-centric explanations mostly focus on actors’ intentions along with the institutional demands. Here, actors’ influence is mostly presented along with the dominant influence of institutions such as culture and values on actor behavior (cf. Arena et al. 2010, Jordan et al. 2013, 2016). Instead of focusing on the willful agency of actors (Abdelnour et al. 2017), the scholars here demonstrate actors to be cultural dopes\(^10\). When it comes to phenomenal

---

\(^9\) As discussed in several philosophical treatises, nothing in this world could have absolute consensus and agreement (Latour 1993). One way of looking at consensus is to see less contested statements (for details, see Shwed and Bearman 2010).

\(^10\) In emerging approaches of institution theory in the organizational literature, agency is a highly debated term (Abdelnour et al. 2017). In some institutional entrepreneurship literature (Battilana et al. 2009) and inhabited institutional perspectives (Hallett 2010, Martin et al. 2017), actors are shown to have willful agency (see, Emirbayer and Mische 1998, and Abdelnour et al. 2017 for details). However, such a debate is still absent when it comes to the risk management literature in accounting (see Arena and Jeppesen 2015 for details).
explanations, actor intentionality is presented in a quite vivid manner, demonstrating disagreements on the issue. While some phenomenal explanations (cf. de Goede 2004, Marron 2007, Power 2009, Langley 2013) argue for the ignorance of actors, others such as that offered by Huber and Scheytt (2013) blame actors for deliberately ignoring the problems.

The third assumption (3) on the shaping of risk management relates to whether risk management is beneficial or problematic. Again, since there are so many heterogeneous practices involving so many different actors in shaping risk management, there is a significant contradiction in the benefits or problematics of risk management in the three literature streams. In addition, since this thesis focuses on mapping field studies, it is imperative to note that causal explanations for problems and benefits of practices are difficult to establish through field studies (Lukka 2014); instead, field studies are mostly concerned with the question of an in-depth understanding of practices (Alvesson and Sköldberg 2009). Again, the three literature streams handle this assumption differently. While most of the actor-centric explanations ignore the question of benefit or problematics and focus on why and how actors shape risk management practices (e.g., Mikes 2009, 2011, Hall et al. 2015), a few studies do focus on the problems with risk management (e.g., Danielsson 2002, Danielsson 2008). The structure-centric explanations mostly ignore the issue of benefit or problematics of risk management as well. The phenomenal explanations focus on whether risk management is problematic for banks or beneficial for banks. For example, scholars such as Power (2009), Huber and Scheytt (2013), and Marti and Scherer (2016) propound risk management as problematic for banks or society or both. Other phenomenal scholars, such as de Goede (2004), Marron (2007) posit risk management to be beneficial mostly to the banks.

To understand the approach to be adopted, this thesis problematizes the issue by challenging the field assumptions of the three different literature streams (Alvesson and Sandberg 2011). As demonstrated earlier, three main assumptions emerge from the extant literature on the shaping of risk management in the three categorized streams of explanations; some of them are similar while others are contradictory (see Table 1 for a summary). Concerning how this thesis challenges these assumptions, following advice
from Davis (1971), Locke and Golden-Biddle (1997), and Alvesson and Sandberg (2011), a reconciling strategy is chalked out. In the paragraphs below, I explain this reconciling strategy in detail.

For the non-contradictory assumption (1) in all three literature streams (see Table 1 for details), the merit of the assumption is judged based on how closely it reflected the empirical reality. The assumption (1) that “risk management is a fluid and heterogeneous practice” matched the empirical reality studied in this thesis. Consequently, this thesis does not challenge this assumption.

For the contradictory assumption (2) on actor intentionality or ignorance, this thesis argues that the intentionality or ignorance arises because of the actor-worlds in which the actors are embedded (Czarniawska and Joerges 1996). In doing so, the thesis argues that actors politically (and intentionally) contest anti-approaches by ensuring the acceptability of their approach as technical by as many actors as possible (Callon 1986a, Latour 1988, Czarniawska and Hernes 2005, Christensen and Skærbaek 2010). However, since actor-worlds are always overflowing, the ignorance of actors results from their unwillingness to open up more black boxes than is necessary for the acceptance of their approach by other actors (Callon 1998, Callon et al. 2009). Hitherto, since different actors have different intentions and interests, in this thesis, multiple actors and their voicing on the issue of risk management are included.

As for the contradictory assumptions (3) on the benefits or problematics of risk management, this thesis does not investigate which side makes sense and which one does not when it comes to the shaping of risk management practices. The thesis adopts this approach because it accepts the premise of emerging theorists that technical benefits cannot be completely isolated from political rhetoric (cf. Latour 1988, 1993, Callon et al. 2009, Skærbaek and Christensen 2015). Consequently, this thesis uses this premise to argue that the scholars studying the shaping of risk management practices through scientific approaches arrive at different conclusions because of this problem in separating benefits or problems objectively from the values or political rhetoric that the scholars or their focal actors had. Hitherto, based on my premises cited above, I take a middle ground approach while dealing with the
shaping of risk management and argue in favor of including both politicizing as well as the technical (perceived) benefits and problems of risk management.
<table>
<thead>
<tr>
<th>Theoretical category</th>
<th>Actor-centric</th>
<th>Structure-centric</th>
<th>Phenomenal</th>
<th>The approach of the Thesis: a Techno-political approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Items</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assumption 1</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Assumption 2</strong></td>
<td>Contradictory</td>
<td>Actor intentionality &amp;</td>
<td>Contradictory</td>
<td>Semiotic #</td>
</tr>
<tr>
<td><strong>Assumption 3</strong></td>
<td>Contradictory</td>
<td>Ignores</td>
<td>Contradictory</td>
<td>Ignore</td>
</tr>
</tbody>
</table>

**Assumption 1:** Risk management is a fluid and heterogeneous set of calculative and governance practices.

**Assumption 2:** Actors deliberately (for their own benefit) or ignorantly (not understanding the problematics of risk management) shape risk management.

**Assumption 3:** Benefits or problematics of the (re-)shaping of risk management.

# Shaping of risk management arises because of techno-political translations of the actor-worlds where it is difficult to isolate the purely technical (benefits or problems) from the political.

&To a certain extent along with structural influences of culture and cultural values.
3.4. Theoretical Perspective Applied in the Thesis

As explained in the previous section, there are three main theoretical explanations for the shaping of risk management in the extant academic literature. In this thesis, a techno-political approach to the shaping of risk management is explored. The techno-political approach has been used in the emerging approach of network-centric explanations, as a theoretical approach. The network-centric explanations are chosen because of the two prime reasons that make this approach closer to practice. First, since risk management in practice involves so many different actors (as depicted in Chapter 2) that it cannot be studied without understanding the viewpoints of the different actors. The network-centric explanation allows the different viewpoints of the different interested actors to be taken into account. Second, the involvement of different actors and their stakes points to the fact that risk management cannot be purely shaped by technical benefits devoid of the political intentions of the actors (Latour 1988, Justesen and Mouritsen 2011). Again, since network-centric semiotic explanations adopt both technical as well as political aspects on the shaping of risk management, this approach allowed findings to be closer to the practice on the shaping of risk management.

Within the network-centric approach, actor-network theory offers semiotic explanations. These explanations focus on the analytically dichotomous but practically inseparable political and technical natures of the overflowing actor-networks for the shaping of risk management. For example, Hilgartner (1992) shows how risk objects emerge in a community of actors. In showing the emergence of risk objects, Hilgartner (1992) demonstrates that risk conceptions are not only rational and technical in nature but are also dependent on the agreement of the community. Collier and Berry (2002) and Arena et al. (2017) take the risk object thesis further and show that risk objects are fixed enough to allow actors to agree to the broad conceptions, but at the same time are flexible enough to allow specific conceptions within specific organizations. Kalthoff (2005) shows the techno-political social construction of credit risk within the banks and Kurunmäki and Miller (2013) show the techno-political social construction of credit risk and its changing meaning in the network of banks, credit rating agencies and government laws. Huault and Rainelli-Weiss (2011) trace the evolution of weather risk and its

Vinnari and Skærbæk (2014) and Themsen and Skærbæk (2018) demonstrate risk management as an incomplete techno-political ensemble where, in the long term, although they become realigned to the interest of various actors, they remain vulnerable to change and conflict. Vinnari and Skærbæk (2014) applied actor-network theory to the practices in a Finnish municipality to understand the uncertainties created by risk management practices themselves. Themsen and Skærbæk (2018) use actor-network theory to understand the uncertainties created in the Danish metro rail project. Both Vinnari and Skærbæk (2014) and Themsen and Skærbæk (2018) use the specific concept of overflowing from actor-network theory, developed by Callon (1998b) and Callon et al. (2009), to show how the overflowing of techno-political systems of risk management contributes to uncertainty creation during their implementation. They also leverage on the concept of framing developed by Callon (1998b) to show that risk management-related inscriptions become a frame; however, like all other frames – since they also have external linkages such as regulation – they are sometimes unable to generate an alignment of different actors. In this way, Vinnari and Skærbæk (2014) and Themsen and Skærbæk (2018) on the one hand and Jordan et al. (2013) on the other present contesting views on inscriptions being useful or not in aligning different actors when it comes to the shaping of risk management approaches.

In summary, this literature stream propounds three important assumptions concerning the shaping of risk management. First, the most important assumptions of semiotic explanations are their focus on risk management being a heterogeneous and disparate practice and their techno-political approach of unraveling the shaping of this heterogeneous risk management practice in specific actor-worlds (a network of actors) (cf. Callon et al. 2009, Vinnari and Skærbæk 2014). Second, semiotic explanations assume that
certain shaping of risk management results in actor-worlds through translations. The concept of translation presents a paradigm where non-human actors also play a role. Thus, these explanations find actor-worlds to be responsible for the shaping of risk management. Third, semiotic explanations such as by Callon et al. (2009) and Vinnari and Skærbæk (2014) link the problems during the shaping of risk management to an identification problem, claiming that risk management is related to several other systems within and outside organizations, making it difficult to isolate benefits or problems of risk management as “facts” or “objective”. Callon et al. (2009) go a step further and blames the ineffectiveness of current risk management on the outmoded division of technical and political aspects applied in risk-related decisions.

Like all other approaches, even techno-political approaches are not devoid of limitation. As demonstrated by emerging network-centric studies, the narratives dealing with the techno-political approach of the shaping of risk management struggle with how to separate the technical and the political analytically during the study (cf. Callon et al. 2009, Vinnari and Skærbæk 2014). Scholars such as Mutch (2013) argue that “while technical and political both play a role in the shaping of risk management practices, studies claiming to indulge in techno-political approaches have underplayed the ‘analytical’ and methodological challenges between the separation of the two.” To compensate for this limitation, following Young (2014), this thesis does not attempt to separate the technical or political analytically; rather it investigates risk management as a techno-political ensemble.
4. Methodology
This thesis is the result of three different studies (A, B and C), and is reported in four different appended papers (I, II, III and IV) and an overarching compilation thesis. The four appended papers individually elaborate on the research methods suitable for their specific research questions. Table 2 provides further details on the method:- research questions, process of concern, unit of analysis, methodology and the studies’ and papers’ links to the compilation essay’s research questions. This section elaborates on the overall research approach followed by details of the three studies concerning the three important methodological focal points: case selection and research strategy, data collection, and data analysis. Finally, some quality issues concerning the overall thesis and compilation essay are discussed.

4.1. Overall Research Design
Contemporary risk management in banks is a practice-driven phenomenon (Wahlström 2006, Daníelsson 2008, Mikes 2009, Bromiley et al. 2015). Keeping this in mind, this study was driven by four scholarly viewpoints that formed the backbone of the research strategy for this project. First, the overall research design was guided by the arguments of scholars such as Laughlin (1995), Llewellyn (1996), and Roslender (2013) on practice-driven research in accounting where they argue for balancing theory and context-specific explanations by finding a middle ground between theory and practice. Consequently, the goal of the research design was not only to generate in-depth theoretical knowledge but also to offer empirical insights into the specific practices.

Second, the data collection strategy was guided by the ideas of Modell (2009, 2015) and Vaivio and Sirén (2010), where they argue that practice-driven fields such as accounting should rely on a plurality of data collection techniques because a plurality of data collection techniques (semi-structured interviews, archival documents, observations (especially in Study B – Paper III)) is useful for generating an appropriate and pragmatic understanding of

11 Paper II relies on the extension of study A. See Fig. 3 (page 51) for details.
the accounting phenomenon. Third, data collection was influenced by scholars such as Latour (1988, 1993) and Callon (1986), who argue that the practices should be illuminated by following the actors and their networks. Since accounting practices are shown to involve multiple actors (Hopwood 1987, Briers and Chua 2001, Huikkku et al. 2017), following actors and their networks helps to illuminate the influence of multiple interested actors on accounting practices.

Fourth, data analysis was influenced by the views of scholars such as Gergen and Gergen (2007), Berger and Luckmann (1966), and Jönsson (1991), who argue that practice-based research should strive towards a pragmatic understanding of the knowledge where knowledge is assumed to be socially constructed and to reside in the community of practice. Consequently, this thesis also utilized multi-actors’ perspectives to unravel the phenomenon.

The above-mentioned four influencing scholarly viewpoints led to a field-based approach as an overall research strategy to understand the mechanism of the extensions of risk management by multiple actors. Several recent scholarly works on risk management (cf. Callon et al. 2009, Vinnari and Skærbæk 2014, Bromiley et al. 2015) have suggested a pragmatic understanding of risk management extensions in action, rather than the normative and prescriptive approach of risk management extensions as a panacea to all problems. Furthermore, since separation of the practice and the contexts is not easily understandable in the contemporary risk management extensions of banks (Douglas and Wildavsky. 1982, Douglas 1992, Lupton and Tulloch 2002, Beck 2006), field-based study allowed sufficiently rich data to be captured for an analysis of the complex phenomenon (cf. Flyvbjerg 2006, Alvesson and Sköldberg 2009). Also, since risk management in banks is shaped and extended by myriad actors involving the standard setters, regulators, normalizers, consultants, and implementers (banks and the interest organizations) (Wahlström 2009, Marti and Scherer 2016), the field-based study allowed for an understanding of the different viewpoints of different actors.
<table>
<thead>
<tr>
<th>Paper</th>
<th>Research Questions of the Specific Papers</th>
<th>Processes of Concern</th>
<th>Unit of Analysis – Organizations</th>
<th>Study</th>
<th>Methodology</th>
<th>Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>How do regulations change the meaning of preexisting categories of risks?</td>
<td>Enactment – regulation building</td>
<td>Regulators, standard setters, consultants, implementers</td>
<td>Study A</td>
<td>Qualitative</td>
<td>Risk Measurement (liquidity) – RQ1</td>
</tr>
<tr>
<td>II</td>
<td>How do different actors – standard setters and implementers – frame the measurement of operational risk?</td>
<td>Enactment – regulation building</td>
<td>Standard setters, implementers</td>
<td>Extension of Study A</td>
<td>Qualitative</td>
<td>Risk Measurement (operational) – RQ1</td>
</tr>
<tr>
<td>III</td>
<td>How does institutional complexity, coupled with internal organizational conditions, facilitate or hinder autonomy in internal audit practices?</td>
<td>Implementation – internal audit</td>
<td>Implementers (specific focus on the Basel Internal Audit units/auditors)</td>
<td>Study B</td>
<td>Qualitative</td>
<td>Internal Audit of Risk Management – RQ2</td>
</tr>
<tr>
<td>IV</td>
<td>How do different actors – standard setters, normalizers, consultants, and implementers – conceive the internal audit of risk culture?</td>
<td>Enactment – internal audit</td>
<td>Standard setters, normalizers, consultants, and implementers</td>
<td>Study C</td>
<td>Qualitative</td>
<td>Internal Audit of Risk Culture – RQ2</td>
</tr>
</tbody>
</table>
Moreover, since the research focused on understanding the shaping of risk management practices (Alvesson and Sköldberg 2009, McKinlay and Pezet 2010, Englund et al. 2011, Kilfoyle and Richardson 2011), the research questions of the proposed research were formulated about “how,” and the qualitative field-based research method was adopted (Alvesson and Sköldberg 2009).

The thesis and its studies had a reflexive design (Alvesson and Sköldberg 2009). All the studies started with some reading of accounting literature as well as contemporary practice-related problems of banking risk management in news articles and regulatory websites. The motivation for studies in banking risk management was also drawn from my own prior experience of working in the banking domain as a consultant. These motivations led to the formulation of some broad guidelines or subjects for data collection (e.g., liquidity risk, operational risk, the internal audit of the Basel models or risk culture). Furthermore, the selection of studies had some opportunistic elements (Baxter and Chua 1998, Baxter and Fong Chua 2008). Consequently, the selection was also based on empirical accessibility, interest from the interviewees and a desire to illuminate multi-actor approaches to extensions of risk management.

4.2. Data Collection, Analysis, and Reporting Strategy

Overall, as highlighted above, the studies of this thesis relied on multiple data sources: verbal, such as semi-structured interviews, as well as non-verbal, such as private documents shared by the informants and the historical archival public documents and artifacts on the specific extensions of risk management. The use of multiple data sources helped with the empirical triangulation of facts and the storyline of the studies and papers (Alvesson and Sköldberg 2009). In fact, field studies of the practice-based phenomena, such as risk management, use multiple data sources to generate faithful rich descriptions of the phenomenon during analysis (Modell 2009, 2015). Access to data in fields like banking is always restricted due to either regulatory hurdles regarding data security (Mikes 2011, Palermo et al. 2016) or the unwillingness of actors to share detailed accounts (Wahlström 2006).
Consequently, to overcome the limitations of data accessibility, continuous analyses during the thesis were used to focus on specific areas for data collection. In this regard, the anonymity assurance gave informants a certain degree of confidence to be open. The investigation of a contemporary phenomenon allowed the recall bias in the accounts of the informants to be minimized. Informal coffee talks and face-to-face interviews made it possible to gather information and data that could not have been gathered through formal interviews.

This thesis and its studies looked at the reality from the interpretive perspective (Flyvbjerg 2006, Alvesson and Sköldberg 2009), where it is assumed that the researcher interacts with the complex reality during its interpretation. The data analysis approaches mostly relied on interpretation in the broader historical and social contexts (cf. Miller and Power 2013) of the shaping of risk management. The interpretation also took into account the different actors, considering the assumption highlighted above that knowledge is assumed to reside in the community of practice (Brown and Duguid 1991, Carlile 2002). The interpretations relied on reading and re-reading texts by the authors and co-authors several times during and after the data collection, which resulted in a more faithful representation of results. Several rounds of feedback from people who did not participate in data collection, such as supervisors (also co-authors of papers) and discussants and audiences at internal seminars and external conferences, helped reduce my own biases during the interpretation and reporting.

In summary, this thesis is a product of three studies reported in four papers. All three studies were carried out from September 2013 to September 2018. The first study started in September 2013 with an aim to understand the Swedish regulatory space and different actors responsible for extending liquidity risk regulations in the banking domain. This study was inspired by my own prior experience in the risk management and banking domain as a consultant and my desire to understand the ever-increasing complexity of banking risk management systems. During the first study, four topics (liquidity risk, operational risk, internal audit, and risk culture) were repeatedly mentioned by the different actors, which resulted in the inspiration for two further studies on the internal audit of risk models and risk culture and the
extension of the first study of liquidity risk regulation to include operational risk regulation.

| Cover Essay - Synthesis of all four papers (January 2017 - September 2018) | Paper I (Study A)         |
|                                                                         | September 2013 - September 2018 |
| Paper II (Extension of Study A)                                        | January 2015 - September 2018 |
| Paper III (Study B)                                                    | April 2014 - April 2018 |
| Paper IV (Study C)                                                     | September 2016 - June 2018 |

Figure 3: Timeline of the Three Studies and Papers Included in This Thesis

4.3. Study A: Shaping Risk Management by Liquidity and Operational Risk Measurements

Case Selection and Research Strategy
The first study is concerned with the shaping of liquidity risk measurement techniques in the Swedish context. This study relied primarily on data from the Swedish banking sector. There were several reasons for this selection. First, Sweden was the first country to officially enact the short-term liquidity regulation even before its European or international draft was finalized and thus represented a unique case to study the discourses of different interested actors on the shaping of liquidity risk management (Riksbanken, 2013). Second, Sweden is prominently ranked in terms of the world’s most transparent government and e-governance initiatives (United Nations, 2015), which allowed for extensive digital access to public documents.

In the European banking system, risk measurement practices are guided by multi-layered standards and regulations (Bhattacharya and Thakor 1993, McGoun 1995, Schooner and Taylor 2010). For example, Swedish banks are influenced by global (the Basel standards), European (European Union laws and directives), and national standards and regulations (Bouwen 2004). More specifically, the study covered the enactment of a short-term measure of
liquidity, referred to as the Liquidity Coverage Ratio (LCR). This measurement approach was introduced in 2009 by the Basel Committee and was, during the study, still in the process of construction and refinement. The central bank (Sveriges Riksbank) and the financial supervisory authorities (Finansinspektionen – FSA) pushed for tighter deadlines and tougher regulations than most other European nations did after the financial crisis of 2007, despite the Swedish banks’ better performance compared to other European banks (Goddard et al. 2009). This tighter control provided a contested environment to study political rhetoric and technical information.

In contrast to the liquidity measurement study of the Swedish banking system, the extended part of this study on the shaping of operational risk measurement was exploratory and mainly employed the data elements connected to the Basel Committee and responses from the interested actors on its guidelines, standards, and other documents. The case of the operational risk measurement was chosen for this study because it represented a unique case where standard setters, led by the Basel Committee, promoted a more detailed approach in the beginning and later retracted and simplified the risk measurement approach. This unique circumstance of the reversal of rhetoric by the standard setters provided an opportunity to study a techno-political approach from the standard setters and lobbyists (implementers and consultants), where standards setters succumbed explicitly to lobbying endeavors.

Data Collection
The study followed the actors (non-human and human entities), in order to bring the relevant story to the forefront. Consequently, the study relied on two primary sources of information: studies of communication documents and interviews with 19 key representatives of the Swedish banking system (for details refer to Paper 1).

The interviewees represented key actors dealing with the Basel liquidity and operational measurement regulatory implementation for the Swedish banking system. For example, banks (a large bank, a large corporate bank, and a large export credit provider to small and medium enterprises), banking associations (a banks’ association, and a buy-side analysts’ association), the consultants (a major risk management software consulting firm, a major risk management
process consulting firm, and a major risk-related accounting consulting firm), and regulators and standard setters (the Basel Committee, the European Banking Authority (EBA), FSA Sweden). Such types of major organizations influence regulation enactment processes more than other actors (Tutticci et al. 1994, Bouwen 2004, Giner and Arce 2012, Reuter and Messner 2015).

The interviews started with the internal audit department of one of the major Swedish banks, where interviewees were asked to refer to other relevant key actors in the network with whom they worked (Callon, 1998b). This actor mapping was complemented with document analysis and a website search of the major regulators – the FSA, the EBA, and the Basel Committee – in order to identify the actors collaborating or involved in sending comment letters or responses to the regulators’ call for a consultation.

The interviews were semi-structured and were of 1-2 hours’ duration each. Apart from the liquidity or operational risk, the interviews also addressed different key actors, their expertise, activities, and collaborative interests (for more details refer to Papers I and II). All the interviews were recorded where permission was granted.

Apart from the general understanding of the actor’s roles and responsibilities and their organization’s general structure and functioning, the interviews were predominantly focused on understanding three important aspects during the shaping of risk management through measurement. The first aspect focused on the informant’s and their organization’s interest in the liquidity and operational risk measurement. The questions specifically addressed the motivation for change or inertia towards change as well as how the change or status quo will affect the organization’s business and other interests. The second aspect addressed how the informants’ organizations operate and participate in defining the measurements that shape risk management. This concern was addressed by asking questions about internal organizational structure, the responsibility of members, and production processes for inscriptions of communication documents aimed at promoting the organization’s specific interest concerning liquidity and operational risk measurement that shaped risk management.

Furthermore, informants were asked about their network and alliances that they formed with other actors to garner better treatment in the network. The
third aspect focused on interviewees’ and their organizations’ most important concerns with respect to the proposed measurement and how they pushed for it during negotiations. Here, the questions focused on understanding technical content as well as political alliances that actor’s formed with respect to their specific concerns.

Informant biases during the interviews were tackled in many ways. First, information received from the interviewees was triangulated through other available public documents or documents shared by the interviewees (Alvesson and Sköldberg 2009). Second, the assurance of anonymity to the interviewees helped to get better responses (Alvesson and Sköldberg 2009). Third, the interviews mostly addressed recent activities that were still ongoing in the organizations, which enabled a reduction of retrospective recall bias (Alvesson and Sköldberg 2009).

For the liquidity measurement study, the communication documents for the period 2009-2016 were collected from the websites of the interest organizations and regulators. The year 2009 was selected because the Basel Committee introduced the concept of LCR that year. For the operational risk measurement study, the communication documents for the period 1998-2016 were downloaded from the Basel Committee website. The lobbying responses from 2010–2016 were downloaded from the Basel Committee website. Even though these documents represent only the “public” aspect of lobbying, they have been considered an important source of information in previous research (Weetman et al. 1996, Georgiou 2010). Websites’ advanced search mechanisms, interviews, and secondary source readings were used to find relevant public documents.

Data Analysis
The data collected for the study A (on liquidity risk measurement), as well as its extension (on operational risk), were analyzed continuously during the fieldwork. For the first step of the analysis, the communication and policy documents from the actors (standard setters, regulators, consultants, interest organizations and banks – implementers) were organized chronologically.

---

12 Before 2010, the Basel committee did not publish the lobbying responses or reasons for the acceptance or rejection of suggestions received from the lobbyists.
The documents were then categorized based on five criteria: topic, type, addressed to, date, and specific reference/collaboration of actors. After this categorization, extracts and sections relevant to liquidity risk measurement and operational risk measurement were selected from the documents and interviews for deeper analysis. The result of this primary analysis was the historical background and the case storyline.

The second step of the analysis involved identifying the type of facts and rhetoric used by the actors. Applying Suddaby & Greenwood's (2005) approach, the analysis focused on finding the dominant rhetoric types used by the actors in posting their viewpoints, i.e., rhetoric types that were repetitively used by actors in a quest of their persuasion of the specific tied goals (Freedman and Medway 1994, Suddaby and Greenwood 2005). For facts, the analysis categorized “hard facts” as numbers, figures, and tables, and soft facts as conceptual and economic models, arguments and descriptions (Tutticci et al. 1994, Giner and Arce 2012, Hoffmann and Zülch 2014).

In the third step of the analysis, the actors’ approaches to “demarcating” technical facts from the political rhetoric, and the “mixing” of technical facts and rhetoric, were identified. In the fourth step of the analysis, the identified patterns of “demarcating” and “mixing” were characterized. This involved identifying repeated patterns of various actors concerning the similarity of rhetoric, facts, and interests. The fifth and final step clustered the identified approaches of actors and grouped them based on their specific persuasive approaches. The similarities (e.g., association with Swedish organizations as well as the European Union-level organizations, similar time periods) and the differences (e.g., different types of focus of different actors, different types of interests), in the context of the actors, helped to highlight the different patterns and modes of behavior of actors.
4.4. Study B: Shaping Risk Management by Internal Audit of Risk Models and Processes

Case Selection and Research Strategy
The second study on the internal audit of risk models is set in the context of three large multinational European banks with their headquarters in Sweden and Italy. More specifically, the study is based on cases (Alvesson and Sköldberg 2009) of the three Basel internal audit (Basel-IA) units of the three international financial institutions. The primary criteria for the case selection were empirical in nature (Alvesson and Sköldberg 2009): typical international financial institutions with large revenue and operations subject to multiple regulatory regimes, advanced risk model and Basel-IA implementations, and availability to share the details of IA processes. The Basel-IA of large international financial institutions, however, is a unique case of internal audit application to risk management since large financial institutions employ a variety of quantitative risk models and robust processes in comparison to IA of risk management in industrial or manufacturing companies (Beasley et al. 2005). Furthermore, Basel-IA is also unique, since IA units are mandated to report independently to the board. In the case of manufacturing companies or the public sector, IA could be placed under risk management teams (cf. Arena et al. 2010, Arena and Jeppesen 2015, Roussy 2015).

Even though large financial institutions were typically selected, on closer examination interesting contrasts emerged between the banks. In particular, the personal convictions of the risk model auditors, the organization styles and the techniques and technologies of internal audit differed significantly. Drawing out differences and similarities between banks (Alvesson and Sköldberg 2009, Arena and Jeppesen 2015) helped in moving faithfully from the empirical material to interpretation and reporting.

Data Collection
The main data source for this study is the semi-structured interviews with Basel-IA, risk management, internal validation and regulatory compliance teams dealing with the Basel-IA in the three financial organizations. The data collected by interviews were supplemented with the annual reports, pillar III risk reports and corporate governance reports as well as the internal documents (manuals/reports/policy) shared by the interviewees (Alvesson
and Sköldberg 2009). Some semi-structured interviews with external stakeholders, including one interview with a member of the secretariat, the IA-team of the Basel committee and five interviews with technology, management, IA, and accounting consultants to the financial industry, helped with the contextual characterization of the Basel-IA.

In total, 19 informants (21 interviews) were interviewed (for details see Paper III). All interviews lasted 1-2 hours. Most of the interviews were conducted at the client locations, except for one. This enabled for observation and informal chats with participants and their colleagues during the coffee break. The study addressed informant bias by interviewing at least two Basel-IA stakeholders, asking for clarification on contradictory information, and triangulating it with available private documents (internal documents shared by the interviewees) or public data. The study also avoided recall bias by interviewing about the current activities that shaped risk management practices through internal audit in the participating organizations (Alvesson and Sköldberg 2009, Arena and Jeppesen 2015).

The interviews with external stakeholders, such as standard setters and consultants, were focused on understanding regulations and their work that affects implementation of the Basel-IA and IA in banking and financial organizations. The consultants were also asked about their involvement with the banking organization in general concerning the Basel-IA and related work. The interviews with the Basel-IA head and team members were focused on understanding the organization of the Basel-IA team, their mode of operation, and the regulations and internal organizational mandates that affected their functioning. The interviews with the risk management and compliance team were focused on their involvement with the Basel-IA team and their view on regulations and internal organizational mandate affecting their work in this regard.

**Data Analysis**

For study B (more details in Paper III), the data analyses were also performed simultaneously during the fieldwork and were analyzed through pattern matching approaches. Before the analysis, all the documents and the interviews were categorized. First, an analysis of the macro-environment of regulations and standards related to the internal audit of Basel Models were
charted out for the Italian, Swedish and the European contexts. Later, differences and commonalities of approaches from different regulators and standard setters were identified.

Second, within-case analysis of individual cases was carried out by identifying a characteristic of the Basel Internal Audit approaches of the banks (Alvesson and Sköldberg 2009). The study then traced the rationales around which Basel-IA work was organized, distributed and implemented in each case, with a specific focus on why organizations or the Basel auditors selected specific internal audit approaches. Finally, the study performed a cross-case comparison identifying similarities and dis-similarities of reasons for homogeneity or heterogeneity of practices and contexts within cases (Alvesson and Sköldberg 2009). In this regard, the study analyzed Basel Internal Audit approaches of all three cases and characterized them into different typologies through the available data sources (e.g., planning, execution, and reporting). Once these similarities and dissimilarities were identified, possible explanations were envisioned trying to dissociate context from theoretical regularities (Alvesson and Sköldberg 2009).

4.5. Study C: Shaping Risk Management by Internal Audit of Risk Culture

Case Selection and Research Strategy
Given the emergent nature of risk culture debates and the contextual ambiguities surrounding its internal audit (Cornia et al. 2016, Palermo et al. 2016, Ring et al. 2016), this study chose a qualitative field-based study to unravel and classify different emergent ideas inductively. Furthermore, since the extant literature13 on internal audit and risk culture is so scant, this study chose to explore the internal audit approaches of risk culture in a variety of actor communities. In doing so, this study adopted a phenomenal approach to research accepting that knowledge is created as a result of interaction and is contextually dependent (Berger and Luckmann 1966, Jönsson 1991,

---

13 Those that exist focus either on the contextual production conditions of risk culture problems (Cornia et al. 2016, Palermo et al. 2016), or only regulators viewpoints (Ring et al. 2016)
Wahlström 2009). The study also presumes that contextual knowledge is purposefully developed, localized and resides in the community of actors who share a practice or a set of problems (Brown and Duguid 1991, Carlile 2002). Another argument that is important to this study is that the localized nature of knowledge does not mean that individuals know about it; rather, it is accepted that knowledge is embedded and invested in the practice itself (Cook and Brown 1999, Carlile 2002). Thus, the practices of different actors are unraveled to uncover the knowledge or approaches of different communities of practice.

The study chose to investigate internal audit of risk culture because risk culture represented a unique case. Internal audit is traditionally applied to established tangible processes of risk management within organizations (de Zwaan et al. 2011); however, risk culture, by contrast, is non-tangible in nature (Palermo et al. 2016, Ring et al. 2016). The non-tangible nature of risk culture allowed for an understanding of how internal audit shapes risk management by assuring non-tangible elements (Ashby et al. 2012).

Data Collection

This paper relied on a heterogeneous set of actors to examine their understanding of internal audit of risk culture and governance. The main focus was on the internal auditing aspect of risk culture. First, 295 archival documents were selected from regulators (the European Banking Authority), standard setters (the Financial Stability Board, the Basel Committee), normalizers (the Institute of Internal Auditors, the Institute of Risk Managers) consulting companies (the big four – PwC, E&Y, Deloitte, and KPMG – and Protiviti) and implementers (banks and the interest organization) on internal audit and risk culture audit. Protiviti was included in addition to the big four because it collaborates with the COSO and the IIA and is one of the most important consulting firms in the field of internal audit.

The archival document analysis was supplemented with interviews conducted with 20 interviewees (see Paper IV for details). The interviews were mostly semi-structured and explorative. Since the phenomenon of risk culture audit is still in its infancy, semi-structured interviews helped to address the concerns of the interviewees in a fluid way. Semi-structured interviews also allowed the practical approach of the communities of actors to be brought to the fore and
made it possible to reduce interviewer bias that might have affected the results more if the interview had been carried out in the structured hypothetic-deductive style of rigid questionnaires. The interviews were aimed at understanding the shaping of risk management through the audit of risk culture.

The interviews were mainly focused on understanding the following aspects. First, the interviews addressed the informants’ concerns about how they view risk culture and why they think it important to be included in risk management. Second, the interviews focused on understanding the informants’ and their organizations’ approaches to risk culture audit and supervision. Here the focus of the questions was on understanding the systems of audit and approaches of audit that the informants and their organizations proposed. I also asked if interviewees could share the relevant documents and cases and examples during their discussion. The informants were asked for further references and relevant people in their network to be interviewed.

Data Analysis
For study C, to analyze the collected data, all the interviews and the archival documents were arranged historically (more details in Paper IV). Later, relevant sections of the archival documents and interviews were identified. This identification relied on selecting the sections of interviews and documents using the methodology developed by Carlile (2002). Specifically, the sets of sections representing internal audit of risk culture were collected for the five actors: regulators, standard setters, normalizers (internal audit and risk professional bodies), consultants, and implementers (risk professionals, and internal auditors). Based on Power’s (1999) categorization, the sections were first analyzed to identify how actors proposed creating a system for internal audit of risk culture.

Furthermore, the sections were analyzed post hoc by critically examining the findings in the light of the two opposing views on governance – the normative/functional (monitoring and control) and critical (empowerment) views prevalent in the extant literature. This theoretical paralleling allowed for the creation of analytical categories and explanations envisioning for observed
similarities and differences. After the critical examinations, implications were drawn for internal audit and risk management.

4.6. Limitations
Like all other interpretive research on the subject of risk management, this thesis also suffers from several limitations. There were three primary methodological limitations.

First, access to banking employees, regulators, and internal auditors are quite restrictive. To overcome this limitation, the thesis also relied on sources such as publicly available regulatory documents, lobbying reports, news reports, annual reports, corporate governance reports, and pillar three risk reports of banks. The access issue also resulted in the different and unbalanced level of analysis in the individual papers. While Papers I, II and IV deal with standards and regulations, Paper III deals with internal audit implementation in banks. This unbalance in the level of analysis means that the thesis focuses more on the shaping of risk management as regulatory standards and less as a situated practice (Boedker 2010).

Second, access to banks also led to some methodological limitations of the thesis that might have a bearing on its results. For example, internal audit studies that deal with internal organizational practices of banks (Paper III – study B and paper IV – study C) had to concentrate on access to only three banks in two countries – Italy and Sweden. This meant that despite the application of analytical generalization through theory, the results of the studies are not as statistically generalizable as studies that could have been conducted using a survey. On the other hand, case-based studies provide a richer description and contextual details of the studied practices.

Third, this study was carried out when the impact of the abnormal financial crisis of 2007-08 had not been fully assimilated in the Basel framework, and the work in this regard was still ongoing. This means that the responses from the interviewees and their analysis may have been affected by the incomplete understanding of the Basel framework situation. However, since the thesis does not study the impact, but only the shaping approaches of different
actors, I argue that such situations have not seriously affected the results of this thesis.

4.7. Quality Concerns and Mitigation
Like all other interpretive research approaches, the quality of this research is linked to data collection, data analysis (Gergen and Gergen 2007) and reporting (Baxter and Fong Chua 2008). Although each paper14 proposes its quality approaches in detail, in this section these concerns are discussed from the overall thesis perspective.

I followed several approaches to strengthen the quality of my collected data (Alvesson and Sköldberg 2009). First, anonymity assurance allowed the interviewees to speak their minds freely. Second, the semi-structured nature of interviews allowed a reduction of interviewer bias by limiting the interviewer’s intervention during the interviews. Third, confirming my interpretations with the informants during the last section of the interviews reduced the interviewer bias in the interpreted accounts presented in the papers. Fourth, although all the papers focus on historical context and use documents to trace this history, the informants were asked about current and recent events. The focus on current and recent events in the interviews helped counter the recall biases15 in the accounts of the informants.

I also followed several approaches to strengthen the reliability and validity of my data analysis approaches (Alvesson and Sköldberg 2009). First, the use of computer programs for storing and analyzing data allowed for the transparency and traceability of my analysis. This is because computer programs allow for structured storage of various versions of data, its interpretation, and interview analysis. Second, triangulation of information and fact checking during data analysis improved the factual validity of the analysis by confirming the opinions of the interviewees by tracing it back to

---

14 The operationalization, validity, and reliability of the specific construct used in the papers and their theorizations are discussed in the individual papers where they are used, and thus this section omits such discussions.

15 Recall bias is an error caused by differences in the accuracy or completeness of the recollections retrieved (“recalled”) by interviewees regarding events or experiences from the past.
the documental reports. Third, historical analysis allowed for a better understanding of the contextual factors by tracing the historical dependence of decisions, strengthening the quality of theorization. Fourth, input from the scholars during internal university workshops as well as accounting and management conferences not only enhanced the quality of interpretation but also allowed for refining the steps of interpretation and data analysis.

I also followed several steps to enhance the quality of the reporting of cases. The first mechanism of attributing reliability to this thesis is to make the readers aware that they are reading an interpretive account that contains the bias of the researcher despite steps to ensure and mitigate the potential biases during the data collection, analysis and reporting of the cases (cf. Gergen and Gergen 2007, Alvesson and Sköldberg 2009). Consequently, the writings of this compilation thesis are presented, as far as possible, in an active voice where I try to remind the users that they are reading a constructive account. The second approach to bring reliability to the results of this thesis is the adoption of multiple voicing (cf. Gergen and Gergen 2007). The multiple voicing makes readers aware of the different viewpoints of different actors and their varying techno-political accounts.
5. Summary of the Appended Papers

This chapter summarizes the four appended papers. The work distribution between the authors for all four appended papers is detailed below.

**Table 3: Authors' contribution to the papers**

<table>
<thead>
<tr>
<th>Paper</th>
<th>Author(-s)</th>
<th>Authors’ contribution</th>
</tr>
</thead>
</table>
| I     | Sinha Vikash; Engwall Mats; Strömstren, Torkel | Development of idea and theoretical contribution: Vikash  
Data: Vikash collected the data.  
Analysis & writing: Vikash carried out the analysis and developed a representation of the results, as well as the discussion parts. Mats provided guidance and helped in writing some parts of the paper. Torkel provided useful feedback. |
| II    | Sinha Vikash | As a single author, Vikash developed the research idea and contribution; performed the analysis; and wrote the paper. |
| III   | Sinha Vikash, Arena Marika | Development of idea and theoretical contribution: Vikash  
Data: Vikash collected the data.  
Analysis & writing: Vikash carried out the analysis and developed a representation of the results, as well as the discussion parts. Marika provided guidance and feedback during writing. |
| IV    | Sinha Vikash, Arena Marika | Development of idea and theoretical contribution: Vikash  
Data: Vikash collected the data.  
Analysis & writing: Vikash carried out the analysis and developed a representation of the results, as well as the discussion parts. Marika provided guidance and feedback during writing. |
5.1. Paper I: Cartography of Liquidity Risk Calculations

Purpose – The objective of this paper was to understand the different meanings and calculation details of the short-term liquidity risk measurements in the regulations.

Methodology – The study built on the case of the extension of liquidity risk measurement in the Swedish banking system. The study was based on 19 semi-structured interviews with the key stakeholders of the banking system, along with 200 archival documents. The documents for the analysis were collected from 2009 to 2016. The year 2009 was selected because the Basel Committee started the liquidity risk reform in 2009 as a part of the Basel III framework.

Findings – The paper depicts three different phases in the evolution of the meaning and calculations of the category of short-term liquidity risk. In doing so, the paper demonstrates that the regulatory regimes act as the episteme driving the meaning and calculation of the categories of risk calculations. As suggested by Foucault (2005), the paper identifies this episteme in the language of the standard setters.

Research implication – while calls for integrated enterprise risk management as a concept are gaining popularity in the banking risk-based regulations (Beasley et al. 2005, Gordon et al. 2009, Arena et al. 2010, Bromiley et al. 2015), its disintegrated implementation is increasingly cluttered with a variety of risk calculations with varying meanings and details (McGoun 1995, Danielsson 2002, Szegö 2002, Millo and MacKenzie 2009, Jordan et al. 2016). This paper demonstrates how the meanings of categories of risk calculations emerge and change. Further research in this area could highlight whether such categorizations promote or hinder an integrated approach to risk management.

Originality – The paper adopted and explicited how short-term liquidity risk measure evolved in different phases where different specific meanings and calculation approaches were attributed. In doing so, the paper addresses the call for studies focusing on the long-term dynamics and meanings of risk measurement practices (Jordan et al. 2016, Arena et al. 2017, Brivot, Gendron, et al. 2017, Thomsen and Skærbæk 2018).
Furthermore, the extant literature on banking risk calculations predominantly focuses on actors – risk experts, academics, regulators and normative bodies (such as the Commission of the Organization of the Treadway Commission (COSO)) – to highlight the changing meaning or calculations of risk categories (McGoun 1995, Wahlström 2009, Hayne and Free 2014, Baud and Chiapello 2017). Very few studies focus on regulations while studying the history of risk categories and their calculations (cf. Herring, 2018, 2016). Many studies that do examine regulations take their primary role for granted, instead of exploring how regulations play an essential role in the development of the risk categories and calculations. In contrast, this paper puts a central focus on regulations in understanding the banking practices of risk measurement. In addition, this is also in line with what Cooper and Robson (2006) and Young (1994) promote as further research venues when they call for more understanding of accounting in their regulatory spaces.

**Contribution to the thesis** – The paper contributes to understanding the shaping of risk management by focusing on short-term liquidity risk. Since short-term liquidity measurement practices were already prevalent in banking organizations, actors questioned the mode of extension of measurement by indulging in questions such as how to measure liquidity and what should be measured as liquidity. These debates led to the attribution of different meanings to the short-term liquidity measures and thus defining their conceptual boundaries.
5.2. Paper II: Reinventing Operational Risk: Distancing Operational Risk from Operations

**Purpose** – The objective of this paper was to understand the different approaches to the extension of operational risks measurement.

**Methodology** – The paper analyses the publicly available comment letters from the implementers (banks and the interest organizations) and consultants as well as the standards on operational risk from the Basel Committee on Banking Supervision for a period from 1980 to 2016.

**Findings** – This paper posits two important contributions. First, it demonstrates how the Basel Committee and the lobbyists (implementers and consultants) framed the operational risk calculations in four different phases. Second, the results of the different approaches to operational risk calculations demonstrate that like other activity-focused accounting instruments (e.g., activity-based costing (Argyris and Kaplan 1994, Shields 1995, Malmi 1997)), the calculation of operational risk allowed many different practices leading to the non-transparency and non-comparability of operational risk reporting. This led to the withdrawal of the activity-focused operational risk calculation by the Basel Committee on Banking Supervision.

**Research implication** – One of the main implications of this study relates to understanding how to balance control and freedom while deploying activity focused accounting calculations.

**Originality** – This paper demonstrates how operational risk practices evolved in four different phases from 1980 to 2016. In doing so, the paper addresses the call for studies focusing on the long-term dynamics and meanings of risk measurement practices (Jordan et al. 2016, Arena et al. 2017, Brivot, Gendron, et al. 2017, Themsen and Skærbæk 2018). The paper also demonstrates that the non-convergence of operational risk practices forced regulators to change their activity and the detail-oriented advanced approach to risk measurement that (unintentionally) allowed the variation to flourish.

**Contribution to the thesis** – The paper contributes to understanding the shaping of risk management by focusing on operational risk. In doing so, the paper explores how actors questioned the notion of risk measurement when it came to extending it by operational risk measurement. Since the
measurement of operational risks was not already implemented among the majority of banking organizations, the extension was focused most importantly on questioning the notion of measurement that required shaping both the conceptual and the material practices of risk management.

Purpose – This paper explored the internal organizational variation of internal audit techniques applied to lend credibility to risk management by Basel internal audit implementers, employing the concept of institutional complexity and internal organizational conditions.

Methodology – The empirical analysis relies on case studies of three Basel internal audit (Basel-IA) units of the three international financial institutions.

Findings – The findings of this paper suggest three approaches of instantiation of institutional logic in organizations while looking into the implementation of internal audit for the Basel processes and models. First, organizations could separate the logics by enacting different unit or structures for carrying different institutional logics and curtail freedom to the carriers of logics in carrying out their work according to one dominant logic (Pache and Santos 2010, 2013). Second, organizations could enact a centralized unit embedded within carriers of one dominant logic and provide a certain degree of freedom to instantiate the admixture of suitable hybrid logic by enabling the partial agency of actors. Third, organizations could enact a virtual matrix structure to facilitate the assimilation of multiple logic by providing full freedom to the lower-level actors (Boxenbaum and Battilana 2005, Battilana et al. 2009).

Research implication – Classical institutional theory only explains the coercive, normative and cognitive forces that bring homogeneity into organizational responses, and explains this by the decoupling of legitimacy and technical efficiency where legitimacy plays a more important role. The non-homogeneous response of organizations in heavily institutionalized contexts has generated significant debate on whether or not agency plays any role in the heterogeneous responses of organizations. To account for the idea of heterogeneity, the concept of institutional logic has been introduced. Institutional logics are culturally formulated, historically embedded practices, values, beliefs, assumptions, and guidelines by which actors decide whether or not to behave in a particular way (Thornton and Ocasio 2008). Institutional logics explain varying responses of actors in institutionally complex environments. However, the explanation for the varying responses from
actors is a very contradictory space in the extant institutional literature. Some studies explain the varying responses by using the full autonomy of actors (such as institutional entrepreneurs), while others use a partial agency to explain differing responses (such as institutional embeddedness). This paper opens up this debate by focusing on conditions of the full or partial agency, i.e., when actors behave autonomously and when they do not.

**Originality** – The results of this paper highlight the arrangement of multiple external institutions such as regulation and professional standards and their mobilization in organizations by internal organizational conditions that restrict or enable the full or partial agency of lower level actors. Consequently, the paper is among the few emerging articles (cf. Martin et al. 2017) that explain the conditions of full or partial agency within institutional frameworks.

**Contribution to the thesis** – The paper contributes to understanding the shaping of risk management by focusing on the internal audit of risk management processes and models. Since risk management is an organized process, the internal audit extensions relied on traditional approaches to questioning what to audit and how to audit. In terms of what to audit, the organizations relied on identifying the tangible system objects that reflected risk management such as documents, process data, and teams. In terms of how to audit, the paper demonstrates that the process and organization of internal audit adopted in the three cases reflected the way organizations instantiated the institutional complexity internally and filtered the availability of institutional logics to lower level actors, enabling different types of agency.
5.4. Paper IV: Manifold Conceptions of the Internal Auditing of Risk Culture in the Financial Sector

**Purpose** – This paper aims to analyze how different actors—standard setters, normalizers, consultants, and implementers—conceive internal audit of risk culture.

**Methodology** – To address the research question, 185 guideline-related documents and lobbying responses on internal audit and risk culture audit proposed by the Basel Committee on Banking Supervision (BCBS), the European Central Bank and the Financial Stability Board (FSB) were inductively examined. This analysis was further extended by analyzing 47 documents from the Institute of Internal Auditors (IIA), the Institute of Risk Management, the Group of Thirty, and the International Financial Corporation. Additionally, five documents from the implementers and 58 documents from the big four (PWC, E&Y, Deloitte, and KPMG) and Protiviti on risk culture and internal audit were scrutinized and analyzed. The inductive analysis specifically focused on examining the manifold conceptions of the internal auditing (IA) of risk culture in the financial sector of the five different actors—regulators, standard setters, normalizers, consultants, and implementers. This inductive examination of documents was supplemented with private documents and data collected through twenty interviews with standard setters (BCBS, FSB), implementers, normalizers (IIA) and consulting companies (E&Y, PWC, Deloitte, KPMG, and Protiviti).

**Findings** – The findings of this paper suggest that the regulators’ and implementers’ conceptions of IA on risk culture point towards the strong presence of the rhetoric of control. In contrast, consultants’ and normalizers’ conceptions point towards the presence of both the rhetoric of control and the rhetoric of empowering employees. The paper explains these differences based on the different conceptions of internal auditing as a governance instrument. While consultants and normalizers, in general, are changing the conceptions of governance towards the emergent approach of empowering employees, the standard setters, and the implementers still problematize governance through a lens of control (Free et al. 2009, Erb and Pelger 2015, Kaspersen and Johansen 2016, Pelger 2016). Furthermore, this paper argues that the normalizers and the consultants are promoting the emergent
approach, focusing mostly on including direct measurement of risk culture through psychological and behavioral elements where they are in the early stage of a quest to establish the new conception of the behavioral audit. The implementers and the standard setters, on the other hand, stick more to adopting a functional approach by including elements of risk culture audit without changing the existing techniques (Power 1999).

**Research implication** – Paper IV opens up a debate on what could be the future of internal audit if it is extended to non-tangible objects of audit such as risk culture or business ethics. The paper raises concerns on how control and empowerment could be balanced in the internal audit of non-tangible objects to avoid the pitfalls of being too intrusive in control and being too lenient in allowing employees to carry out their work.

**Originality** – This paper contributes to the literature in two ways. First, it delineates a systematic understanding of the manifold conceptions of risk culture and its governance by internal audit. In this way, it complements the existing research on the internal audit of risk culture that relates it to either the contextual production conditions (Cornia *et al.* 2016, Palermo *et al.* 2016) or only regulators’ viewpoints (Ring *et al.* 2016). Second, the paper contributes to calls by several scholars in examining how ‘the idea of audit’ is extended into new domains (Chua 1996, Pentland 2000, Free *et al.* 2009, Kaspersen and Johansen 2016). In particular, the paper highlights the challenges and tensions that arise when the object to be audited is far from a transaction or an organized process, as in the case of risk culture.

**Contribution to the thesis** – The paper contributes to understanding the shaping of risk management by utilizing internal audit of risk culture. Since risk culture is an open, intangible work stream (Palermo *et al.* 2016), and internal audit extensions have mostly focused on tangible systems and processes, this paper demonstrates how actors questioned the notion of internal audit and governance which resulted in fixing both the conceptual boundaries and the tangible material practices of risk management.
6. Discussion and Synthesis of Results

The thesis aimed to explore how measurements and internal audit are used by different actors (regulators, standard setters, normalizers, consultants, and implementers – banks and their interest organizations) in shaping risk management practices.

The thesis encompasses four different papers. Papers I and II explored the shaping of risk management through measurement, whereas Papers III and IV explored the shaping of risk management through internal audit. The details of the correspondence between the papers and the research questions are presented in Table 4 below:

<table>
<thead>
<tr>
<th>Paper</th>
<th>The shaping of risk management through measurement (RQ1)</th>
<th>The shaping of risk management through internal audit (RQ2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper I</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Paper II</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Paper III</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Paper IV</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

In the first two subsections of this chapter, I discuss the results of the different papers on the shaping of risk management through measurement and internal audit, respectively. In the third section, I synthesize and combine the results of the papers and present an overarching framework developed based on them.

6.1. Shaping Risk Management through Measurement

**RQ1: How is risk management shaped through risk measurement in a network-centric context?**
Measurement is one of the most prominent ways of shaping risk management in banks. This is due to three important factors: first, risk measurements have a long history in the banking and financial domain (de Goede 2004, Marron 2007, Baud and Chiapello 2017). Second, the persistence of risk measurement and its quantitative spirit has been incentivized by the regulators for the modern banking organizations (Danielsson 2002, Danielsson 2008, Wahlström 2009). Third, measurements are considered a good way to objectify phenomena (Latour 1993, 2005, Barry 2002, Callon and Muniesa 2005).

Despite the objectifying nature of measurements, measurements are not devoid of politics (Barry 2002, Callon and Muniesa 2005). Scientific developments throughout the last century have relied on measurements in their quest for objective truths. However, as Barry (2002) notes, measurements themselves become a conduit to the political when a plurality of approaches of measurement exist. In a similar vein, Latour (2005) also argues that while calculations help objectify and are promoted at centers of calculation (such as scientific research laboratories (Latour 1988) or consulting companies (Christensen and Skærbæk 2010)), the complete separation of calculations as objective facts and politics of rhetoric is not possible. Latour (1993) dubs this separation an illusion in modern society. To sum up, nothing is, in fact, devoid of value including calculations and measurement (Latour 1988, Callon and Muniesa 2005). I have referred to this approach repeatedly, within this essay, as the techno-political approach of studying the shaping of risk management.

My results identify three ways in which the actors shaped risk management by using measurement approaches:

(1) While identifying what to measure, the actors drew the conceptual boundaries of risk management.

(2) While identifying how to measure, the actors shaped the tangible material practices of risk management.

(3) In refining the notion of measurement, the actors matched the conceptual boundary and material practices of risk management.
Drawing the Conceptual Boundary

As demonstrated in Papers I and II, the conceptual boundary was the first step in shaping risk management practices through measurements. In drawing the conceptual boundary, the standard setters took the lead and surveyed the existing material practices among implementers (banks and the interest organizations) that were labeled with the specific category of risk (liquidity or operational in our case). The standard setters specifically enrolled and invited the large multinational banks and influential interest organizations (such as the international and European level organizations) to study the existing practices of liquidity and operational risk measurement. In doing so, the conceptual boundaries drawn by standard setters and later endorsed by the regulators were broad placeholders that only included the label and identified the broad principles. For example, in the case of liquidity risk measurement (in Paper I), the three broad labels and accompanying principles were identified, viz., the matching approach with principles of matching cash inflow-outflow, the ratio approach of matching excess cash outflow with high quality assets, and the mixed approach where implementers used a mix of both the matching and ratio approaches.

Similarly, in the case of operational risk (in Paper II), measurement principles of categorizing the operational error, their economic severity and frequency were acknowledged. Since drawing this conceptual boundary acknowledged the heterogeneous practices of implementers and merely presented a document identifying such practices without any recommendations from the standard setters and the regulators, the implementers (banks and the interest organizations) did not contest the proposed conceptual boundaries. In fact, the implementers (banks and the interest organizations) opened up their practices for the standard setters and the regulators to study them.

In summary, as the results of Papers I and II suggest, in drawing the conceptual boundary of risk management, the standard setters and the regulators mostly proposed the measures as a “stylized” fact, especially detailing only a broader level principle on “what to measure” (Callon 1986b, Young 2003, 2014). To impart objectivity to the proposed conceptual boundaries, political discussions were limited to the preamble of the standard and regulatory documents. Furthermore, the conceptual boundaries were
loosely defined in the regulations as containers that could hold different types of practices (Abbott 1995). Consequently, such definitions meant summing up the basic principle of measurement in only a few pages of the standards and regulations without any detailed illustrations.

**Shaping the Tangible Material Practices**

As demonstrated in Papers I and II, shaping the tangible material practices was a contentious issue, and the standard setters and the regulators sorted this contentious issue into several successive steps, i.e., the discussion was raised in several different documents on specific issues. The shaping of material practices mostly relied on detailing and elaborating on the methods of calculation and data collection in an ostensive manner (Boedker 2010). Thus, the focus in this step was on questions of “how to measure.” For example, in the case of liquidity risk measurement (refer to Paper I), after studying and categorizing the liquidity practices for two decades, the regulators posited short-term liquidity as a new conceptual category of Liquidity Coverage Ratio in 2009 and linked it to thirty days’ matching of excessive cash outflows with High-Quality Liquid Assets. In a similar vein, tangible physical boundaries for operational risks (refer to Paper II) and three detailed approaches of measurement were defined in several successive publications of the Basel Committee on Banking Supervisors after 2000. In shaping the material practices in an ostensive manner (Boedker 2010), the standard setters and the regulators presented the detailed measurement guidelines on “how to measure” as stylized facts, separating them from the political mandate and preamble (Callon 1986a, Young 2003, 2014). Most of the time standard setters and regulators studied the best practices at a special group of implementers (large multinational banking organizations) that invested resources in pricing and packaging risks to exploit risk-taking for larger returns (de Goede 2004).

Although published standard and regulatory documents revealed the prior work of the standard setters and the regulators along with the political mandate behind their work, the “messy reality” behind how the regulators and the standard setters assumed the role of a macro-actor and silenced their allies, as well as their opponents, was not fully revealed (Czarniawska and Hernes 2005). One of the tensions that could be observed in the approaches of the standard setters and regulators was in their linguistic flavor. For
example, the standard setters (the Basel Committee) used predominantly financial language and jargon since the experts drafting these guidelines and principles had a background in finance and economics, whereas the regulators such as the European Banking Authority drafted regulations in the legal language since the European experts were mostly lawyers who drafted the regulation.

While the internal regulatory process had its internal contestations, the implementers (banks and the interest organizations) considered the shaping of the material practices in details as encroachment by the standard setters and the regulators on their privilege of flexible practices, business models and strategy matters (see Papers I and III for details). The implementers (banks and the interest organizations), consequently, participated actively in the processes of defining the material practices of risk management by indulging in questions about “how to measure.” Thus, in both the liquidity risk measurement case and the operational risk measurement case, the actors mostly questioned the calculation procedures16 (“how to measure”) by examining the regulations and standards for discrepancies. In doing so, the implementers raised doubts on the proposed measurement approaches by linking them to either instrumental content such as ineffectiveness of measurement (e.g., absence or unavailability of data for detailed risk calculation, dissimilar treatment of similar risk-level instruments and widespread historical use) or political rhetoric (e.g., ineffectiveness due to ignorance of context, one size fits all, unproven track record and mismatch between regulations, unfit for specific country condition).

Apart from the standard setters, regulators, and implementers (banks and the interest organizations), consultants were a distinct group participating differently in the standard and regulation enactment process that was aimed

16 The implementers differed regarding what exactly they questioned in terms of material practices, but their approaches to questioning relied on finding discrepancies in the proposals of the standard setters and the regulators. For example, Swedish banks and interest organizations asked for better liquidity treatment of covered bonds, even though other large European and international banks were not very concerned about it. This was because Swedish government debt is scarce and covered bonds with good credit ratings were in widespread use in Sweden as high quality liquid assets (see Paper 1 for details).
at shaping the risk management practices of banks\textsuperscript{17}. The consultants’ participation in “how to measure” relied on the impact assessment of the measurement approaches\textsuperscript{18}. In doing so, the consultants especially used value-based rhetoric, showing their expertise and authority (such as “in our experience,” “we believe”) to qualify their technical information. Some academic consultants also proposed a technical approach for how to measure impact or validate measurement approaches of regulations during the due processes of standard setting. The involvement of academics in proposing approaches for calculating impact or validating assessment methodology can be attributed to the prevalence of such approaches in academic discussions (Himick and Brivot 2018). For example, Danielsson (2002, 2008) questions the calculation procedures by finding the contamination of data and unsuitability of propounded approaches (such as Value at Risk). MacKenzie (2006), and Marti and Scherer (2016) argue about the performativity of existing quantitative measures and blame the problems of the banking risk measurement and its socially undesirable impact on inequality by questioning the content of the models which influence the behavior of the risk managers. They imply that these models need to take into account social consequences if the regulators want results that are more effective for society in general. It is also imperative to note here that the advent of risk management and its advanced calculation techniques are due to many academic advancements in statistics and finance before risk measurement became popular in banks in the 1980s (McGoun 1993, 1995).

**Matching the Conceptual Boundary and the Material Practices by Problematizing the Notion of Measurement**

As demonstrated in Paper I, this type of approach of matching conceptual boundaries and material physical practices was absent in the techno-political rhetoric of all the actors (regulators, standard setters, normalizers, 

\textsuperscript{17} Additional analysis of the data of Study 1 (Paper I and II) for this compilation essay was carried out to identify peculiarities of the consultants’ approach.

\textsuperscript{18} Again, different consultants responded differently in terms of content, but their specific focus relied on demonstrating their expertise on specific issues. For example, academics used their knowledge of database and impact assessment methodology, whereas financial consultants focused on the aspects of impact calculations (see Paper 1 for details).
consultants, and implementers – banks and the interest organizations) when it came to liquidity risk measurement. None of the actors questioned the notion of measuring liquidity risk itself. However, when it came to operational risk measurement, which was not a popular measurement even among large banks (Paper II), questions on whether or not measurement should be close to operational activity were predominantly discussed. Here, while the standard setters and the regulators first supported the idea of detailed risk measurement close to operational activities, all other actors such as banks, interest organizations and consultants vehemently opposed such a notion of measuring operational risk. Later, standard setters reverted their position by proposing a fixed and less detailed approach of operational risk measurement. What transpired the retraction could not be established with a certain degree of veracity since publicly available documents cannot provide information on private lobbying. However, as demonstrated in Paper II, in the publicly available document, the standard setters acknowledged the inconsistencies on treatment of approaches raised by banking supervisors, the complexity and flexibility of activity-oriented measurement resulting in bad quality indicators and their desperation with not meeting the expectations of convergence of approaches as the reason for the withdrawal of activity-oriented approaches of operational risk measurement.

6.2. Shaping Risk Management by Internal Audit

**RQ2: How is risk management shaped through internal audit in a network-centric context?**

In the last four decades, the entanglement of internal audit with the risk management process has grown tremendously (de Zwaan *et al.* 2011, Vinnari and Skærbæk 2014). This is mainly due to three contextual reasons. First, the internal audit techniques and concepts were invented and promoted by the external auditors (Spira and Page 2003, Chambers and Odar 2015) and the movement of external audit to risk-based audit paved the way for the entanglement of internal audit with risk management activities (Knechel 2007, Robson *et al.* 2007, Free *et al.* 2009). Second, a number of corporate scandals
over the last four decades have resulted in standard setters (such as the Basel Committee on Banking Supervision) and governments instituting internal audit as a third line of defense that assures the first (operations) and the second (risk management) lines of defense (Chambers 2014). Third, the growing popularity of risk management (Arena et al. 2010, 2017, Hardy and Maguire 2016) prompted normalizers of internal audit (such as the Institute of Internal Auditors and the Committee of Sponsoring Organizations of the Treadway Commission) to cast the internal audit and internal control frameworks of 1992 in terms of the enterprise risk management framework in 2004 (Spira and Page 2003, Hayne and Free 2014, Roussy 2015).

However, despite growing entrenchment with risk management, like external audit, internal audit is still used to bring credibility and assurance to any activity within organizations (Power 1996, 1999, 2003, Pentland 2000). Fueled by a number of corporate scandals, internal audit was expanding rapidly during the last decades of the 20th century and was becoming a part of the organizational governance processes (Maijoor 2000, Power 2000, Gramling et al. 2004). The continuance of corporate frauds and banking failures have meant that internal audit has become an established practice within organizations where it wields its influence over most of the organizational activities, from operations to corporate governance (Collier and Zaman 2005, Christopher 2018). As a result of the involvement of a number of organizational actors, the internal audit explosion is linked not only to improvement in techniques but also to the politics associated with such techniques, such as the acceptance of techniques by different communities as objective and trustworthy (Christopher et al. 2009, Roussy 2013, Everett and Tremblay 2014). Thus, while internal audit techniques may seem technical and objectifiable when looked at from a purely functional perspective, their acceptance emerges only through the political negotiations of the actor communities (Roussy 2015, Roussy and Brivot 2016, Christopher 2018). As a result, internal audit approaches are also techno-political in nature where the technical cannot be separated from the political (Arena and Jeppesen 2015). The interpretation propounded above forms the basis of this thesis while studying the shaping of risk management through internal audit. More generally, I have referred to this approach, repeatedly, within this thesis, as the techno-political approach of studying the shaping of risk management.
My results identify three ways in which the actors shaped risk management by using internal audit approaches:

(1) While identifying what to audit, the actors drew the conceptual boundaries of risk management.

(2) While identifying how to audit, the actors shaped the tangible material processes of risk management.

(3) In refining the notion of internal audit, the actors matched the conceptual boundary and material practices of risk management.

**Drawing the Conceptual Boundary**

As shown in Paper III, due to widespread mandated use of Basel standards by the regulators, in the case of the Basel model and processes, the systems and processes existed within organizations. Thus, the focus on what to audit was easily settled – the Basel models and processes became the conceptual object of audit. In contrast to the Basel models and processes of Paper III, the conceptual object of internal audit – risk culture, in Paper IV – is organization-wide and goes beyond all processes and systems within organizations to the individual motivations and behavior. The lack of mapping between risk culture and organizational processes led to questioning whether to audit existing processes and systems or to create new processes or systems of audit. Thus, in the case of risk culture, the conceptual boundary was more flexible than the case of the Basel models and processes.

This finding is in line with the systems approach of audit propounded in the extant literature. According to this approach, most of the audit techniques rely on tangible systems to audit (Power 2000, Castanheira *et al.* 2009) (such as risk management systems) rather than intangible organizational processes or work streams (Palermo *et al.* 2016). This is because internal audit, or verification/assurance in its traditional sense, can only be carried out on processes that are made tangible by the use of documents, ownership, charts, and data collected at different points in time about the processes. In cases, where the conceptual boundaries of the systems are not fixed, a conceptual existing or adapted system of systems is created to make the auditing processes smoother. Thus, it is safe to say that the shaping of risk management through internal audit is achieved by verifying the
conceptualized tangible secondary systems that symbolically reflect non-tangible aspects (Pentland 2000).

Again, in this step of shaping the conceptual boundary, the five actors (regulators, standard setters, normalizers, consultants, and implementers – banks and the interest organizations) did not differ much on the conceptual boundary but acknowledged its heterogeneous and fluid definition employed in practice. Furthermore, since internal audit is a codified practice, its fluidity and heterogeneity were well acknowledged by all the actors (Arena and Jeppesen 2009, 2015).

**Shaping the Tangible Material Practices**

As demonstrated in Paper III, in the case of the use of internal audit to lend credibility to the Basel models and processes, the organizations chose the audit approaches that suited their preexisting experiences and practices of internal audit. Thus, most of the focus of the implementers was on using the well-known approaches of audit – where to get the data and how to adapt the typical qualitative (interview) and quantitative (data and model testing) tools of the audit to suit the desired outcome. This simple adaptation could be attributed to the fact that the implementers encountered established paradigms of internal audit of tangible processes, which were already developed, accepted and black-boxed in the community (Power 2003, Knechel 2007, Robson et al. 2007). Thus, in the case of the internal audit of Basel models and processes, credibility for the existing system of risk management was provided by testing deviations and keeping deviations within the limit through the use of issue reporting and tracking systems.

However, in the case of risk culture (Paper IV), there were marked differences in the actors’ approaches, and the process of audit became a point of discussion. Such discussions raised concerns over internal audit’s capability to lend credibility to the new element of risk culture that was to be included in risk management. The normalizers and the consultants proposed direct behavioral and ethical measurement (although the approaches of different normalizers and consultants varied in terms of how to measure behavior or ethical inclinations exactly, the approaches had similarities regarding the direct measurement of behavioral and ethical boundaries). The standard setters, regulators, and implementers mostly favored existing systems (such as
definitions of risk appetite, the tone of the top management, the communication of the top management, and the rewards and compensation). Again, different implementers had varying approaches to how to carry out the internal audit on the four practice groups. They agreed in principle that these four broad practice bundles form internal audit of risk culture.

Similarly, the Basel Committee and the Financial Stability Board had some differences on the inclusion of culture in their guidelines. This could again be attributed to the fact that the techno-political processes settle over time and develop into some sort of standardization in the later phase. However, at the beginning (which is what internal audit of risk culture represents), actors differ significantly in the actual practice of internal audit (Free et al. 2009, Kaspersen and Johansen 2016) where such practices are in hot and hybrid forums (Callon 1998, Callon et al. 2009). The findings also highlight the fact that different techno-political understandings reside in different communities of practice (Brown and Duguid 1991, Power 2003, Knechel 2007, Robson et al. 2007).

Matching the Conceptual Boundaries and Tangible Material Practices by Problematizing the Notion of Audit

As demonstrated in Paper III, in the case of the implementation of the internal audit of the Basel model and processes, questions about the notion of audit were not raised by the implementers, since the Basel models and processes represented the dominant paradigm of thinking with respect to risk management and contributed to making risk management tangible as a process. This type of approach of problematizing the notion of audit dominates only when a radical shift in auditing is required to justify a certain shaping of risk management. For example, in the case of Paper IV, questions such as whether audit can be taken further from its conception of verification and representational faithfulness (Power 1996, Richardson and Eberlein 2011) and should be not seen in isolation from employee empowerment within organizations (Knechel 2007, Robson et al. 2007, Free et al. 2009) were raised when the risk management was extended to include risk culture by propounding internal auditing of risk culture. Including culture was a radical shift in audit approach to risk management because culture is highly ambiguous and intangible, and is unlike bounded organized processes within
organizations which are the focus of current internal audit approaches (Schein 1990, 2004).

Again, as demonstrated in Paper IV, different actors had different understandings of the notion of audit. While implementers, regulators, and standard setters stuck to the traditional idea of internal audit as verification of systems, normalizers (such as the Institute of Internal Auditors and the Institute of Risk Managers) and consultants propounded the idea of internal audit being supplemented with informed and empowered employees. These two different notions of internal audit led to the recommendation of different material practices. The normalizers and the consultants proposed training for employees on how to make informed risk decisions (although the approaches of different normalizers and consultants varied in relation to how to train, they had similarity in terms of recommending training of employees where employees could make informed and critical decisions to avoid risks in dynamic environments (Vaughan 1999, McCabe 2014)). The standard setters, regulators and the implementers mostly favored existing systems (such as definitions of risk appetite, the tone of the top management, the communication of the top management, and the rewards and compensation). The regulators and standard setters did not want to intervene in the banking business and strategy matters, and the implementers did not want to invest in new technologies and practices. Thus, in a way, matching the conceptual boundary and internal audit practices for risk culture shaped the container of the conceptual boundary as well as the content of risk management to include training employees to deal with unexpected circumstances (Abott 1988).
6.3. Synthesis of Results

Based on my results, a general framework of how risk management is shaped by measurement and internal audit could be drawn (as depicted in Fig. 4 below). The framework consists of three ways in which measurement and internal audit shape risk management: the drawing of a conceptual boundary, the fixing of material practices, and the matching of the conceptual boundary with the material practices. Thus, this general framework focuses on both the representational and the material aspects of risk management. The model shows that the (re-)shaping of risk management starts with the identification of a representational concept. Once the representational concept of what is risk management has been identified, tangible material aspects of risk management are shaped by elaborating its practices. Finally, both representational and material aspects become intertwined in the process of how risk management is shaped.

A processual perspective on the shaping of risk management could also be identified in the results of the various appended papers. In this processual perspective, the drawing of a conceptual boundary could be considered as the first step in the shaping of risk management by both measurement and internal audit approaches. As the results of the papers suggest, such conceptual boundaries are fluid in nature and represent only an abstracted understanding of risk management practices. The fluid nature of such boundaries allows a variety of practices to be included under the umbrella of risk management (Arena et al. 2010, 2017, Bromiley et al. 2015). To some extent, these findings also have implications for the boundary literature in sociology that speculates on whether boundaries of things come first or things of boundaries come first (Abott 1988). In a way, since risk management practices in our case predate their formal redrafting by the standard setters and regulators, it could be argued that conceptual boundaries come after the material practices as things (Woodward and Jones 2005). In this way, conceptual boundaries work as fluid containers that give way to understanding how heterogeneous practices could be unified under one umbrella (Lamont and Molnár 2002).

Once the conceptual boundaries are established, a tug of war between actors ensues and results in identifying material practices (tangible physical
boundaries regarding what could be included or excluded during the measurement and internal audit). Since the financial crisis had paved the way for stricter regulations, there were fierce debates on which material practices to include or exclude. Here, a fixing of material practices gives a more concrete and tangible understanding of risk management and ensures a certain definitiveness of the “things” to be put within the fluid conceptual boundaries. However, an interesting implication to note is that the definitiveness of which material practices could be included under the conceptual boundaries is always incomplete (Robson and Bottausci 2017). This incompleteness of the conceptual boundaries regarding which practices could be included under them seems reasonable because no artifacts could include every aspect of definitiveness (Latour 1993, Robson and Bottausci 2017). Gieryn (1983) explains this incompleteness of conceptual boundaries in his boundary work by saying boundaries are rhetorically constructed based on the interest of the actors. Mikes (2011) and Hall et al. (2015) have utilized the boundary work approach to coin the idea of risk talk that allows risk experts to draw the boundaries of material practices in defining what constitutes the conceptual category of risk management in an organization. Themsen and Skærbæk (2018) and Arena et al. (2017) also demonstrate the incompleteness of conceptual risk frameworks in terms of which material practices are included.

As demonstrated in the results of this thesis, the drawing of a conceptual boundary and the fixing of material practices could not exist in isolation. Thus, matching conceptual categories and material practices results in the settlement of new conceptual and physical boundaries of risk management. This matching of conceptual categories and material practices is mostly a byproduct of revising the nature and notion of measurement or internal audit itself. The matching of conceptual boundaries and material practices allows a loose coupling to be created between the symbolic domain of concepts and the material domain of practices (Woodward and Jones 2005). Again, this matching is never complete, but it allows for a greater degree of certainty in terms of which practices are included and which are not (Abbott 1995).

Our findings on expanding the reach of risk management have important consequences and implications. Our findings somewhat confirm how the
concept of risk includes everything (even day-to-day operations as operational risk) under its umbrella by harnessing the meaning of risk as threats and thereby requiring control over a variety of organizational activities (Beck 1992, 2006, Beck and Holzer 2007). Power (2016) coins the term ‘risk work’ to show the vast expansive reach of risk in the context of modern organizations. Power also warns that broadening the concept of risk to include everything would make the concept of risk so generic that in the end, it will become an exercise of including nothing (Power 2004a, 2009).

Our findings on the expansion of internal audit (to even non-tangible things such as culture) somewhat confirm the explosion of surveillance by internal audit and thus have important implications for creating a surveillance-based organization with audit trails (Maijoor 2000, Chambers and Odar 2015). Pentland (2000) and Power (2000) have already warned about the dangers of including everything under audit society and surveillance. In fact, critical theorists have long argued that too much surveillance and monitoring makes employees susceptible to dissociating themselves emotionally from work and employing mechanical decision-making instead of critical decision making (Vaughan 1999, McCabe 2014).
Figure 4: General Framework Based on the Findings of the Thesis on the Shaping of Risk Management through Measurement and Audit
7. Implications

The previous chapter elucidated the main arguments and results of the thesis based on its three field studies. In interpreting the results of all the three studies, both contextual history and analytical generalizations played an important role. In this chapter, by grounding the findings of the previous chapter in the extant literature, I derive implications for theory as well as practice. In addition, I also elaborate on further research opportunities.

7.1. Theoretical Implications

The findings of this thesis have several implications for risk management literature in accounting. In this sub-section, five important theoretical implications are discussed in detail.

Challenging the Rational Perspectives on Risk Management

The thesis challenges the rational (purely technical and instrumental) view of risk management propounded in the functional and normative literature streams where scholars propound specific approaches to shaping risk management as effective (cf. Szegő 2002, Beasley et al. 2005) or non-effective (Danielsson 2002, Danielsson 2008, Woods 2009, Tekathen and Dechow 2013), contingent on various conditions. In this regard, the findings of the thesis caution such technical studies to be careful and prompt them to understand the shaping of risk management in its organizational, social and institutional context. The thesis goes beyond simply challenging the notions of rationality and demonstrates how different actors play a central role in conceptualizing and utilizing the organizational, social and institutional complexities (McCabe 2014, Alvesson and Robertson 2016) in their technical interpretations of risk management. One of the highlighting points of this thesis has been to downplay the importance of “risk experts” and “risk talks” (Mikes 2009, 2011, Hall et al. 2015) and explicate the involvement of a number of actors in the discourses of risk. While emerging field studies in risk management have questioned the prime importance of risk experts (cf. Arena et al. 2017, Brivot, Gendron, et al. 2017, Themsen and Skærbæk 2018), they have avoided theorizations of discourses of risks.
In contrast to the risk literature, many emerging theoretical approaches have been utilized in the organizational literature to unravel the multi-actor viewpoints and their contribution to organizational practices. For example, situated discourses (Jarzabkowski and Sillince 2007), situational rhetoric (Weetman et al. 1996, Georgiou 2010) and information context (Königsgruber 2012, 2013) utilized by different actors are used in the extant organizational literature to unravel the reasons for heterogeneity. Consequently, in further research opportunities, the thesis promotes inquirers to go beyond the technical or political understanding of risk experts and risk talk by including ideas on how different actors draw linkages between the political and the technical as well as how different actors demarcate the technical and the political.

The Techno-Political Ensemble of Risk Management in Action

The findings of this thesis also explicate the heterogeneous nature of the shaping of risk management practices within (cf. Arena et al. 2010, Tekathen and Dechow 2013, Bromiley et al. 2015) and outside (Spira and Page 2003, Hayne and Free 2014) organizations. In doing so, the thesis explicated the historical and situational contexts that promoted the heterogeneity of risk management (Kurunmäki and Miller 2013, Miller and Power 2013). In particular, the thesis provides a framework to understand risk management as a “risk object” that conceals the heterogeneous nature of material practices under a common symbolic meaning (Hilgartner 1992, Hansson 2010, Arena et al. 2017). In contrast to the existing understanding of the typologies of risk objects (see Arena et al. 2017), the thesis provides a dynamic and processual understanding of risk objects by elaborating the risk object in terms of symbolic meaning and material practices. In doing so, the thesis also promotes new inquiries to bring a historical understanding of the shaping of risk management practices (Latour 1988, 1993, Czarniawska and Joerges 1996, Czarniawska and Hernes 2005, Callon et al. 2009).

Moreover, instead of following the demarcation of the technical and the political (cf. Young 2014), or the evolution of the political (cf. Chee Chiu Kwok and Sharp 2005, Reuter and Messner 2015) or the evolution of the technical-instrumental (cf. Königsgruber 2013), the thesis proposes conducting further studies on both the demarcation and the intermingling of
political rhetoric and technical facts. Moreover, building on Latour (1988, 1993) and Callon et al. (2009), the thesis promotes research showing the deployment of technical calculations within political contexts and their intermingling and separation in practice. The thesis argues that bringing the understanding of both technical and political factors together in this manner could enhance our current understandings of risk management in action.

**The Fluidity of Risk Management due to Allied Practices**

The thesis posits approaches that researchers or inquirers could further extend to study the fluidity of risk management within organizations (Arena et al. 2017, Brivot, Gendron, et al. 2017). While fluid conceptions on the shaping of risk management are not new in the literature (cf. Bromiley et al. 2015, Baud and Chiapello 2016), this thesis goes beyond acknowledging the fluidity of risk management in different organizations and promotes inquirers to look at the fluidity of risk management practices within organizations. In doing so, the thesis calls attention to the shaping of risk management by organizational processes, such as internal audit and corporate governance. The current studies look at how internal auditors are involved in risk management (Spira and Page 2003, IIA 2009, Hayne and Free 2014, Nuijten et al. 2015) or how organizational culture (Palermo et al. 2016, Ring et al. 2016) and calculative culture (Mikes 2009, 2011) are affected by risk management within organizations. However, these studies fail to demonstrate that calculation, culture and internal auditing are not only shaped by risk management but in turn also shape risk management practices within organizations. Thus, the thesis promotes inquirers to study the shaping of risk management by different internal processes of organizations (Palermo et al. 2016, Martin et al. 2017). These studies on the shaping of risk management could further explicate the heterogeneity of risk management at different levels and different units and processes within organizations.

**Persisting Heterogeneity of Views and Tensions**

In Paper IV, the thesis opens up a debate on different integration approaches of control and empowerment to explicate the dichotomous conceptions of internal audit and risk governance (governance by checking and governance by checking empowered employees) among different actors (Covaleski et al. 1998, Baud and Chiapello 2017). Here, the thesis (particularly Paper IV) first
extends the synthesis of Baud and Chiapello (2016) by including perspectives of actors other than regulators and standard setters. In doing so, the thesis moves beyond the constructivist notions of internal audit and knowledge where actors agree on some central ideas or objects (Power 1996, Knechel 2007, Robson et al. 2007) and shows that heterogeneity of understanding could persist among actors. This demonstrates what Arena et al. (2017) call the ‘plastic’ nature of risk management or shows the persistence of what Callon (1998) and Callon et al. (2009) term as ‘hot situations.’ Further to the understanding of the persistence of tension among actors, I encourage further research in not only understanding the differences of viewpoints prevalent among different actors but also how the tensions arising out of these persistent differences are handled during the inter or intra-organizational shaping of risk management practices.

Balancing Control and Empowerment of Employees
In Paper IV, the thesis also explicates the “balance” required between verification and control from internal audit on one side and empowerment of employees on the other side (Vaughan 1999, McCabe 2014). The thesis goes on to question the established notion of verification and control attached to internal audit and risk management that has been promoted by the existing literature streams (Power 1996, 1999, Gephart et al. 2009, Hardy and Maguire 2016). Verification and control regimes make sure that employees behave according to prescribed norms and helps curb non-normative behavior that could be detrimental to organizations (Ferris and King 1991, Morales et al. 2014). However, various critical researchers have warned that the tight regimes of control and verification objectify employees’ behavior and promote non-critical thinking (Kets de Vries 1985, Vaughan 1999, Linstead et al. 2014, McCabe 2014). Non-Critical thinking could be detrimental to organizations where dynamic and complex situations demand employees to be actively involved in decision making (Vaughan 1999, Khan et al. 2007). Here, it is interesting to note that risk management in banking is a dynamic practice and the assessment of risk in dynamic situations of financial crisis or trading/investment decisions, in general, requires critical thinking on the part of employees (Reinhart and Rogoff 2008, Huber and Scheytt 2013, Curran 2015). Consequently, the thesis promotes further research in expanding the
notion of internal audit and risk management to make it better suited for organizations where employees feel empowered and not mechanized.

7.2. Practical Implications

The results of this thesis have several practical implications. In this subsection, four of the most important practical implications are discussed in detail.

Critical Analysis of Risk Measurement and Internal Audit Approaches

The practitioners could use the frameworks of this thesis (developed on pages 85-88) to explicate the dysfunctionality, paradoxes, and tensions better while shaping their risk management approaches. In this regard, organizations could analyze technical as well as political aspirations of their employees in favor of or in opposition to risk management practices using the three questions highlighted in the framework: what to measure/audit, how to measure/audit, and how (and when) to question the notion of measurement/audit. The analysis of technical and political aspirations in this manner could help organizations to achieve a degree of clarity on the use of risk measurement or internal audit during the transformation of risk management systems and practices. This techno-political understanding could not only help organizations in establishing a common understanding of the technicalities of risk management but also in settling the political controversies.

The proposed techno-political approach would also facilitate organizations in shaping their risk management systems by removing ambiguities surrounding calculations as well as their appropriate use. The calculative processes are becoming so distributive and complicated in nature, that a simple understanding of who collects the data, where the data for calculations are collected, who is responsible for calculation, and what calculations and its verifications include, is becoming ambiguous (Power 2004b, Callon and Law 2005, Callon and Muniesa 2005, Huikku et al. 2017). These ambiguities regarding what, how and why to measure could exacerbate the chances of failure of the measurement approaches in achieving the desired behavior from employees (Barry 2002, Englund et al. 2013). Similarly, since the use of internal audit is extended to verify ‘ambiguous concepts’ such as risk culture (Palermo
et al. 2016) and ethics (Kaspersen and Johansen 2016), understanding what is audited, how to audit or questioning the notion of audit suggested in the proposed framework could also help build effective internal audit processes. Such queries could help organizations in explicating the critical data points and approaches for a successful extension of internal auditing.

**Configuring Freedom of Choices for Risk Management Teams**

Risk management and internal audit practices operate in a complex institutional setup, where a number of external professional bodies, as well as regulators, have stipulated a number of normative and coercive institutional demands (Balthazar 2006, Dionne 2013, Arena and Jeppesen 2015, Roussy and Brivot 2016). Given the multi-vocal regulations and standards, organizations could use the approach of Paper III to decide what level of freedom to provide to the lower-level risk management and internal audit teams. As suggested in Paper III, organizations could utilize internal organizational arrangements (such as board composition, the structure of internal audit teams and skilling initiatives) to filter and simplify the prescriptions of complex external institutional setup for the lower-level risk management and internal audit teams. For example, organizations, operating in a less complex and less dynamic institutional environment with mature processes (such as retail banking teams), could provide detailed guidelines to risk management, and internal audit teams. Organizations, operating in complex and dynamic institutional environments with flexible processes (such as trading desks or investment banking teams), could enable their internal audit and risk management teams to make their own informed decisions in adapting their knowledge according to the need for the different complex process. Moreover, as suggested by Quattrone (2015) and Bento da Silva et al. (2017) accountability could be improved by empowering employees through training as well as training them for critical thinking and self-reflection than merely constraining them with rules, procedures and mechanical tasks.

**Communication Approaches to Risk Management**

Critical thinking and better arrangement of contextual rhetoric and technical information during the shaping of risk management practices could enhance the communication and information flow between different actors. For
example, instead of tightly embedding the information with political rhetoric or ignoring the technical information, managers could provide transparent and clear information during the internal shaping of practices as well as during lobbying to gain favor from employees or the authorities respectively. Since, lobbying and the internal shaping of risk management practices within organizations are being questioned (Kaspersen and Johansen 2016, Marti and Scherer 2016) and more and more transparency is demanded (Richardson and Eberlein 2011, Königsgruber 2013), organizations could learn from the results of this thesis to become more information-oriented in their dealings with employees as well as authorities.

**Information Asymmetry on Risk Management**

The results of this thesis also provide insights into the thesis of information asymmetry between different stakeholders. Information asymmetry on risk leads to unbalanced risk-taking in organizations. For example, if relationship managers make a decision on credit risk and are unaware of the strategic risk team’s ideas about how their risk-taking can jeopardize the overall risk profile of the bank, this could lead to unbalanced risk-taking decisions (Kalthoff 2005). While banks implement processes that embed the views of strategic risk teams and deploy technical monitoring tools to make sure relationship managers abide by the risk appetite and tolerance limits of banks, several studies indicate the failure in lending processes or investment decision making. More specifically, studies suggest that a purely formal and instrumental/technical monitoring systems do not work all the time (Canales 2014). Here, the implication of our results is that information asymmetry between sales, risk, internal audit and compliance team on risk management could be reduced by using the techno-political communication approach where informal channels to understand political motivations are also established in parallel to the formal channels. We argue that the reduction of information-asymmetry would enhance the information flow between different stakeholders and hence would lead to a reduction of risk that arises due to misalignment of views and tension between different actors in the organizations (Saravanamuthu and Lehman 2013). Furthermore, as shown by Giovannoni and Quattrone (2018) organizations would need to continuously assess ‘what is absent in their interaction’ to improve the flow of information between different teams.
7.3. Further Studies

The findings of this thesis open up several avenues of further research opportunities for risk management literature. First, studies unraveling the shaping of risk management practices by organizational processes other than internal auditing could illuminate problems in shaping risk management practices for specific processes within organizations. Here, I specifically promote studies on how compliance processes shape risk management in banks. Since compliance is exploding in banks due to the increasing number as well as details of regulations, field studies on compliance and risk management could illuminate further how different processes and teams within organizations shape risk management.

Second, I suggest further studies on the heterogeneity of views among different members of the different actors (regulators, standard setters, normalizers, consultants, and implementers – banks and their interest organizations). For example, in this thesis, I assumed regulators and standard setters to be a somewhat homogeneous group having similar views. I promote further studies where different viewpoints among different regulators on risk management and its shapings such as the Basel Committee on Banking Supervision and the Financial Stability Board are highlighted to theorize on how the tension between different regulatory forces are shaping risk management. Similarly, I promote studies where the difference in conceptions of risk management between the different central banks and the supervisory authorities is highlighted to understand the different trajectories of risk management in different countries and continents. Furthermore, I also promote studies that explore heterogeneous viewpoints on risk management and its shaping among different employees of the standard setters, regulators and supervisory authorities to understand how the complexity of risk management and the specialization of regulatory tasks is affecting the trajectory of risk management. Similarly, I promote detailed studies on internal organizational stakeholders (e.g., audit committee, control committee, board members, executives, different operations, risk, internal audit, compliance managers and employees) to identify power centers, expert knowledge and existing practices within organizations that could reveal reasons for the heterogeneous shaping of risk management in different contexts. Here I also encourage researchers to use other network-centric
theories such as stakeholder theory (for example, see Saravanamuthu and Lehman (2013) regarding stakeholder theory in the domain of environmental risk in accounting) as well as social network theory (for example, see Richardson (2009) regarding social network theory in the domain of political risk in accounting).

Third, I also promote further inquiry on the extension of risk management to the non-tangible domain of risk culture and ethics. I specifically promote further inquiry on what risk management would mean if culture and ethics were included. How will such scope enhancements to non-tangible domains change the existing understanding of risk on the philosophical level (Gephart et al. 2009, Dionne 2013).

Finally, I also encourage researchers to extend the understanding of the shaping of risk management through lobbying by supplementing the knowledge gained through my study with access to private lobbying content. This study could be extremely difficult to conduct in the regulatory context of banking, but could be easier to conduct on the COSO frameworks (Hayne and Free 2014) or environmental risk frameworks (Dangelico and Pujari 2010, Reuter and Messner 2015). In the case of the COSO frameworks or environmental risk frameworks, the movement of standards towards even more transparent enactment in the future could provide users with access to such private content. Lobbying activities are going to be more organized and transparent with the rapid increase of technical democracy (Callon et al. 2009), and this could provide an opportunity for scholars to understand the regulatory shaping of risk management.
8. Conclusions

This thesis set out to explore how actors shape the practices of risk management. In this regard, the thesis focused on two mechanisms that actors utilize to shape risk management practices. First, shaping through measurement and second, shaping through internal audit. In doing so, the thesis proposed a techno-political framework (on pages 85-88) to understand the shaping of risk management. The proposed framework highlighted how actors invoke conceptual questioning when shaping risk management requires a radical shift of techniques (as depicted in the case of operational risk and internal audit of risk culture) and indulge in selective discussions when shaping does not require a radical shift in techniques (as depicted in the case of internal audit of the Basel IA and liquidity risk). To arrive at the proposed framework and to address the research questions, the thesis discussed the extant literature, analyzed the three studies and synthesized the results. Furthermore, the thesis also elucidated the implications of the results for theory as well as practice. In this closing chapter, I briefly reiterate the important contributions of the thesis and its appended papers to the different literature streams.

8.1. Contributions

The contribution of this thesis lies in explicating how the diversity of views and intentions of five different actors (regulators, standard setters, normalizers, consultants, and implementers – banks and their interest organizations) are reconciled to form a techno-political risk object that is flexible enough to accommodate diversity and fixed enough to allow communication between different actors (Hilgartner 1992, Hansson 2010, Arena et al. 2017). There have been several recent calls in the accounting and management literature to understand how the diversity (cf. Bromiley et al. 2015, Baud and Chiapello 2016) and fluidity (Mikes 2009, 2011, Arena et al. 2010, 2017) of actor views on risk management practices persist. While there have been increasing studies on risk management in the organizational context where risk management is less regulated, the thesis is among the few emerging qualitative field-based studies (Wahlström 2009, Mikes 2011, Hall et al. 2015, Baud and Chiapello 2017) that study the shaping of risk management.
in the banking sector within their social, institutional, and historical context. Thus, the thesis makes a number of specific contributions to the risk management literature.

**Extending the techno-political approach**

The thesis extends the techno-political approach of studying the shaping of risk management by accepting that – analytically and methodologically – it is difficult to separate the technical from the political (Mutch 2013). Thus, instead of looking at the demarcation of the technical and the political (cf. Young 2014), or evolution of the political (cf. Chee Chiu Kwok and Sharp 2005, Reuter and Messner 2015) or evolution of the technical and instrumental approaches (cf. Königsgruber 2013), the thesis proposes studying the process of enactment of risk management as a techno-political ensemble (Hilgartner 1992, Hansson 2010, Arena et al. 2017). More specifically, the study of the techno-political ensemble in this thesis relies on theorizing about how the content and meaning of risk categories or concepts are black-boxed and positioned as “facts” (Gieryn 1983, Lamont and Molnár 2002, Jones 2009, Lamont 2012). In doing so, the thesis circumvents the problem of separation of the technical and the political, and sides with the premise that no facts are devoid of value, they are just black-boxed where episodic controversies are settled temporarily (Latour 1993, 2005, Callon et al. 2009, Vinnari and Skærbæk 2014).

**Shedding Light on the Dynamic Framing**

In Papers I and II, the thesis refines the understanding of the framing of risk measurement. In doing so, the thesis sheds light on the dynamic framing of the measurement techniques of liquidity and operational risk, especially focusing on calculation approaches and their meaning. Here, in contrast to the risk talk literature that explores the shaping of risk management by risk experts (cf. Mikes 2011, Hall et al. 2015), the thesis demonstrates that the framing of risk management is carried out by several interested actors. The findings of this thesis thus reverberate with the emerging theme in the risk management literature in accounting, where scholars have questioned the one-sided view of experts on the shaping of risk management (Arena et al. 2017, Brivot, Gendron, et al. 2017).
Furthermore, the thesis also contributes to addressing the call by scholars to understand the long-term dynamics of risk calculations and other devices (cf. Callon et al. 2009, Kurunmäki and Miller 2013, Jordan et al. 2016, Themsen and Skærbæk 2018). In understanding the long-term dynamics of risk management, the thesis specifically demonstrates the dynamic and unstable framing that risk management goes through. The dynamic framing of risk management results from the fact that no artifact could be fully complete (Robson and Bottausci 2017) and stable over a long period (Callon 1998).

**Revealing Mechanisms of Agency**

In Paper II, the thesis explores the shaping of risk management by internal audit. Here the thesis adds to how varying internal audit approaches lend credibility to the shaping of risk management practice. In addition, Paper III also explicates how internal audit approaches are influenced by the instantiation of institutional complexity within organizations, allowing for freedom or curtailing freedom in decision-making by internal auditors. In doing so, this thesis develops the interaction of internal organizational factors and external institutional constellations as the mechanism for the agency of the lower level internal audit teams. Thus, the thesis explains the mechanisms of agency in neo-institutional approaches which have been a bone of contention in the field of institutional logic and are explored in a few recent papers (cf. Pache and Santos 2013, Busco et al. 2017, Martin et al. 2017). By identifying such approaches, the thesis also posits a theoretical model in Paper III of how institutionally embedded internal auditors could be made independent. This contribution extends the existing theory of non-independence of internal audit in the literature which has ignored the institutional foundations and has shown internal auditors to have full agency (Christopher et al. 2009, Stewart and Subramaniam 2010).

**The Rhetoric of Control or Training for Self-regulation**

In Paper IV, the thesis contributes to the shaping of risk management by interested actors by focusing on the internal audit of risk culture. In doing so, Paper IV highlights and links the shaping of risk management to the varying conceptions of governance and internal audit techniques. In addition, the paper extends the view of Baud and Chiapello (2016) to understand variations in conceptions and integration approaches of different types of control and
empowerment. The thesis confirms the findings of Baud and Chiapello (2016) by finding the dominating presence of the rhetoric of control in the regulators’ and standard setters’ approaches. However, extending this to other actors, the thesis concludes that normalizers such as the Institute of Internal Auditors and consultants promote the use of training to empower organizational employees by relying on self-regulation as a prominent way to overcome deficiencies of the disciplining approaches of audit and governance.

8.2. Conclusion
In conclusion, the thesis develops a techno-political approach to the shaping of risk management through measurement and internal audit and contributes to the extant risk management literature in accounting. In doing so, the thesis departs from a purely technical (cf. Szegö 2002) or a purely socio-political approach of studying the shaping of risk management (cf. Arena et al. 2010, Mikes 2011, Huber and Scheytt 2013) developed in the extant accounting literature. In doing so, the thesis contributes and extends the ideas propounded in a few existing studies (cf. Callon et al. 2009, Vinnari and Skærbæk 2014) that promote the techno-political approach of studying the shaping of risk management practices. More specifically, the thesis presents a model depicting how five different actors (regulators, standard setters, normalizers, consultants, and implementers – banks and the interest organizations) shape the conceptual boundaries and material practices of risk management.
References


Czarniawska, B. and Hernes, T., 2005. Constructing macro actors according


at the strategic and operational levels? Mid Sweden University.


121


