WP-2017-01

# Papiers de recherche

Ce texte a été publié dans les *Cahiers de la SSFA*
(Automne 2017, numéro 1)

## The Uncontrollability of Independent Risks

**Anne EA van der Graaf**

Doctoral Fellow , MaxPo, Sciences Po
(anne.vandergraaf@sciencespo.fr)

Standard economic thinking would say that the more risks taken, the more profit can be created. In European financial institutions a division of labour exists between those who are seen as the profit makers and those who manage the risks. Insurance regulation Solvency II and banking regulation CRD IV require a risk department independent from the operations. From a governance perspective one could expect that the control on risks increase since knowledge about them is autonomously produced. Yet independence and control through knowledge do not always go together in large firms. One of their characteristics is a hierarchical division of labour. This paper will argue that in such a situation, resource control matters. This paper shows how the independence that was created actually exacerbated a lack of risk control. The risk managers lacked resources and knowledge of the financial risks that were taken. The research is based on participant observations, network data and qualitative interviews with people handling risks within banks and insurance. Risk management does not have the resources to either obtain knowledge from the operational centres, nor the power to make decisions

Keywords: CRD IV; Division of Labour; Financial risk; Independence; Solvency II

Pour citer ce texte : Van der Graaf, A.E.A, 2017, « The uncontrollability of independent risks », Papier de recherche SSFA-2017-01 [En ligne]: http://ssfa.free.fr/hoprubrique.php?id_rub=83

Ce papier de recherche a été présenté en séminaire, et a donné lieu à relecture par deux évaluateurs de l'association SSFA. Son contenu est susceptible d'avoir été soumis dans une revue académique pour publication.

## 1. Introduction

Since 2008, the European Union has adopted an ample amount of financial regulation. The downturn in the US housing market and the consequent fall of Lehmann brothers showed the first weaknesses in European finance. The European sovereign debt crisis added a new layer of financial trouble. In order to better govern financial actors and their markets, a large number of actions took place to avoid future problems. Directives such as CRD IV, CRR, or MIFID II as well as a banking union or the European capital markets have been implemented to limit the consequences of future economic crises. Banks, insurance companies, clearing houses and stock markets have all had to change the way they do business to adapt to the new rules.

One aspect that comes forward in all these directives is the question of risk. Risks from financial markets need to be governed and handled in a controlled fashion. The regulations have adopted multiple tools seem in order to carry this out. For example, several new technical measures like the capital measures in Solvency II or liquidity ratios have been adopted. At the same time, there is also the question of who governs the risks. The regulation does not set the exact profiles but does give a framework. Those who manage risks in banks and insurance companies need to be independent from operational teams. The risk management team is supposed to be detached from those who handle the investments.

Having designated people for risk management is relatively new in the financial industry. Risks themselves had been managed for a long time in banking and insurance. The US has its rating agencies since the beginning of the 1900s. Even before this, since the start of the industry, insurance companies and cooperatives have pooled the different risks of their clients. It was in the 1990s however that the financial industry got its own risk management's governance. From that moment on, heads of risk department became part of the banking organisations (Dionne, 2013). In insurance, the European regulation of Solvency II institutionally established the risk function (Bizieux and Francois, 2017).

Even though risks can be seen throughout a long history, their management did not prevent the 2008 financial crisis. However, this did not stop the risk managers' activities. After the crisis with the introduction of new regulations, the teams grew even further. In both banks and insurance companies, risk management has evolved from a handful of operators to full risk divisions, represented in their executive committees.

The growth of the risk management team is related to the limits and possibilities determined by the latest banking and insurance regulation. In a European context, CRD IV (banking) and Solvency II (insurance) have made banks and insurance companies enlarge their risk operation. On the one hand this has meant more control, on the other hand there is a freedom in the way risks are measured. More control is supposedly created by heavier scrutiny and more pressure on the risk function. The freedom comes from the possibility to implement company specific regulatory capital models. These models are generally seen as the most important of risk control mechanisms. However, control with at the same time leaving the organisations to use their discretionary power seems contradictory.

One of the ways in which the regulation seems to avoid the above-described paradox is by making risk teams independent of operations. Both in Solvency II as in CRD IV, regulators demand an independent risk function such that they are not disturbed by the constraints of the operations team. This independence however happens in an organisation with inherent divisions of labour that create constant dependencies.

A sociological approach to control that might fit in such a dependency situation is the concept of control through systems of governmentality. Measurements can be seen as controlling by themselves. By existing on themselves as form of information mechanisms, they would exhort a power on their own since people would act towards them. There are however also other types of control that happen in organisational divisions of labour. Namely, people have control over resources. Examples of these are status but also specific information or decision-making power. The two types of control, information and resources, can reinforce but also undermine one another. If for example risk management does not have the right information and therefore the right resources as seen by others in the organisation, risk management might have difficulties in producing numbers seen as control mechanisms. Only detailed information of risk processes can tell us which type of control is held by whom in this division of labour.

Can one thus really expect that independence allows risk control? This article will show that the separation of risk and operational divisions actually creates less control. In order to understand the role of risk management towards the operational functions, in-depth qualitative research has been carried out. Two participant observations took place as well as 86 semi-structured interviews with people in banking and insurance that handled financial risks.

The risks that this paper deals with are the ones that originate from financial markets. Risk management is the group of people that have to handle these risks in banks and insurance companies. The first collection of interviews already gives us an idea of the division of labour and control mechanisms. The risk managers showed how they had inherent difficulties because of their positions to create accurate risk measures or to control risk taking by the operational teams. The second data collection was a participatory observation in Bank F. Here, relationship between risk and profit was even more controversial. The ideas of independences had even made that the risk department did not calculate risks, another department did this. The risk department was therefore even further away from the financial market operations. Most of their time was spent negotiating with the calculation team. Risk managers did not obtain enough information from the financial market exposures, making it difficult for them to exercise their control function of financial market interactions. They did not know enough to be able to control through measures or decision-making.

The last data collection was carried out in the life and financial risk management department of a large insurance company, in a national subsidiary. Here risk management was independent from the investment department and also from those who would carry out the market transactions, the asset managers. They were so far away from the financial markets that they saw monthly changes in spreadsheets, which they investigated to see if no breaches in policy had been made. The daily or weekly changes of the portfolio or the specific investments in specific products were not visible to the risk managers. Their task was not a control as such but more a task of keeping logs that only their counterparts at the group level might sometimes look at.

The data discussion will show that in all cases, the question of control through numbers and measurements does not happen. Risk management has too much a distance to the front office in obtaining information that what they produce is never the right one. The creation of independence between the different divisions even exacerbates this since it means that a lot of the local knowledge of the operational sections never reaches the risk managers.

In this paper the literature around independence and control of risk management is discussed at first. Following this, the methodology is brought forward shortly. Thirdly, the interviews of the orientation stage are discussed. Fourthly, the risk management of market risks at Bank F has its place. Here the in-detail mechanisms of lack of control in independent situations can be seen. Before the conclusion, the division of labour of financial risks in Insurance Company V will be discussed. But first of all it is important to know more about the literature background that this paper situates itself in.

## 2. Independence and Control

Within social sciences, research has been done on financial markets, their objects and the concept of risk. However, the division of labour between the operational bodies and risk management lacks investigation. It is there where we can see if independence and control actually go together. First of all, the regulatory required independence is shortly described. This is followed by a short introduction to the social studies of finance and followed by a discussion of work on control from a Foucauldian point of view. Afterwards this is brought together with work on control of different types of resources.

In the EU, both the insurance and the banking sector are regulated through European directives. For the latter CRD IV holds, for the former Solvency II. Both directives state that risk management should be independent from the operational business. This would allow the former to have an objective approach to the business. They would be able to give a control perspective of how risks are handled in large institutions. Solvency II included this clause in article 268 and 269. Different functions, which includes the risk management function, are not supposed to be influenced by others that might compromise its duties to be carried out in a fair, objective and independent manner. Risk is something that is outside of the normal business and has to have its own, independent assessments. In CRD IV, it is article 76 that determines risk management's independence from the operational bodies. Risk management is supposed to identify and measure all risks in an independent manner. That way it can supposedly be part of the strategic decision-making process in which the risk appetite is chosen.

Even though this seems nice on paper and works well with works in governance literature (Aebi, Sabato and Schmid, 2012; Lang and Jagtani, 2010; Lewellyn and Muller-Kahle, 2012; Magnan and Markarian 2011), this lacks the detailed account of actual risk management. If there is one thing that the social studies of finance has taught us, it is that details about models, objects and people matter in the way financial actors are constructed.

Risks of financial markets and financial losses are managed both in a market, through computers and mathematical models, but also by people. The relationships people have matter. Since the ethnography looks into the concept of risk through practices, not only the practices and the object have had an impact on the findings but also the humans that carried them out. They acted in an organisational frame of an official division of labour, those that look at the negative consequences, risk management, and those that look at the positive ones, the front office, of financial interactions.

In the social studies of finance and critical accounting studies on risk, the human relationships in organisations have been explored sparsely. MacKenzie (2011) talks about two different knowledge groups of financial engineers who deal with structured products and a difference in hierarchy of the knowledge, Godechot (2007) writes about the differences in salary between different groups but neither goes into the specific relations people have in dealing with financial markets in this division of labour.

The gap that exists in the knowledge on the division of labour and its subsequent interdependencies exists similarly with scholars treating the subject of financial risk. Michael Power put forward a theory of risk management as a form of control and governance in financial institutions. He holds the theory that risk management and especially calculative risk management is making an upward march in the governance of firms. The risk calculations would lead to a control of other entities and risks actions. Enterprise risk management, which includes the regulatory capital measurements, supposedly brings together a new form of control of the organisation through the diffusion and importance of the newly created risk numbers. The control mentioned is a type of Foucauldian control where the distribution of knowledge and continuous gaze from the surroundings make adjustments in behaviour. Accounting and other economic transparency measures have been set in a similar light by Miller and Rose, who have written extensively about their governmentality (Miller and Rose, 1990). Risk management as controlling the enterprise matches economic theory on a trade-off between profit and risk in an investment decision. Looking for example at the capital asset pricing model as developed by Sharpe (1964), there is an expected future wealth and a standard deviation (equal to risk in this case) that make the final wealth an investor will end up with. The standard deviation is than the measurement of control that is decided upon since in the end, the market will converge to a common market price.

Mikes has taken Power's ideas in several case studies of enterprise risk management, thereby looking at the different types of usages of risk assessments in different enterprises (Mikes, 2009 and 2011). She finds that there are more qualitative and holistic approaches as well as specific quantitative approaches where risks in business units are quantified but not the general risk in itself. The findings show an importance of both technicalities as well as the way people deal with each other in these organisations, where upper management can be more or less open to risk management's impressions. However, the focus on the idea of control seems to miss a dimension in the relationships, namely the importance of the front office and profit objectives. In the 2009 article, Mikes shows multiple quotes of her interviewees who talk about the relation to the front office. The director of Risk Reporting says for example the following:

> [The] risk [function] by definition, like audit, sits outside the culture of an organisation as a whole, it has to. And the more important it becomes to a business that everybody sings in tune, the less space is given for any kind of business voice. And it becomes very difficult for a risk manager, at any level, either talking to a trader or talking to the chairman of the bank, to challenge. The skill is challenging without causing offence and if the trading manager and the chairman are wise, they listen [...] (Mikes, 2009, p. 33)

However, even though it is pointed out by the interviewee that the relation between risk management and front office is important, the paper does not go into the specificities of that relationship. Mikes does see that more qualitative risk assessments are more effective in reaching upper management than quantitative ones. The latter are not necessarily able to convey the message other entities are able to listen to. The governmentality point of view of risks should thus be placed in a world of a division of labour between risk and profit. How to do this? It requires the addition of a control of resources. Resources in this case also include status and hierarchical position. Namely, when one has a control over resources in the division of labour, one can use this to impose one's value legitimacy or governmentality.

The importance of resources is put forward in sociology and organisational theory. The classical work of Pfeffer and Salancik (2003[1978]) shows how power is exerted through dependencies between different actors in organisations. The resources here could come from information obtainment but also in decision-making. Bourdieu and Christin (1990) go further in a discussion of resources. Here also the background of people matters in the manner in which the housing market and its policies were constructed. From both these seminal works we can learn the importance of dependencies and resources. Personal status and how this falls within the dependencies in the firm have an impact on the work relationships.

The sociological literature on financial markets makes one thing clear about the status between the front office and the rest. The front office has a higher status than the rest. Risk management, back office, IT, human resources or legal people, they all wilt in the light of those who handle the sales, trading and calculation of the financial market products (front office). Multiple ethnographies show how the front office is highest in status. One of the things one can relate this to is what Godechot (2007) calls the "appropriation of profits". Those who can clearly relate money that comes into the organisation to their own work claim part of this profit. It is not necessarily the combined work of a specific division of labour. The money is theirs. At the same time money equals status in the bank that was studied by Godechot (also corroborated by Ho, 2009, in her observations of Wall Street). This enhances the image of a front office with a large legitimacy. Ho (ibid) describes in the same vein how the front office and the rest of the organisation were separated in Wall Street banks. Those working with the clients were able to take the fancy elevators and lobby. The back office workers including risk managers had to take a separate elevator, which looked much less nice. The banks were literally separated into the part for the front office in high status and those that were not part of it.

Let's try to bring together risk management's lack of status in banking with the importance of resources in decision making in organisations. If risk does not have status, what does that mean for the control function in this independent relationship? Risk does not have resource control. With the independence of the regulation, less dependence has been created between risk and the front office. Thus how can we see a control function through knowledge dissemination as Power (2007) describes? In order to do that, one would expect that risk management has a resource control over the legitimacy creation. Yet given their lack of status and relative distance to the financial markets, this is highly questionable. In the micro interactions of risk control one could expect that control through knowledge would only go along with a control of resources such as status and access to knowledge. One may wonder if risk management actually has those resources and therefore also strong influence on the investment decisions made.

## 3. Methodology

To understand about risk management's control in the financial market organisations, two participant observations and 86 interviews with bankers and insurers were carried out.

As the literature background shows, the human practices of financial risks have been relatively little studied. Yet, the work that has its background in the social studies of science and technology as carried out by MacKenzie, Preda and Millo has shown many virtues (MacKenzie, 2011; MacKenzie and Millo, 2003; Preda, 2009). Namely, when looking at the way people construct financial markets and work in them, we can actually find out what happens in such a market. Going beyond the work of the prescriptive models into the meanings and constructions leads to an empirical knowledge of the practices of finance. Yet what then makes the right research to understand the relationship between control and division of labour in the management of risk? The practices are partially in the shadow of the rest of financial world. They could touch upon the questions of the right implementation of regulation and therefore be potentially politically sensitive. Most qualitative research in finance has been carried out with interviews or document analysis but, with a few exceptions, not in the organisation itself. Yet the politically difficult situation of risk management might make interviewees less likely to talk about difficulties. Thus interviews might not be enough to get behind a possibly politically correct image.

In order to get the in-depth data on risk management practices, other types of data were therefore required from multiple locations. To find out about the nitty-gritty workings of risk management practices, ethnographic practices seemed optimal. This meant that only very few locations would be studied. That could bring generalisations in danger. At the same time, ethnographic observations would mean that the extreme detail of risk management could be observed, from daily human interactions to the workings and makings of financial models. To counter the limits of ethnographic work, multiple locations were chosen. Besides that, interviews were carried out to see how risk management worked in different locations.

The data collection had three phases. First of all, a preliminary research was carried out. In this phase, the questions were left relatively open to be able to follow the actors' meanings and interpretations of risk management in their respective environments. Interviewees were found through snowballing and gatekeepers. Most interviews were with people in lower/middle management positions. Others were professionals and a handful of the interviewees had an executive role. They all handled risks either because they were in risk management departments or because they worked directly with risk managers in the role of information technology specialists or sales people. The interviews lasted in general an hour, depending on the time the interviewee had available. With the help of the interviews, the second and third phase were set in motion. Through the interviews access was granted as a participant observant in a bank and in an insurance company.

Phase two is the participant observation that took place in Bank F in 2014 and which lasted for four months. Phase three of the research is the participant observation in Insurance Company V, which took place in 2015 and lasted five months. Both took place as internships. The work for the companies mainly consisted of either coordinating, data handling or programming tasks. In both locations the other employees of the company would know that the internship was part of sociological research. Besides working for either the Bank or the Insurance company, I could be an observer in meetings. Besides that, most of the participants were interviewed. The participant observations were thus internships where observations could be made in an overt way. In order to understand the two fieldwork locations, a short description is needed of both of them.

**Bank F**

The first participant observation took place in the market risk management department (MRM) of Bank F. This department was part of the risk division which was led by the Chief Risk Officer. He was a man quite close to his retirement and part of the executive board. The MRM's workforce fluctuated between 20 and 25 people. Bank F had gone through the different financial crises in Europe with a lot of difficulties. It had been bailed-out after 2008 and during the European sovereign crisis, it was on the brink of failing another time. However, this time the different states did not put money in without consequences. Bank F received the required guarantees but was not able to continue its business as usual. Part of the Bank was split off, to continue as a viable organisation. Bank F however was left to die-out in the long term. No business expansion was allowed.

Bank F was still active in multiple countries (in and outside of Europe) and the MRM team was part of the head office. Within the MRM department, there were five teams. Four of them were specialised in specific risks, and the fifth was called the inter-sectional team. The latter was the smallest, with two people in it and fell directly under the head of the MRM, Valery. The other four teams all had separate managers who were below Valery in the hierarchy. There were two teams that worked on the risks resulting from the balance sheet itself and two who worked on the different types of financial market products.

**Insurance Company V**

The participant observation in Insurance Company V took place in a different setting from Bank F. The risk department had a different make-up, the fieldwork took place in a country subsidiary and the company was allowed to do business. Insurance Company V was active all over the world and one of the largest in Europe. It had both life and non-life insurance products. Part of the life insurance were insurances of death, disabilities or long-term savings products. An example of a non-life product is a car insurance product. The main weight however of the company's portfolio lay within life insurance.

The risk management team the fieldwork took place in was the Life and Financial Risk department. This team roughly held 20 people, with at least six consultants who supported them. The department was part of the part of the Risk Management division of the country subsidiary and led by the Chief Risk Officer. She fell directly under the head of the Group's Chief Risk Officer. The life and financial risk department had two sections. One was for the risk management of the life insurance and financial products that were sold and bought. Then there were the people who handled the calculations related to the Solvency II risk calculations. Both of these teams had a separation between those who handled life insurances and those who handled financial assets.

To investigate the independence and control relationship, the following fieldwork observations and interview excerpts deal with the work of risk managers and their relationship with the operational divisions, mainly those who interact directly with financial markets. First of all the preliminary data will be untangled, followed by the ethnographic data of the bank and the insurance company. All three datasets show a relatively similar image. The independence of risk managers leaves little room for in-detail control.

## 4. Negotiating Risks

To understand the work of risk management, a first set of interviews was carried out with people working with financial risks. These were both in insurance and banking. They self-reported their role in the organisations as a relatively difficult one. They are partially the guardians of the temple, required to limit risk taking. At the same time they work in an organisation where it is the ones they control who are seen as making the profit and therefore have the resources.

In banking, a strained relationship with the front office became relatively clear from the interviews. Some would see their role mainly as accurately reporting risks, letting aside the question of a risk control and limitation. Others would mention a more negotiating role, thereby also being an asset to the front office. In insurance, the relationship seemed less strained. Yet at the same time, in multiple interviews difficulties of control came forward. Another aspect was that the financial markets were relatively far away. Even though insurance companies have a large part of their assets invested in financial markets, the changes in the market were not part of the discussion on risk. The banking side however first needs some discussion, followed by the insurance interviews.

**4.1. Banking**

The banking interviewees put forward two different typologies in their role with regard to profit and the profit entity. First of all there is the idea of an independent and accurate risk management that is divided from the front office and gives the right assessments, sees all the risks. But what does it mean being independent while working in an organisation where the different roles are highly dependent on one another? Secondly, there is the representation of the risk manager as walking on the line between profit and risk, making sure that there are no excesses on the profit side but at the same time also helping to find the frontier of what is possible given regulation and possible dangers.

Both these typologies are related to a front office with one objective, namely maximising the profit they can make. In the jargon of the interviewees, the front office is maximising their P&L, their profit and loss accounts which are assigned to each front office position and give an end number of the profit made against the cost that are determined for the transactions. The interviewees did not only represent that the objective for the organisation is this maximisation but added that a high P&L is for the trader themselves, so that they can maximise their personal income, namely their bonus. This individualised objective and representation of the objective for the front office cannot be found with risk managers. The parallel objective would namely be a minimisation of risks, thereby leaving the firm without clients.

So what is the role of a risk manager in a financial organisation? First of all, some represent their work as being independent and supplying the accurate data. It thereby follows the distinction made by Knight (1921) and followed by Markowitz (1952) in his work on the portfolio theory.

It seems that an economic theoretical concept as the distinction between risk and profit has also created two teams, namely risk and profit within the organisation where the risk management bodies are left with the inherent conflict between the two.

In the interviews risk managers described their role as measuring and publishing risks as accurate as possible. Besides the accuracy of the risks measured, risk management was supposed to be an independent entity within the organisation that portrayed the risks that existed. Risk management had to see all the risks that existed and, for example, make a topology of the risks. Interviewees would talk about identifying all the risks and measuring the risks in a way that resembled measuring natural phenomena. Dirk of Bank Y puts the role of himself and his team as follows:

> We measure [the limits for the front office], we give an independent fair measurement both in quantitative tools or in financial communication, or at portfolio analysis, but we are not incentivised to for example minimise risks we are taking, or give risk limits to the front office. So this was a choice which is now widespread.

His team was a different one from other teams, in that he measured the risks. Other teams would be able to then use this to control the front office directly. Then, it was the role of higher management to set the risk appetite of the bank, with which both the calculators and the controllers in the risk management team could work. In his vision, risk management was best to be independent and portray risks as independently as possible.

The ideal of independent risk management is related to representing risk management as creating accurate numbers. Felix, a quant who made risk models for Bank Z's investment bank talked for example about how making a market model was similar to doing academic quantitative research. Cameron, a quant in Bank X's credit risk modelling made the link between modelling the natural world and the market even clearer. He discusses the making of a credit risk model as being similar to making a model of a weather prediction. In both cases one wanted to predict risks as accurate as possible.

Besides the quants who made the risk models, managers higher up would discuss the idea of the real risk and seeing all the risks. The latter meant not missing one and therefore to be accurate in the risks you identify. Before 2008 no one had seen liquidity risk since markets had, for them, always been liquid. However in 2008, after Lehman, organisations stopped borrowing each other money, even on the short term market and a problem had emerged. This problem was therefore seen as a possible risk for market transactions later on. A similar thing was said about the Euro crisis in 2011, which made people think about the idea that sovereigns were able to default. But sovereign risk had not been identified before and sovereign bonds were the risk free rate of investment. These two cases were both used to explain that accurate risk management also meant identifying all possible risks, even the ones that had not become a problem before.

The description of good risk management as being accurate, independent and identifying all risk leaves open the question of what this actually means. Can one be accurate and independent at the same time? What does it mean to identify the real risks in the right way?

Let's start with the idea of independence first. Can one be independent in an organisation of interdependencies between the different teams? Interviewees at multiple banks stated that while making the capital requirement model and risk assessments they used other data than the front office. Quant 1 at Bank X gave the reason that for their models they needed less complex data because they had to simulate more, which costs much more computer power. Harald, the manager of the daily risks at Bank X, had told me in one of the exploratory interviews that he was glad he had front office experience. He had worked on specific securitisation transactions that were helpful in bringing down capital requirements. Trading a financial product does not only mean looking at the predetermined risk parameters (what he called the 'greeks') but about all the movements of the portfolio. One needed to know where the changes in the portfolio would come from, not just by looking at stress tests or indicators. The knowledge transfer from the sales people to the risk manager is crucial in the process of managing risks. The people selling and making the products know much more of their details than the risk managers. The latter have access to general knowledge but not to the day to day specificities. The distance makes the risk teams dependent on the front office for knowledge.

For example, in the making of a risk model, the input of the front office can make a change to the model. Whilst having worked on the new capital model of credit risk for Bank Y, Oliver recounted in an interview that they had required the input of the front office. They had told the model makers that certain parameters would not work in real life for example, thereby leading to changes of the risk model.

If one does not know where the problems come from, nor how to calculate the specific risk characteristics, it is difficult to control the work of the front office. Harald, who had seemed quite tired when giving the interview, told me about the importance of the comprehensiveness of data. The argument, shortened, turned out to not be about knowing necessarily all the data but having the same tools of the front office, thereby avoiding discussions on the technicalities. In his eyes, having the same data as the front office risk management would actually lead to a discussion on the risks. At the moment of the interview, those discussions were stuck on questions if risk management had or had not calculated the values correctly. However, Harald in Bank X did not have direct access to the same tools as the front office. In the case of Bank X this also had to do with a question of internal budgets. Harald recounted begging for budgets to improve systems but not getting it. His team did not have the priority in the organisation. In Bank F, risk management could see the general valuation program but did not have access to product specific valuation tools, leaving them out of crucial knowledge of the specific parameters. The calculation people as well as the quantitative model people would say that access to the

methodology should be enough, something highly contested by the risk managers.
According to some interviewees, the knowledge situation in banks had changed. Many had invested in data quality, which ensured that the right people had access to the right data. At Bank Y projects were going on to improve the data. Interviewees at Bank Y and Z would say this. Yet interviewees from those two banks also mentioned that they would always have to work together with the front office to get the right risk calculations. Even though front office knowledge through data systems might have gotten easier to the risk managers, they still needed the front office to get to the information.

Therefore it seems that risk in itself is highly dependent on the front office for its information and to help determine the risk. Besides the input of information, there is also a question of budget. Namely, making a model can cost a lot of time and energy within the organisation and the more one wants to spend, the more people would work on a model. Multiple interviewees from different banks recounted stories of being constrained in their models to the budgets given or not given by upper management. So the interviewees recount how they are doing a specialised job in an environment where they are dependent on the other teams to deliver them information, to implement the ideas as well as listen to them. Yet from the interviews in banking it seemed like the relationship with the front office did not limit itself to the flow of information. It was for some also inherently linked to the object they were supposed to handle. Risk and profit were namely seen as contradictory.

The front office seemed to exist to make as much money as possible. Was it then the role of risk management to minimise the risks? According to the interviewees, that was not a good idea. Because minimising the risks would mean that one would go out of business. Losing a client was a big risk in itself as well. It was namely the client that makes the business continue. Risk management was there to make sure that the right boundary between risk and profit was found. This also meant that risk management needed to optimise its behaviour and partially help the front office find the right boundary.

The risk-profit role description with regard to risk management in finance can be found in the quote described underneath by Yvonne. She was head of the division that dealt with the implementation of regulatory ratios and the contacts with regulators regarding the ratios at Bank X. She was therefore part of the team that implemented risk policies that were ordered by the regulators. One can therefore describe her job as being both a risk manager and a compliance officer. When describing her role, she put forward that she was in a double position with regard to the front office and profit. On the one hand she had to see if the work of the front office responded to the regulation and stop them in the case they would not. On the other, she and her team were there to help the front as well in talking to regulators and see where there would be room for the front office to act and make money. She saw her job and her relationship to risk management as one of finding a boundary, a boundary between risk and profit.

> Yvonne at Bank X: Yeah sure. It [our task] is very difficult because on the one hand you want to help them [the front office] to be competitive, but on the other hand we have to be careful because if we go to far, the whole bank goes bankrupt.

Even though Hans put forward that risk management was a difficult job because it was their task to beat back the fun, it was not always negative or conflictual. As Reg 1 also put forward, she was not well liked in the organisation. Because she would say no and be very critical towards new propositions of products that she would not trust. None of the interviewees, however, recounted a story of constant conflict with the front office, where the role of risk management was to destroy the work of the front. Risk management resembled a schizophrenic relationship, both focussing on what would be good for the front office as well as looking at what would be too dangerous to let pass.

The seat at the table is therefore also important in the front office – risk management relationship. If one wants to control, risk management' assessments should be listened to. In a possible control relationship, knowledge is not the only factor. An imbalance between the front office and the risk managers is not only created by knowledge deficiencies. It was also a question of being able to convince upper management and the people carrying out the transactions that your risk assessment was right and worthwhile following. The interaction between front office and risk management was not one of shared convincing power.

Interviewees in banking recounted that it was actually the front office that had convincing power. Yvonne, head of the regulation department that was part of risk management in Bank X, recounted the upper management's dilemma. On the one hand you have the risk people telling you not to do something because you might loose the money. On the other there are the front office people, promising you golden mountains. What do you want as a manager, you want to make money. So what does one do? One listens to the people that tell you that you will make a lot of money, contrary to what risk might say.

The independent relationships between operations and risk management as well as the accurate management of risks seemed nice ideas but partially contradicted by the reality of the division of labour. The risk managers of the preliminary interviews recounted a conflicted story of dependencies. They required data, more tacit knowledge, budgets and decision-making resources from others. These people could be upper management or the front office. Risk management had to convince them or their accurate risk measurements, controls or ideas about optimal investments would not happen. The division of labour brought dependencies with it where risk management seemed to lose out.

**4.2. Insurance**

The interviews with insurance participants about financial risk turned out quite differently from those in banking. Similar problems seemed to arise about complexity and relationships within the organisation. At the same time, the measures were very different as were ideas of risk. The regulatory capital requirements seemed to be the insurers' risk measurements. These were however not directly related to the investments that were made. On the other hand, insurers seemed more comfortable talking about risk management. All in all, insurance was more focused on risks and less on financial markets.

The insurance interviewees mostly discussed insurance in itself rather than a relationship between profit and risk. Insurance was inherently related to risk according to them. The core business of the insurance was taking on future obligations of their clients, thereby diversifying the different problems that might come along. At the same time, financial risks were not part of the discourse. Assets in financial markets seemed to be a necessary way to invest the money but did not make the profit. Thus even though risks came back in all the interviews with people in insurance, the financial market interactions seemed even further than in banking.

Similarly however to the bankers, the insurers seemed to have trouble in the relationship of control. Within Bank Z for example, the bank had quite a large insurance subsidiary. One of the lessons they had learned from the crisis was that risk would come from the locations where one would not think about. One of these places was the non-core business. In the case of Bank Z this was its insurance part.

Edward was the head of the head office team supposed to control the risks at the insurance subsidiary. The focus lay especially on the different models that were used for the overall financial position of the insurance company. These were models on how to handle the assets of the company but also on the regulatory capital requirements. Edward had set up the team and at the beginning things had gone rather smoothly. They had been able to look at the code and suggest improvements. However the relationship between the risk managers of the subsidiary and the head office had become somewhat restrained.

After having spoken to Edward, I was able to speak to Sherman too. He had an actuary diploma and worked as a risk manager under Edward. Where the latter had remained relatively on the surface about the problems with the entity they had to control. After having given quite a lot of advice about how the model could be improved, the subsidiary had shut down communications. They had not been happy with the interference of the new head office team.

The risk managers within the subsidiary reported to their own CEO. The risk team that Edward and Sherman were part of were supposed to be independent. They were there to avoid that the subsidiary would make too many losses. The independent outlook was important for Sherman, that way they could control better. However, the model was created by the insurance. The group team only reviewed this model.

That leaves open a question of where one can go with the review. Sherman admitted that in previous years they might have been a bit too involved. They had worked on the development of the model, testing it extensively to see how it performed. The insurance subsidiary had not liked this and had made a clear statement that they had gone too far. The risk team at group level was not allowed to see the model anymore. They were supposed to validate the results of the tests of the different models. In Sherman's case, his work diminished from investigating a relatively large predictive model to reviewing a twenty-page document. He had little left to do, comparing it partially to unemployment. Those who supposedly controlled independently had been cut off from the in-depth information that made control possible.

The story above resonates with risk management in Bank X that had difficulties obtaining the right model. Even so, financial risks were relatively far from the insurers' narrative. They were one of the parameters of this large model that determined the organisation's risk profile. Large categories of investments were discussed, such as stock market investments, sovereign bonds or property. The daily changes however of financial markets were not in their scope.

Another independent relationship was the cause of the lack of financial risk focus. Those who carried out the daily investments and therefore also handled the daily value changes, were not part of the insurance company itself. European insurance companies did, in general, not have trading rooms nor carried out transactions. It were the asset management firms, brokers and sometimes banks who did this for the insurer. Especially the asset management firms would be the place to outsource the handling of financial market transactions.

Otto was a trainee for the asset management firm of Insurance Company. He worked on the financial strategy, where the firm was going. Even though he did not directly work with risks, he did explain the relationship between the asset management and the insurance company. It was the former who carried out the transactions. They handled the portfolio of the insurance company, investing in the market for them. The insurance company explained their investment preference to the asset manager, who then carried out the daily market interactions. By having the asset manager carry out transactions outside of the insurance company, expertise was supposedly optimised. Insurers handled insurances, asset managers the assets. Funnily enough though, the asset manager would not have direct responsibility of losses of the financial market. In case their investments made a loss, it would be on the books of the insurance company, not the asset management firm.

This distance to the financial market was continuously reiterated in interviews with insurers. Even though they had financial risks, they saw them from a relatively general and global scale. Insurance companies looked at other insurance companies, explained the head of an insurance lobby organisation to me. He explained that risks were their core business, yet they would always diversify them. The financial market was far away and only one aspect of many of the risks they dealt with.

## 5. Calculating Power

The first interviewees give an indication of risk management, control and independence. The latter seems to create a distance that leads to lack of possible control. Yet interviews always maintain a report of storytelling. One can give a representation of reality in a way that suits you, where one does not lose face. The interview data already give a relatively strained and difficult role of risk management. The workings of risk departments however might give a different image.

The participatory research in Bank F showed even further how independence and distance from the front office created a lack of control of risks. There were few front office interactions, yet many with a group of people that handled the calculations. The risk assessments seemed to matter mainly to those in the risk teams rather than the actions of the front office.

The risk department used to be a place where the risks were calculated of the different financial market exposures. Yet, half a year before the participant observation started, the team had been divided into two. One part handled the calculations whereas the other was supposed to take care of the risk methodology and control. The latter was the risk management team. This separation created an extra step to get to the financial market exposures. Let's first go into the interaction with the calculation team, after which the limited front office ones are discussed.

**The Calculation Relationship**

Calculations and control had been separated due to regulatory pressure. According to Valery, the head of the team, the Central Bank had required this creation of independence. After some negotiation at the top, the calculations had become part of the Finance Department while the risk control remained part of the Risk Management department. It had been a battle at the board level that the head of the finance department(the CFO) had won. The legitimacy behind the shift was the creation of synergy in calculations. Namely, the finance department already had to calculate the bank's exposures to the financial market. By bringing in the teams that calculated the risk exposure, the knowledge could be brought together. At the same time, it also meant that the head of the Risk department (the CRO) did not have a direct say anymore in the risk calculations. The risk calculations were under the decision making of the CFO, while the management of those same risks was under the authority of the CRO.

For the calculation team, the separation of tasks could be seen as a loss of importance. Only calculating exposures and risk measurements without having to say anything about the methodology or the consequences of these numbers gave them less formal influence in the decision making process. While they used to be part of the process of calculating and control, their only job became control. They became responsible for an accurate calculation of numbers and their opinion about those numbers became formally unimportant. The management of the calculation team did not like this. Even though they had their hands on the mechanisms, it was up to others to say something about it. Even though formally they had been part of the same team, the division made that the cooperation of those that calculated was restrained.

Risk management was now two steps away from the front office. In order to get to the front office's risk exposures, it had to go through the calculation team. Either through the reporting that they generated or meetings on how the risks were calculated. This proved difficult. The two teams that supposedly controlled the risks of the trading portfolios were in continuous conflict with their counterparts at the calculation teams. This was especially the case between the managers. Those without a management role were in general in quite good relationship with their former colleagues. The managers however were supposed to take their role as a controlling body, probably imposing new or better calculations. Here little cooperation was found between the two.

The strained relationship was everywhere. It went from meetings where new measures were put forward, to foreign exchange rate exposures, to the idea of what risk management control was. Meetings where the calculation department and the risk department both took part could go from cheery to grim. For example, meetings on the amount of foreign currency held by the bank could turn into shouting contest about the incompetence of one or the other team. Even though these were part of the extreme, the relationship was generally tense. Most of the times, meetings would be about the advancement of the implementation of certain calculations, on valuations or risk measurements. Yet there was always a delay from the calculation side. Even though Valery and Trevor might sometimes joke around in meetings, the general sentiment was that the measurements were not good enough. Risk management, even though it would sometimes bring it up, hardly ever was able to do something about it.

Both Pete and Michael were managers of market risk teams. They were supposed to control the risks of the market portfolio. Yet in between them and the portfolio was the calculation team. Getting information from them was very difficult, partially impossible. During the end of the fieldwork they explained the general relationship over lunch. Both of them felt as if walking continuously into a wall. They had to contact the calculation team to know more about the portfolio and related risks. At the same time, neither Pete nor Michael had anything to give back to them. There was no exchange of information or needs. When they would contact them for information, the calculation team dragged their heals, being difficult in general.

For Michael the difficulties had not been new, he had a long history of conflict with Trevor. He even seemed to avoid going to meetings where Trevor was present. His team was supposed to work on the risk measures of the trading book. They were responsible for the methodology of the regulatory capital measures as well as the limits on the different trading activities. For Pete, the social conflict was relatively new. He put forward that until two weeks ago he had never thought there was a problem. Yet he had found out that it was one because Trevor had send an angry email. In this email, Trevor asked

Pete to back-off.

The above shows that the independence that was created between the risk management team and the calculation team even created more problems. The relationship with the calculation team was also extremely strained. Risk management was not allowed to see the calculations, only the limited methodology. It was not allowed to have the data that was used, only the documentation. And the documentation in Bank F was generally very limited. The conflict between the two teams even created a further distance to the market operations.

**The Front Office Relationship**

Since Bank F was in long-term default, one could expect many interactions from a strong risk management with the exposures in the financial markets. The only reason the bank namely existed was a smoothing of the risks rather than creating profit with the operations. Yet as the above shows, risk management's role was more contested.

Risk management seemed to have relatively few relationships to the front office. Most contacts were held with the people that calculated the numbers, being the main cause of concern for the risk managers. The only relationships I observed with the front office took place in the weekly meetings market exchanges, a place where the non-management people from the different departments sat together and discussed the goings-on of a specific week.
In these meetings the upcoming and past transactions and new products would be discussed, as well as the on-going projects and the problems that were encountered during the week. The meeting would happen after lunch and while I arrived early in general, there was always one other person there before me, who sat in the middle of the table. She hardly said a word but wrote every transaction that was discussed down. She was part of compliance, the team that was supposed to make sure the transactions were in line with the rules of the market. And whilst I was amazed by her silence, the people of risk present at the table, would never say much either. Sometimes one or two would step in in a conversation, to ask more about the specifics or to ask if something was really necessary, but, except for one time, the narrative of the person presenting the transaction would continue, without changing it even though questions had been put forward. Most of the conversations in these meetings were one-way, informing the different bodies around the table what went on at the desks that traded specific items.

It was the lowest in the hierarchy and the team managers (the lowest level managers) that met up there, it was not a meeting where the key strategic decisions were on the table. However it could have been one about the specific technicalities of carrying out the strategies. And there, the risk was told what was going to happen. These meetings lacked an input from risk but they were also places where information could be gathered. Might there be problems about specific transactions and counterparties, this was the meetings to know about this. Would one not be in this meeting, it would be difficult for you as a risk manager to know about risks that could become problems. For example, during one of the meetings the documentation of a specific property asset was discussed. The property had been owned by one of the subsidiaries but since that one had closed, it was now up to the head office to deal with this. The property and its characteristics were in the IT systems and visible on the computer screens of those wanting to know about the specific exposure of the property portfolio. The client fulfilled its interest payments but the traders on the long-term asset desk put forward a small problem. The papers stating the ownership of the property were gone. During the move the papers had gone lost, the traders said jokingly. The whole table laughed with them, it seemed unrealistic. And yet, the surreal had become possible, all non-tangible evidence was still there and there was no immediate problem (the client still paid) but there was a risk that the income flow would stop. Would Bank F had to show evidence that they owned the property, they would not be able to. The persons for whom it would be useful to know this were the heads of the two market risk teams (not the liquidity ones) but neither of them was present at the meeting. Even though the minutes were sent around on a regular basis, information like this would be rather euphemistically written down.

The above knowledge transfer happened through verbal communication in a formalised environment. The risks that have been created on non-payment and loss of investment by the loss of the documents are an object one would expect the risk department to deal with. However, they did not because they did not know and also because the possible problems might not be consequential enough. It shows the importance of information of the front office and a direct line in the ability to deal with risks and problems. If there is a big gap between the front office and risk, certain risks are just not known and not managed by the people responsible for them. It was seen important to know the book, know the products and know the exact exposure. Risks were all the things that influenced the product and therefore worth knowing, as Miriam, a consultant at the market risk team had explained to me.

In his interview about his work and career, Trevor (head of the calculation teams that dealt with financial markets in Bank F) looked back in the years leading up to the default of Bank F and the ones following. The interview had been very animated, Trevor did not hesitate to show his frustrations and feelings. He was quite proud of his work, teams and the work they delivered. Colleagues in the risk department contested this and were in conflict with him since he needed to deliver the risk data. This left me as an ethnographer in a difficult situation since I worked for the risk team but also needed access to the calculation department. However, after having been quite neutral and non-participatory for a while helping people out but not taking a stance, Trevor was convinced by the worth of my work and I got access to the team and him. And so, because he had spend more than six years at Bank F, all in roles dealing with the calculations of the risk numbers, Trevor had a story to tell. Risk had been treated very badly, before and after the crisis. His story before the crisis, where he portrays risk as being nothing in regard to the front office. Risk was nothing, rules were not followed up and risk was put in front of facts rather than proposals. Before the crisis of Lehman and the subsequent problems at Bank F, Trevor had been told off by the head of risk. He had been too critical. He remembered how the head of the department had told him to explicitly *not* write things down, to *not* say things.

The default had not changed much. It had just given much more work, certain figures had to be delivered that before that had not. Even after the crisis, risk management had the lesser tools, the lesser information and was there to make sure numbers were calculated, not opinions were formed on transactions.

**Controlling what?**

In the risk team of Bank F it seemed as if no one really managed to get their way. The calculation team, in the middle between the front office and risk, limited the risk teams access to market information by being hesitant in sharing knowledge of their calculations. Besides that, their calculations seemed to lack accuracy (confirmed by Trevor, the head of the calculation team who said: As risk we have never produced a right number), making it difficult for the risk team to see the portfolio the front office dealt with. As the earlier description of risk's interactions in the market committee show, risk management was there to listen, not to act against risk taking. Only the head of the department, Valery, seemed to get her way once in a while, she would team up with people to avoid specific things. She had learned to pick her battles and had legitimacy outside of risk management since she had worked selling structured finance and in the financial department.

The division of labour created by the regulatory pressure between calculation and risk management led to a further diminishing of risk management's control. The detailed knowledge of the markets and their portfolio was now two steps away instead of one. Risk management in Bank F spend most of its time negotiating with the Calculation team rather than discussing the actions of those who acted on the financial markets.

## 6. Far Away Markets

The initial interviews with the insurance people already showed a risk management of far away markets. The fieldwork in Insurance Company V showed a similar type of risk control. In the local subsidiary of the risk management department of life and financial risks, part of the team was supposed to handle the risks that came from the daily activities. This meant they were responsible for making sure that the specific choice of willingness to take risks was followed by those selling life insurance products and those investing in financial markets. There were seven people part of this team, two for the financial side, four for the life insurances and a team manager. Their work was a mix of following policy and having an opinion on the changing portfolios of their counterparts in the operational office.

The risk management division of Insurance Company V was located in a large open space. In the open space the non-managerial staff was placed and there were big windows on one side. The floor counted over thirty people. On the side were there were no windows, there was a corridor with on the other side the management offices. Besides that, in one of the corners, there was a small office with two middle-aged men. One of these was Didier. This was the best location in the room since there was a little bit of privacy. Didier's direct colleague Gene had the third best place in the office. Namely he was sitting in a corner but his back was turned to the window. In a big open office, the possibility to see everything yet at the same time not be seen can be quite comfortable. With the exceptions of those like Gene who sat with their back to a window or a wall, all screens were namely visible. The visibility of one's work activity also brought with it a certain form of self-restriction. Namely, one could not just have an active screen on non-work related issues without being seen as an inactive co-worker. The two who managed financial risks had managed to obtain a good seat, where their work activity was relatively hidden from the prying eyes of others.

Quite early on in the fieldwork, Gene explained to me how he saw his work. According to him, most important was to keep track. He kept track of emails and discussions in a very structured way. Everything with their counterparties in the head office and the investment department was logged in an excel file. That way he could always show later that he had done what was required of him. Next to Gene sat a bunch of risk managers related to the calculations of the regulatory risk numbers who seemed to receive an innumerable amount of emails about requests for specific exposures, risk data or accounting numbers. They would be in the office until much later than stipulated in their work contracts, both replying to the requests and making the ad-hoc calculations. Gene's push for the rigorous bookkeeping was thereby quite weird. He had the time to make extensive excel files over who contacted whom when and about what. Others did not have the time to do this even though it might have been part of the job. Opposite to Gene they were pushed to go forward in the extreme amount of requests they received.

There was a reason why Gene focused on logging his activities. There were namely a lot of his recommendations that did not receive an answer. His and Didier's job was to implement the risk management rules of the head office. This meant, mainly, that they had to ensure that certain limits were kept in the financial exposures. To give a theoretical example, they were not allowed to have more than three per cent of the investments in Belgian corporate bonds. Sometimes the investment department wanted to invest a bit more in this category than the limit. They would then send a request to Didier and Gene to ask for a waiver. The two of them would then ask the head office if they would sign off on this. However, it would generally take quite a while for the head office to respond, if they would respond at all. They had thus been given a job that was not handled through daily interactions with their peers. To make sure they could show that the exceeding of the limits was not their fault, they maintained records of their actions. In case someone would start asking questions, they would be able to show that they had done their job.

Part of their task was thus the following of limits, another one was the implementation of the right methodology. They did this together with the investment department. This mainly had to do with how one accounted for the investments that were held. Even though this might sound quite easy, Didier put forward that it was quite difficult. For example, if one receives cash collateral for the derivatives that are on the books, how do you account for this? Is it part of the big pot of cash or does it go into a separate account? And how does one make sure it is not reinvested? For a ratio of the liquidity of the organisation, this cash could count and yet on the other hand it will probably leave one's books quite easily. These were technical questions related to the specific accounting of a financial product.

In general, the relationship with the investment department was relatively cooperative. They discussed about the questions of the technicalities to make sure that everything was possible in the right way. I was able to sit in one of such a meeting with the investment department on how to count for the financial objects. They were convivial with one another and the viewpoints were exchanged, with questions about how this could be done technically. None of the conflicts as seen in Bank F could be found. The relationship seemed cooperative yet at the same time limited to accounting questions.

The concept of independence was seen here as well in the reason behind some of the interactions. To maintain an independent view on the investments, Didier and Gene did not have contact with the asset managers. And the investment department was not in contact with the group. This way there was information stream and the policies could be implemented by the independent control of the different roles.

The work in this division of labour was focussed on the technical bookkeeping aspects of the financial portfolio. How do we get data that represents the portfolio as we think it should be represented. The control of what the portfolio was about was left to limit discussions. And there there was little dialogue, it was more keeping an archive than maintaining the limits. This shows the lack of influence that these financial risk managers had on the investments themselves. They worked on making the numbers yet the risks created by the investments seemed off limits to Didier and Gene's sphere of influence. The independence and the different steps made it almost impossible to see the investments on a daily or weekly basis. There was no knowledge and therefore no control of the knowledge.

Tony, Didier and Gene's boss, knew little of financial investments. He was focussed on the life side of the risks. Life insurance products were generally directly linked to financial risks since the pay-out to the insured depended on the financial investments that were made with them. However, other types of risks were also related to these products, such as life expectancies. Tony had worked on the model side of life risks before. As already the workforce proportions showed, the focus in the risk management team lay on these life products.

The description by Tony on the life risk management seemed much more hands-on than the role of Gene and Didier. Tony put forward that he had to make sure the profitability of the life insurance products was good. The price of the insurance for the customer should be able to cover at least the obligations it took on for the customer. In this sense, risk management was directly linked to the make-up of the product. He would be part of committees of new product launches to discuss the how the product should be structured. For example, were all types of risks were well taken into account into the pricing? Tony focussed on the profitability of the company and therefore also if the risks were taken well into account.

The people working on the life risks seemed to be more of a communication partner to the life insurance product people. Even though John, a former life risk product manager, would tell stories about how it had been difficult to stand up against the new product ideas. However he had been able to do this and would also recount good encounters with upper management. The relationship here between product sales and risk seemed less tense and more one of mutual understanding, similar to Tony's story. For example, in the communications risk would also use arguments possibly beneficial to the others. In the explanations of the head of the team, one of the important parameters that they looked at was the return on the products, if they would actually be profitable. While working there I helped on the making of a presentation on the impact of the new capital model on the different life products. There the conversation had also been the presentation of the impact to the life insurance portfolio, thereby also giving alternative strategies to counter those effects. The life risk team acted as a partner in the negotiation over the specific products, thereby also using a similar language to the one used by the sales people.

In Insurance Company V, the knowledge situation of the two people managing the risks of the local financial assets was limited. They did not make a problem out of this but at the same time, the risk managers' work remained very distant from the actual investments being made. They had access to quarterly exposures but did not know of valuation models nor of daily exposures. Besides that, they did not have access to valuation models either. What they did was discuss on guidelines and communicated breaches of specific guidelines to the head office. A breach of the guidelines would not be directly seen by the risk managers but it was communicated to them by the investment department. This work is difficult to understand as a form of control. They neither distributed knowledge nor had direct resources of decisions on investments. The financial risk managers in Insurance Company V did not even have a seat at the table where they could convince people. Nor were their assessments of risks distributed widely or looked at on a regular basis. The control through knowledge or resources was limited to the technicalities of counting.

## 7. Conclusion

All three data collections show a lack of control between risk and the people handling (financial) products. Control can come either through the dissemination of knowledge or through the one-sided use of resources. None of the actors in risk management seemed to have a clear role where the ultimate truth in calculations are given or the possibility to punish the front office or make decisions for them.

One can see here the importance of relational distance. The further one is away from the market place, either because you are not in the same building or do not have access to the same tools as the market place, the more difficult it is to control. Distance here can be seen in the form of knowledge distance but also relational distance. The risk managers in Bank F had to go through the calculation department to get to the actions of the front office, two steps to get to the source. The financial risk managers in the insurance company had to go through the investment department to know about the investment actions, which were carried out by another entity, the asset manager. Not only were there two steps to get to the source, the second one was between two different legal entities. The relationship between risk and products that was closest to a form of control, however even this was not recounted as a form of direct control but as a struggle, was the one of the life risk product team to those handling the products. There was one step between the product managers and the risk managers who used knowledge they had gathered and handled themselves, through the risk and finance department.

In the end, whatever the distance, one can conclude that risk management does not control the front office. Neither in a Foucauldian sense, nor in a form of control over decisions or convincing power in negotiations. The independence that the regulation has created actually brings this lack of control to the forefront. The extra distance to the operators gives less information, less knowledge of market exchanges for the risk managers.

## References

Aebi, V., Sabato, G., & Schmid, M. (2012). Risk management, corporate governance, and bank performance in the financial crisis. *Journal of Banking & Finance*, 36(12), 3213-3226.

Bourdieu, P., & Christin, R. (1990). La construction du marché [Le champ administratif et la production de la. *Actes de la recherche en sciences sociales*, *81*(1), 65-85.

Bizieux, A., & Francois, P. (2017). L'invention de la fonction risque : pouvoir, contre-pouvoir ? PARI Working Paper Series.

Dionne, G. (2013). Risk management: History, definition, and critique. *Risk Management and Insurance Review*, 16(2), 147-166.

Godechot, O. (2007). *Working rich. Salaires, bonus et appropriation du profit dans l'industrie financière*. Paris, France, La Découverte.

Ho, K. (2009). *Liquidated: an ethnography of Wall Street*. Durham, NC, USA Duke University Press.

Knight, F. H. (1921). Risk, uncertainty and profit. *New York: Hart, Schaffner and Marx.*

Lang, W. W., & Jagtiani, J. A. (2010). The mortgage and financial crises: The role of credit risk management and corporate governance. *Atlantic Economic Journal*, 38(3), 295-316.

Lewellyn, K. B., & Muller-Kahle, M. I. (2012). CEO power and risk taking: Evidence from the subprime lending industry. *Corporate Governance: An International Review*, 20(3), 289-307.

MacKenzie, D. (2011). The credit crisis as a problem in the sociology of knowledge. *American Journal of Sociology*, 116(6), 1778-1841.

MacKenzie, D., & Millo, Y. (2003). Constructing a market, performing theory: The historical sociology of a financial derivatives exchange. *American Journal of Sociology*, 109(1), 107-145.

Markowitz, H. (1952). Portfolio selection. *The journal of finance*, *7*(1), 77-91.

Magnan, M., & Markarian, G. (2011). Accounting, governance and the crisis: is risk the missing link? *European Accounting Review*, 20(2), 215-231.

Mikes, A. (2009). Risk management and calculative cultures. *Management Accounting Research*, 20(1), 18-40.

Mikes, A. (2011). From counting risk to making risk count: Boundary-work in risk management. *Accounting, Organizations and Society*, 36(4), 226-245.

Miller, P., & Rose, N. (1990). Governing economic life. *Economy and society*, 19(1),1-31.

Pfeffer, J., & Salancik, G. R. (2003). *The external control of organizations: A resource dependence perspective.* Stanford University Press.

Power, M. (2007), *Organized uncertainty: designing a world of risk management*. Oxford – New York, Oxford University Press.

Preda, A. (2009). *Framing finance: The boundaries of markets and modern capitalism*. Chicago, University of Chicago Press.

Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*, 19(3), 425-442.